

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT

APPLICATION FOR OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) APPLICATION #: OPM-0201-13

OSHPD Preapproval of Manufacturer's Certification (OPM)
Type: ☐ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number:
Manufacturer Information
Manufacturer: MIDMARK CORPORATION
Manufacturer's Technical Representative: Joe Martin
Mailing Address: 60 Vista Drive, Versailles, OH 45380
Telephone: 1-800-MIDMARK, ext. 8446 Email: JMartin@midmark.com
Product Information CODE
Product Name: Midmark Corporation Base Cabinet
Product Type: Cabinet
1946-13; 027-1946-14; 027-1946-15; 027-1946-16; 027-1946-17; 027-1946-18; 027-1946-19; 027-1946-20; 027-1946-21; 027-1946-22; 027-1946-23; 027-1946-24; 027-1946-25; 027-1946-26; 027-1946-27; 027-1946-28; 027-1946-29; 027-1946-30; 027-1946-31; 027-1946-32; 027-1946-33; 027-1946-34; 027-1946-35; 027-1946-36; 027-1946-37; 027-1946-38; 027-1946-39; 027-1946-40; 027-1946-41; 027-1946-42; 027-1946-43; 027-1946-44; 027-1946-45; 027-1946-46; 027-1946-47; 027-1946-49; 027-1946-50; 027-1946-51; 027-1946-52; 027-1946-53 General Description: Floor supported cabinet
Applicant Information
Applicant Company Name: ZFA Structural Engineers Contact Person: Mark Moore
Mailing Address: 100 Bush Street, Suite 1850, San Francisco, CA, 94104
Telephone: 415-243-4091 Email: markm@zfa.com
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.
Signature of Applicant: Date: 3/26/2015
Title: Executive Principal Company Name: ZFA Structural Engineers

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





STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-700 (REV 10/22/14)

Page 1 of 2



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Registered Design P	rofessional Preparing Enginee	ring Recommendations	
Company ZFA Name:	Structural Engineers		
Name: Mark Moore		California License Number:	4443
Mailing Address: 100 E	Bush Street, Suite 1850, San Francis	sco, 94104	
Telephone: 415-243-4	1091	Email: markm@zfa.com	
OSHPD Special Seis	mic Certification Preapproval (OSP)	
(Separate application	ertification is preapproved under OSI on for OSP is required) ertification is not preapproved	D_	
Certification Method	(s)	005	
☐ Testing in accordan☐ Other* (Please S		FM 1950-10	
supports and attachmen bracings, test criteria oth	n those adopted by the California Buts are not permitted. For distribution er than those adopted in the CBSC	system, interior partition wall, and 2013 may be used when approved y Piland	suspended ceiling seismic
✓ Analysis✓ Experience Data	DATE: 05/	28/2015	
<u> </u>	ting, Analysis, and/or Experience Da		
List of Attachments	Supporting the Manufacturer's	Certification	
☐ Test Report ☐ Other(s) (Please	☑ Drawings ☑ Calcul Specify):	ations	atalog
OFFICE USE ONLY – C	SHPD APPROVAL VALID FOR CE	BC 2013 ONLY	
Signature: 44m	Lel	_	05/28/2015
Print Name: Timothy P			
Title: SSE			
Condition of Approval (if	applicable):		

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





Page 2 of 2

ENG/CKR: ARF

DATE: 04/24/15

15113.30

SCALE:

ZFA STRUCTURAL ENGINEERS

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1/4

SHEET NO.:

OPM-0201-13: EQUIPMENT MANUFACTURER: MIDMARK CORPORATION EQUIPMENT TYPE: BASE CABINETS

GENERAL NOTES

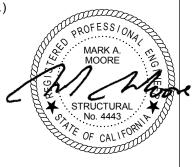
- 1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2013. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2013.
- 2. FORCES PER ASCE 7-10 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2, 13.3-3, WHERE $S_{DS} = 2.20$, $a_P = 1.0$, $I_P = 1.5 \& R_P = 2.5$, $z/h \le 1.0$. A FACTOR OF 0.7 IS APPLIED TO CALCULATE ASD LOADS.

HORIZONTAL FORCE (E_h) = 1.109 Wp VERTICAL FORCE (E_v) = 0.308Wp

- 3. THE DETAILS IN THIS PRE-APPROVAL MAY BE USED AT ANY LOCATION WITH AN S_{DS} OF 2.20g OR LESS.
- 4. ALL SEISMIC AND ANCHOR FORCES SHOWN ON THE DRAWINGS ARE BASED ON ALLOWABLE STRESS DESIGN.
- 5. SHEET METAL SCREWS (SMS) SHALL CONFORM TO ICC-ES ESR-1976 OR ICC-ES ESR-2196.
- 6. SEE SHEET 2 FOR LIGHT GAGE STEEL MINIMUM SPECIFICATIONS.

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD (SEOR)

- DESIGN BACKING PLATES, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS. THE SEOR SHALL ALSO VERIFY THE ADEQUACY OF THE STRUCTURES (SUCH AS WALLS AND FLOORS) WHICH SUPPORT THE UNITS FOR ALL LOADS.
- 8. PROVIDE ANY SUPPORTING STRUCTURE REQUIRED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN ADDITION TO ALL OTHER LOADS.
- 9. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2013 CBC AND WITH THE DETAILS SHOWN IN THIS DOCUMENT. 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 PRE-APPROVAL DOCUMENTS.
- 10. VERIFY THAT THE COMBINATION OF S_{DS} & z/h RESULT IN SEISMIC FORCES ($E_{\rm h}$ $E_{\rm v}$) THAT ARE NOT GREATER THAN THE VALUES IN THE GENERAL NOTES.
- 11. VERIFY THAT THE ATTACHMENTS ARE LOCATED AT AN ADEQUATE DISTANCE FROM ANY END OR EDGE OF METAL STUD.



ENG/CKR: ARF

JOB NO.: 15113.30

DATE: 04/24/15

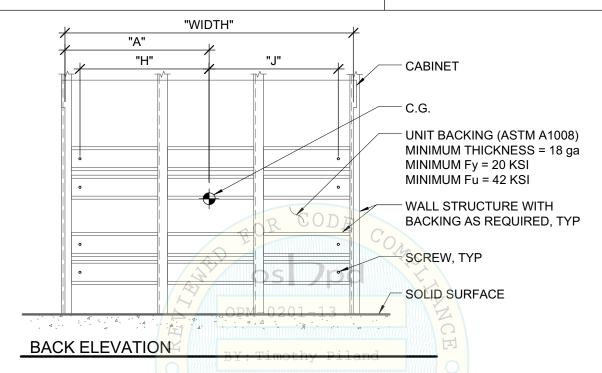
SCALE: 3/4" = 1'-0"

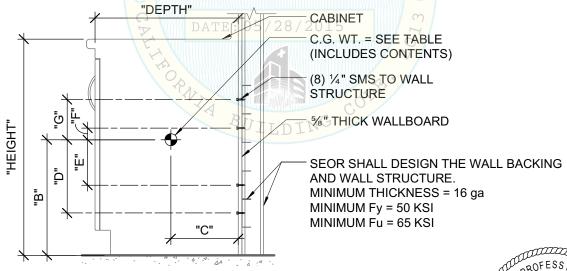
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SHEET NO.:





SIDE ELEVATION

NOTES

- 1. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 2. FOR GENERAL NOTES, SEE SHEET 1.
- 3. FOR GEOMETRY, WEIGHT, AND ANCHOR FORCES, SEE SHEETS 3 AND 4.
- 4. MINIMUM SCREW SPACING = 3/4"; MINIMUM EDGE DISTANCE FOR SCREWS = 3/6"



ENG/CKR: ARF

15113.30

DATE:

04/24/15

5 027-1940-00 THROUGH 027-1940-55

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SHEET NO.:

JOB NO.:

3/4

124 120 303 178 59 162 87 91 44 03 49 36 34 143 180 303 178 178 161 87 91 44 03 49 36 14 49 46 66 44 40 40 66 61 44 60 49 66 61 44 60 49 66 61 44 60 49 66 61 44 60 49 66 61 44 60 49 66 61 44 60 49 66 61 49 66 61 49 66 61 44 60 49 66 61 60 49 66 61 66 67 60 61 60 61 61 61 61 61 61 62 61 60 61 60 61 60 61 60 61	Unit Name	Max Operating Weight (lbs)	WIDTH (in)	HEIGHT (in)	DEPTH (in)	"A" (in) "B" (in)		"C" (in)	"D" (in)	"E" (in)	"F" (in)	"G" (in)	"H" (in)	"J" (in)	T max (lbs/screw)	V max (lbs/screw)
149 150 303 178 74 161 87 90 44 04 50 51 49 173 180 303 178 89 161 86 91 44 03 49 82 66 64 197 210 303 178 118 162 86 91 44 03 49 82 65 64 180 220 240 303 178 118 162 86 91 44 03 49 97 93 275 230 303 178 150 162 86 91 45 03 49 155 125 125 135 145	- 1946	124	12.0	30.3	17.8	5.9	16.2	8.7	9.1			4.9		3.4	50	17
173 180 303 178 89 161 86 91 44 03 49 66 64 220 2210 303 178 103 162 86 91 44 03 49 82 78 220 300 303 178 150 162 86 91 44 03 49 125 125 220 300 303 178 150 162 86 91 44 03 49 125 125 220 360 303 178 180 162 86 91 45 03 49 125 125 230 360 378 178 210 162 85 91 45 03 49 165 155 241 480 303 178 210 162 85 91 45 03 49 165 155 250 336 178 240 162 85 91 45 03 49 165 155 251 180 336 178 74 177 86 106 60 12 33 34 251 251 251 251 251 251 251 251 252 300 336 178 190 178 85 107 60 13 33 35 34 251 251 251 251 252 300 336 178 180 178 85 107 60 13 33 155 155 252 250 336 178 180 178 85 107 60 13 33 155 155 253 251 336 178 240 178 85 107 60 13 33 155 155 254 250 336 178 240 178 85 107 60 13 33 155 155 254 250 336 178 180 178 85 107 60 13 33 155 155 255 250 336 178 180 178 85 107 60 13 33 155 155 256 300 361 178 180 180 180 180 180 180 257 180 361 178 190 83 110 73 22 69 155 155 258 300 361 178 130 131 82 120 73 22 69 185 250 250 250 250 250 250 251 250 250 250 250 250 252 250 250 250 250 250 253 250 250 250 250 250 250 254 255 255 250 250 250 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255 255	027 - 1946 - 01	149	15.0	30.3	17.8	7.4	16.1	8.7	0.6			5.0	5.1		43	21
197 210 303 178 103 162 86 91 44 03 49 82 78 220 300 178 118 162 86 91 44 03 49 125 78 220 300 303 178 180 162 86 91 44 03 49 125 125 320 360 303 178 180 162 86 91 44 03 49 125 125 367 480 303 178 210 162 86 91 45 03 49 125 155 165 1	027 - 1946 - 02	173	18.0	30.3	17.8	8.9	16.1		9.1			4.9	6.6		40	24
220 240 303 178 118 162 86 91 44 0.3 49 97 93 272 300 303 17.8 150 162 86 91 44 0.3 49 17.5 12.5	027 - 1946 - 03	197	21.0	30.3	17.8	10.3	16.2		9.1		0.3	4.9	8.2	7.8	38	27
272 300 303 178 150 162 86 91 44 03 49 125 125 320 360 30.3 178 180 162 86 91 45 0.3 49 125 155 155 165 175 165 177 86 177 86 178 165 177 86 178 166 178 178 178 178 178 178 178 178 178 178 160 173 33 165 178 160 178 160 178 180 178 180 178 180 178 180 178 180 178 185 107 60 1	027 - 1946 - 04	220	24.0	30.3		11.8	16.2	9.8	9.1		0.3	4.9	9.7	9.3	39	31
320 360 303 178 180 162 86 91 45 03 49 155 155 155 367 420 30.3 17.8 210 162 8.6 91 45 0.3 49 185	027 - 1946 - 05	272	30.0	30.3	17.8	15.0	16.2	9.8	9.1		0.3	4.9	12.5	12.5	45	38
367 420 303 178 210 162 86 91 45 03 49 185 185 49 185	027 - 1946 - 06	320	36.0	30.3	17.8	18.0	16.2	9.8	9.1	4.5	0.3	4.9	15.5	15.5	52	44
415 480 30.3 17.8 240 16.2 8.5 9.1 4.5 0.3 4.9 21.5 21.5 135 12.0 33.6 17.8 5.9 17.7 8.6 0.1 3.3 3.6 3.4 162 15.0 33.6 17.8 8.9 17.7 8.6 10.7 60 1.2 3.3 8.6 6.4 214 21.0 33.6 17.8 10.4 17.8 8.5 10.7 60 1.3 3.3 8.6 6.4 244 24.0 33.6 17.8 11.9 17.8 8.5 10.7 60 1.3 3.3 12.5 12.5 296 30.0 33.6 17.8 18.6 10.7 60 1.3 3.3 12.5 12.5 349 36.0 33.6 17.8 10.7 60 1.3 3.3 15.5 12.5 401 48.0 33.6 17.8 85.	027 - 1946 - 07	367	42.0	30.3	17.8	21.0	16.2	9.8	9.1	4.5	0.3	4.9	18.5	18.5	58	51
135 12.0 33.6 17.8 5.9 17.7 8.6 10.6 60. 1.2 3.4 51 4.9 189 18.0 33.6 17.8 7.4 17.7 8.6 10.6 60. 1.2 3.4 51 4.9 214 21.0 33.6 17.8 8.9 17.7 8.5 10.7 60 1.3 3.3 8.6 6.4 224 2240 33.6 17.8 15.0 17.8 8.5 10.7 60 1.3 3.3 12.5 12.5 236 30.0 33.6 17.8 18.0 17.8 8.5 10.7 60 1.3 3.3 12.5 15.5 401 42.0 33.6 17.8 18.0 17.8 8.5 10.7 60 1.3 3.3 12.5 15.5 453 48.0 33.6 17.8 24.0 17.8 8.5 10.7 60 1.3 3.3 18.5 18.5 453 48.0 33.6 17.8 24.0 17.8 8.5 10.7 60 1.3 3.3 18.5 18.5 454 450 36.1 17.8 24.0 17.8 8.5 10.7 60 1.3 3.3 455 21.0 36.1 17.8 18.0 18.0 17.3 2.2 17.0 6.6 6.4 507 18.0 36.1 17.8 10.4 19.0 8.3 12.0 17.3 2.2 10.0 508 36.0 36.1 17.8 10.4 19.0 8.3 12.0 12.3 12.5 508 36.0 36.1 17.8 18.0 19.4 8.3 12.0 12.3 2.2 6.9 12.5 440 420 36.1 17.8 18.0 19.4 8.3 12.0 12.3 2.2 6.9 18.5 450 48.0 36.1 17.8 24.0 19.4 8.3 12.0 12.3 2.2 6.9 451 452 30.0 36.1 17.8 24.0 19.4 8.3 12.0 12.5 12.5 452 453 36.0 36.1 17.8 24.0 19.4 8.3 12.0 12.3 2.2 6.9 12.5 453 454 450 36.1 17.8 24.0 19.4 8.3 12.0 12.5 454 455 455 455 455 455 455 455 455 455 455 455 455 455 455 455 456 246 247 258 249 16.3 14.5 9.3 4.6 0.4 4.7 3.6 3.4 457 480 30.3 23.8 74, 16.3 14.5 0.4 4.7 8.4 458 459 450 450 450 450 450 450 450 459 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450 450	027 - 1946 - 08	415	48.0	30.3	17.8	24.0	16.2	8.5	9.1	4.5	0.3	4.9	21.5	21.5	64	58
162 150 336 17.8 74 17.7 8.6 106 60 12 34 5.1 4.9 189 180 336 17.8 89 17.7 8.5 10.6 60 12 33 6.6 6.4 241 21.0 33.6 17.8 11.9 17.8 8.5 10.7 60 13 33 8.1 7.9 296 30.0 33.6 17.8 11.9 17.8 8.5 10.7 60 13 33 15.5 12.5 349 36.0 33.6 17.8 18.5 10.7 60 13 33 15.5 15.5 401 42.0 33.6 17.8 18.5 10.7 60 13 33 15.5 15.5 453 48.0 33.6 17.8 8.5 10.7 60 13 33 21.5 15.5 177 48.0 33.6 17.8 8.	027 - 1946 - 09	135	12.0	33.6	17.8	5.9	147	8.7	710.7	0.9	1.3	3.3	3.6	3.4	54	19
189 18.0 33.6 17.8 8.9 17.7 8.5 10.6 60 1.2 3.3 6.6 6.4 214 21.0 33.6 17.8 10.4 17.8 8.5 10.7 6.0 1.3 3.3 8.1 7.9 241 240 33.6 17.8 11.9 17.8 8.5 10.7 6.0 1.3 3.3 12.5 12.5 249 36.0 33.6 17.8 15.0 17.8 8.5 10.7 6.0 1.3 3.3 12.5 12.5 401 420 33.6 17.8 24.0 17.8 8.5 10.7 6.0 1.3 3.3 12.5 15.5 453 48.0 33.6 17.8 24.0 17.8 8.5 10.7 6.0 1.3 3.3 12.5 15.5 453 48.0 36.1 17.8 24.0 17.8 8.5 10.7 6.0 1.3 3.3 21.5 18.5 454 12.0 36.1 17.8 17.9 18.0 18.1 19.0 18.1 19.0 255 210 36.1 17.8 11.9 19.0 8.3 12.0 17.3 2.2 17.0 6.6 6.4 450 36.1 17.8 11.9 19.0 8.3 12.0 17.3 2.2 6.9 18.5 450 36.1 17.8 11.9 19.0 8.3 12.0 17.3 2.2 6.9 18.5 450 36.1 17.8 11.9 19.0 8.3 12.0 17.3 2.2 6.9 18.5 450 36.1 17.8 11.9 19.0 8.3 12.0 17.3 2.2 6.9 18.5 450 36.1 17.8 18.0 19.1 8.2 12.0 17.3 2.2 6.9 18.5 450 450 36.1 17.8 18.0 19.1 8.2 12.0 17.3 2.2 6.9 18.5 450 450 36.1 17.8 18.0 19.1 8.2 12.0 17.3 2.2 6.9 18.5 450 450 36.1 17.8 24.0 19.1 8.2 12.0 17.3 2.2 6.9 18.5 450 450 36.1 17.8 24.0 19.1 8.2 12.0 17.5 21.5 450 450 36.3 23.8 24.0 19.1 8.2 12.0 7.3 22.0 6.9 18.5 450 450 30.3 23.8 24.0 19.1 18.0 24.6 0.1 4.7 6.6 6.4 450 30.3 23.8 30.4 14.5 03.4	027 - 1946 - 10	162	15.0	33.6	17.8	7.4	17.7	9.8	10.6	6.02	1.2	3.4	5.1	4.9	46	22
214 21.0 33.6 17.8 10.4 17.8 8.5 10.7 6.0 13 3.3 8.1 7.9 241 24.0 33.6 17.8 11.9 17.8 8.5 10.7 6.0 1.3 3.3 12.5 12.5 296 30.0 33.6 17.8 15.0 17.8 8.5 10.7 6.0 1.3 3.3 12.5 12.5 349 36.0 33.6 17.8 18.5 10.7 6.0 1.3 33.3 12.5 12.5 12.5 14.5 15.5 14.5 15.5 <td>027 - 1946 - 11</td> <td>189</td> <td>18.0</td> <td>33.6</td> <td>17.8</td> <td>6.8</td> <td>17.7</td> <td></td> <td>10.6</td> <td>6.0</td> <td>47.2</td> <td>3.3</td> <td>9.9</td> <td>6.4</td> <td>43</td> <td>26</td>	027 - 1946 - 11	189	18.0	33.6	17.8	6.8	17.7		10.6	6.0	47.2	3.3	9.9	6.4	43	26
241 240 33.6 17.8 11.9 17.8 8.5 10.7 6.0 1.3 3.3 9.6 9.4 296 30.0 33.6 17.8 15.0 17.8 86 10.7 6.0 1.3 33 12.5 12.5 349 36.0 33.6 17.8 18.0 17.8 85 10.7 6.0 1.3 33 15.5 15.5 453 48.0 33.6 17.8 24.0 17.8 8.5 10.7 6.0 1.3 33 18.5 18.5 453 48.0 36.1 17.8 24.0 17.8 8.5 10.7 6.1 13.3 21.5 11.5 11.5 11.5 21.5 21.5 11.5 <t< td=""><td>027 - 1946 - 12</td><td>214</td><td>21.0</td><td>33.6</td><td>17.8 Z</td><td>10.4</td><td></td><td></td><td>10.7</td><td>0.9</td><td>(3)</td><td>3.3</td><td>8.1</td><td>6.7</td><td>41</td><td>30</td></t<>	027 - 1946 - 12	214	21.0	33.6	17.8 Z	10.4			10.7	0.9	(3)	3.3	8.1	6.7	41	30
296 30.0 33.6 17.8 15.0 17.8 86 10.7 60 1.3 3.3 12.5 12.5 349 36.0 33.6 17.8 18.0 17.8 8.5 10.7 60 1.3 3.3 15.5 15.5 401 42.0 33.6 47.8 21.0 17.8 8.5 10.7 6.0 1.3 3.3 15.5 1	027 - 1946 - 13	241	24.0	33.6					10.7	0.9	1.3	3.3	9.6		42	33
349 36.0 33.6 47.8 18.0 17.8 8.5 10.7 6.0 4.3 3.3 15.5	027 - 1946 - 14	296	30.0	33.6		15.0			10.7	0.9∩	1.3	3.3	12.5		50	41
401 42.0 33.6 41.8 21.0 17.8 85.1 10.7 6.0 4.3 3.3 18.5 18.	027 - 1946 - 15	349	36.0	33.6	17.8	18.0			10.7	≥6.0	1.3	3.3	15.5	15.5	56	48
453 48.0 33.6 C17.8 24.0 17.8 8.55 10.7 6.1 11.3 3.3 21.5 2	027 - 1946 - 16	401	42.0	33.6	647.8	21.0	17.8		10.7	0.9	7.3	333	18.5	18.5	63	56
148 12.0 36.1 4/17.8 5.9 190 8.5 12.0 7.3 2.2 7.0 7.3 2.2 7.0 7.3 2.2 7.0 5.1 4.9 207 15.0 36.1 17.8 17.8 190 8.4 11.9 7.3 2.2 7.0 5.1 4.9 235 21.0 36.1 17.8 10.4 190 8.3 12.0 7.3 2.2 6.9 8.1 7.9 264 24.0 36.1 17.8 11.9 190 8.3 12.0 7.3 2.2 6.9 8.1 7.9 264 24.0 36.1 17.8 11.9 190 8.3 12.0 7.3 2.2 6.9 9.4 7.5 12.5	027 - 1946 - 17	453	48.0	33.6	C17.8	24.0	17.8	8.53	10.7	6.1	1.3	3.3	21.5	21.5	70	63
177 15.0 36.1 17.8 74 190 84 11.9 7.3 22 7.0 5.1 4.9 207 18.0 36.1 17.8 8.9 19.0 8.3 11.9 7.3 22 7.0 6.6 6.4 235 21.0 36.1 17.8 10.4 19.0 8.3 12.0 7.3 22 6.9 8.1 7.9 264 24.0 36.1 47.8 11.9 19.0 8.3 12.0 7.3 22 6.9 8.1 7.9 382 30.0 36.1 47.8 15.0 19.1 8.2 12.0 7.3 22 6.9 18.5 12.5 440 42.0 36.1 17.8 18.0 19.1 8.2 12.0 7.3 22 6.9 18.5 18.5 497 48.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 22 6.9 18.5 </td <td>027 - 1946 - 18</td> <td>148</td> <td>12.0</td> <td>36.1</td> <td>117.8</td> <td>5.9</td> <td>19.0</td> <td>8.5</td> <td>12.0</td> <td>7.3</td> <td>2.2</td> <td>7.0</td> <td>3.6</td> <td></td> <td>57</td> <td>21</td>	027 - 1946 - 18	148	12.0	36.1	117.8	5.9	19.0	8.5	12.0	7.3	2.2	7.0	3.6		57	21
207 18.0 36.1 —17.8 8.9 19.0 8.3 11.9 7.3 2.2 7.0 6.6 6.4 235 21.0 36.1 —17.8 10.4 19.0 8.3 12.0 7.3 2.2 6.9 8.1 7.9 264 24.0 36.1 77.8 11.9 19.0 8.3 12.0 7.3 2.2 6.9 8.1 7.9 325 30.0 36.1 77.8 15.0 19.1 8.3 12.0 7.3 2.2 6.9 12.5 12.5 440 42.0 36.1 17.8 19.1 8.2 12.0 7.3 2.2 6.9 15.5 15.5 497 48.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 2.2 6.9 15.5 15.5 497 48.0 36.1 17.8 2.0 19.0 7.3 2.2 6.9 15.5 15.5 15.5	027 - 1946 - 19	177	15.0	36.1	17.8	7.4	19.0	8.4	11.9	7.3	2.2	7.0	5.1	4.9	50	25
235 21.0 36.1 17.8 10.4 19.0 8.3 12.0 47.3 2.2 6.9 8.1 7.9 264 24.0 36.1 77.8 11.9 19.0 8.3 12.0 7.3 2.2 6.9 9.6 9.4 325 30.0 36.1 77.8 15.0 19.1 8.3 12.0 7.3 2.2 6.9 12.5 12.5 440 42.0 36.1 17.8 19.1 8.2 12.0 7.3 2.2 6.9 15.5 15.5 497 48.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 2.2 6.9 18.5 18.5 162 48.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 2.2 6.9 18.5 18.5 18.5 162 12.0 30.3 23.8 5.9 16.3 11.8 9.3 4.6 0.4 4.7 3.6 3.4 225 18.0 30.3 23.8 7.4 16.3<	027 - 1946 - 20	207	18.0	36.1	17.8	8.9	19.0	8.3	11.9	7.3	2.2	7.0	6.6	6.4	46	29
264 24.0 36.1 71.8 11.9 19.0 83-12.0 7.3 2.2 6.9 9.6 9.4 325 30.0 36.1 47.8 15.0 19.1 8.3 12.0 7.3 2.2 6.9 12.5 12.5 382 36.0 36.1 17.8 18.0 19.1 8.2 12.0 7.3 2.2 6.9 15.5 12.5 440 42.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 2.2 6.9 18.5 18.5 497 48.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 2.2 6.9 18.5 18.5 162 12.0 30.3 23.8 5.9 16.3 11.8 9.3 4.6 0.4 4.7 3.6 3.4 194 15.0 30.3 23.8 16.3 11.6 19.3 4.6 0.7 4.8 5.1 4.9	027 - 1946 - 21	235	21.0	36.1	117.8	10.4	19.0		12.0		2.2	6.9	8.1	7.9	44	33
325 30.0 36.1 47.8 15.0 19.1 8.3 12.0 7.3 2.2 6.9 12.5	- 1946	264	24.0	36.1	217.8	11.9	19.0		12.0	7.3		6.9			46	37
382 36.0 36.1 17.8 18.0 19.1 8.3 12.0 7.3 2.2 6.9 15.5	027 - 1946 - 23	325	30.0	36.1	G17.8	15.0	19:1		12.0		2.2	6.9	12.5	12.5	54	45
440 42.0 36.1 17.6 21.0 19.1 8.2 12.0 7.3 2.2 6.9 18.5	027 - 1946 - 24	382	36.0	36.1		18.0	19:1		12.0		2.2			15.5	61	53
497 48.0 36.1 17.8 24.0 19.1 8.2 12.0 7.3 2.2 6.9 6.9 21.5<	027 - 1946 - 25	440	42.0	36.1	17.8	21.0	19.1		12.0						69	61
162 12.0 30.3 23.8 5.9 16.3 11.8 9.3 4.6 0.0 4.7 3.6 3.4 194 15.0 30.3 23.8 74.0 16.3 11.7 9.2 4.6 0.2 4.8 5.1 4.9 225 18.0 30.3 23.8 8.9 46.3 11.6 19.3 4.6 0.1 4.7 6.6 6.4 55 31.0 30.3 23.8 10.4 16.4 11.6 0.3 4.6 0.1 4.7 6.6 6.4	027 - 1946 - 26	497	48.0	36.1		24.0	19.1		12.0	7.3					77	69
194 150 30.3 23.8 7.4 16.3 11.7 9.2 4.6 0.2 4.8 5.1 4.9 225 18.0 30.3 23.8 8.9 46.3 11.6 19.3 4.6 0.1 4.7 6.6 6.4 256 21.0 30.3 23.8 10.4 16.4 11.6 0.3 4.6 0.1 4.7 6.6 6.4	027 - 1946 - 27	162	12.0	30.3	23.8 🜣	5.9	16.3	11.8	9.3		0.0	4.7			84	22
225 18.0 30.3 23.8 8.9 16.3 11.6 9.3 14.6 0.1 4.7 6.6 6.4 6.4 25.6 21.0 30.3 22.8 10.4 16.4 11.6 0.3 4.6 0.1 4.7 8.1 7.0	027 - 1946 - 28	194	15.0	30.3	23.8	7.4	16.3	11.7	9.2	4.6			5.1		72	27
256 210 303 238 104 164 116 03 46 01 47 81 70	- 1946		18.0	30.3	23.8	8.9	16.3	11.6	-9.3		0.1				99	31
230 21.0 30.3 23.0 10.4 10.4 11.0 3.3 4.0 0.1 4.7 0.1 7.3	027 - 1946 - 30	256	21.0	30.3	23.8	10.4	16.4	11.6	9.3	4.6	0.1	4.7	8.1	7.9	63	35



ENG/CKR: ARF

DATE: 04/24/15

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SHEET NO.:

JOB NO.:

4/4

V max (Ibs/screw)	40	49	58	66	75	24	29	34	39	44	54	63	73	82	27	32	38	43	48	59	70	80	91	
T max (lbs/screw)	61	63	71	79	87	91	78	72	68	99	89	77	98	95	66	85	78	74	72	75	85	95	105	
"J" (in)	9.4	12.5	15.5	18.5	21.5	3.4	4.9	6.4	6.7	9.4	12.5	15.5	18.5	21.5	3.4	4.9	6.4	6.7	9.4	12.5	15.5	18.5	21.5	
"H" (in)	9.6	12.5	15.5	18.5	21.5	3.6	5.1	9.9	8.1	9.6	12.5	15.5	18.5	21.5	3.6	5.1	9.9	8.1	9.6	12.5	15.5	18.5	21.5	
"G" (in)	4.7	4.7	4.7	4.7	4.6	3.1	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	8.9	8.9	6.8	49	£9	7.9	6.7	4.9	6.7	
"F" (in)	0.1	0.1	0.1	0.1	0.1	1.5	1.4	1.4	1.5	1.5	5.	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	
	4.6	4.7	4.7	4.7	4.7	6.2	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.3	7.5	7.5	7.5	5.7	7.5	9.7	7.6	9.7	9.7	
"D" (in) "E" (in)	9.3	9.3	9.3	9.3	9.3	10.9	10.8	10.8	10.9	10.9	10.9	10.9	10.9	10.9	12.1	U 2	12.1	12.2	12.2	12.2	12.2	12.2	12.2	M
"C" (in)	11.6	11.7	11.6	11.6	11.6	11.7	11.6	11.6	11.5 +	11.5	11.6	11.5	11.5	11.5	11.4	11.4	11.3	11.3	11.8	11.3	11.3	11.2	11.2	d
. (in) .8	16.4	16.4	16.4	16.4	16.4	17.9	17.9	17.9	18.0	18.0	18.0	18.0	18.0	18.0	19.2	19.2	19.2	19.3	193	19.3	19.3	19:3	19,3	
"A" (in) "B" (in)	11.9	15.0	18.0	21.0	24.0	5.9	7.4	8.9	10,4	14.9	15.0	18.0	21.0	24.0	5.9	7.4	8.9	10.4	11.9	15.0	18.0	21.0	24.0	
DEPTH (in)	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	
HEIGHT (in)	30.3	30.3	30.3	30.3	30.3	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	33.6	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	
WIDTH (in)	24.0	30.0	36.0	42.0	48.0	12.0	15.0	18.0	21.0	24.0	30.0	36.0	42.0	48.0	12.0	15.0	18.0	21.0	24.0	30.0	36.0	45.0	48.0	
Max Operating Weight (Ibs)	288	354	417	479	542	176	211	246	280	314	386	455	523	592	195	234	272	310	348	428	504	581	657	
Unit Name	027 - 1946 - 31	027 - 1946 - 32	027 - 1946 - 33	027 - 1946 - 34	027 - 1946 - 35	027 - 1946 - 36	027 - 1946 - 37	027 - 1946 - 38	027 - 1946 - 39	027 - 1946 - 40	027 - 1946 - 41	027 - 1946 - 42	027 - 1946 - 43	027 - 1946 - 44	027 - 1946 - 45	027 - 1946 - 46	027 - 1946 - 47	027 - 1946 - 48	027 - 1946 - 49	027 - 1946 - 50	027 - 1946 - 51	027 - 1946 - 52	027 - 1946 - 53	

