



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

**-1ST APPLICATION FOR OSHPD
PREAPPROVAL OF MANUFACTURER'S
CERTIFICATION (OPM)**

OFFICE USE ONLY

APPLICATION #: OPM-0498-13

OSHPD Preapproval of Manufacturer's Certification (OPM)

Type: ☒ New ☐ Renewal ☐ Update to Pre-CBC 2013 OPA Number: _____

Manufacturer Information

Manufacturer: Belimed AG

Manufacturer's Technical Representative: Heike Hütterer

Mailing Address: Belimed AG, Grienbachstrasse 11 • 6300 Zug • Switzerland

Telephone: +41 71 644 86 65 Email: heike.huetterer@belimed.com

Product Information

Product Name: WD750 Washer/Disinfector

Product Type: Washer/Disinfector

Product Model Number: WD750L-1ST, WD750M-1ST, WD750S-1ST,
WD750L-2ST, WD750M-2ST, WD750S-2ST

General Description: WD750: Large-scale cleaning, disinfection and drying system designed for economic efficiency in hospitals and clinics. Storage tanks use preheated water that is reused for faster cycle times.

Thermal and chemothermal disinfection techniques are used.

Applicant Information

Applicant Company Name: ISAT Seismic Bracing

Contact Person: William V Joerger

Mailing Address: 1020 Crews Road, Suite Q, Matthews NC 28105

Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

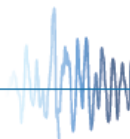
I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: June 6, 2018

Title: Principal Structural Engineer Company Name: ISAT Seismic Bracing

"Access to Safe, Quality Healthcare Environments that Meet California's

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-700 (REV 12/16/15)



OSHPD

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OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Registered Design Professional Preparing Engineering Recommendations

Company Name: ISAT Seismic Bracing

Name: William V Joerger California License Number: SE 4545

Mailing Address: 1020 Crews Road, Suite Q, Matthews NC 28105

Telephone: 510-714-0216 Email: wvjoerger@isatsb.com

OSHPD Special Seismic Certification Preapproval (OSP)

- ☐ Special Seismic Certification is preapproved under OSP-
(Separate application for OSP is required)
- ☐ Special Seismic Certification is not preapproved

Certification Method(s)

- ☐ Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16
- ☐ Other* (Please Specify): _____

*Use of criteria other than those adopted by the California Building Standards Code, 2016 (CBSC 2016) 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 2016 may be used when approved by OSHPD prior to testing.

- ☒ Analysis
- ☐ Experience Data
- ☐ Combination of Testing, Analysis, and/or Experience Data (Please Specify): _____

List of Attachments Supporting the Manufacturer's Certification

- ☐ Test Report ☒ Drawings ☒ Calculations ☐ Manufacturer's Catalog
- ☐ Other(s) (Please Specify): _____

OFFICE USE ONLY – OSHPD APPROVAL VALID FOR CBC 2016 & ALL PRE-2016 CODE BASED PROJECTS

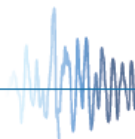
Signature: Jeffrey Enzler Date: 9/12/2019

Print Name: Jeffrey Enzler

Title: District Structural Engineer

Condition of Approval (if applicable): _____

"Access to Safe, Quality Healthcare Environments that Meet California's





TOTAL SUPPORT

Innovation • Engineering • BIM • Fabrication

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Submittal Documents

OSHPD OPM-0498-13

DATE: 09/12/2019

ATTACHMENT OPM DRAWINGS WD750 STERILIZERS

BELIMED

ISAT
1020 Crews Road Suite Q
Matthews, N.C. 28105
704-841-4080



WVJ 08 Apr 19

FILE NO.: CLT-0618-045

"Empowered by Experience"

REV 1

OSHPD OPM-0498-13 DWG - i



OSHPD OPM-0498-13

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FILE NO.: CLT-0618-045

“Empowered by Experience”

Index Rev 1

OSHPD OPM-0498-13 DWG - ii

OSHDP OPM-0498-13

MANUFACTURE: BELIMED
EQUIPMENT TYPE: STERILIZER

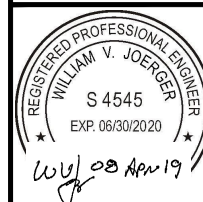
GENERAL NOTES

1. THIS OSHDP PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. SEISMIC CRITERIA USED: $S_{DS} = 2.50$ $I_P = 1.5$ $a_p = 1.0$ $R_p = 1.5$ (OTHER EQUIPMENT). FOR $z/h = 0.0$ $F_pH = 1.13$ AND FOR $z/h \leq 1.0$ $F_pH = 3.00$ AND $F_pV = 0.50$.
3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-10 CHAPTER 13 "SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS". AN OVERSTRENGTH FACTOR $\Omega_0 = 1.5$ IS USED FOR CONCRETE ANCHORAGE FORCES PER ASCE 7-10 SUPPLEMENT 1 TABLE 13.6-1. LOADS SHOWN ARE STRENGTH DESIGN LOADS PER ASCE 7-10 SECTION 12.4.3.2.
4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
5. STEEL MATERIALS: PLATE 304 STAINLESS STEEL BY MANUFACTURER ($F_y = 30.0$ KSI PER ASTM A240 TYPE 304), ALL THREAD ROD ASTM F593 CW1 304 STAINLESS STEEL FOR BOLTS AT ELEVATED FLOORS, ANGLE ASTM A35 ($F_u = 58$ KSI) HOT DIPPED GALVANIZED.
6. CONCRETE SLABS:
 - a. FOR ELEVATED SOLID CONCRETE SLABS: 6" MINIMUM THICKNESS OF NORMAL WEIGHT CONCRETE WITH 3000 PSI MINIMUM STRENGTH.
 - b. METAL DECK: 3" DEEP COMPOSITE STEEL DECK, 20 GAGE MINIMUM, 4 1/2" MINIMUM BOTTOM FLUTE WIDTH AND MINIMUM FLUTE SPACING FO 12", WITH 3 1/4" SAND LIGHT WEIGHT OR NORMAL WEIGHT CONCRETE COVER AT 3000 PSI MINIMUM STRENGTH.
 - c. FOR SLAB ON GRADE: 6" THICKNESS NORMAL WEIGHT CONCRETE AT 3000 PSI MINIMUM STRENGTH.
7. POST INSTALLED CONCRETE ANCHORS: HILTI KWIK BOLT TZ (ESR-1917) 5/8" DIAMETER x 4" EFFECTIVE EMBEDMENT. DRILL 11/16" DIAMETER X 4 3/4" DEEP HOLE; CLEAN HOLE PER MANUFACTURER'S INSTRUCTIONS. FOR ANCHORS INTO THE SOFFITT OF THE METAL DECK USE KWIK BOLT TZ (ESR-1917) 1/2" DIAMETER x 4" MIN. HOLE DEPTH FOR 3 1/4" EFFECTIVE EMBEDMENT WITH 1" MAXIMUM OFFSET FROM THE CENTER OF THE METAL DECK FLUTE. BOTH ARE SUPPLIED BY INSTALLATION CONTRACTOR.
8. EXERCISE DUE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR TENDONS

OPM-0498-13 BELIMED WD750 STERILIZER GENERAL NOTES



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SCALE N.T.S.	PAGE GEN NOTES

OSHDP OPM-0498-13 DWG - 1

OSHDP OPM-0498-13

MANUFACTURE: BELIMED
EQUIPMENT TYPE: STERILIZER

ATTACHMENT NOTES:

1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2016. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2016.
2. PERIODIC SPECIAL INSPECTION PER CBC 2016 SECTION 1705A AND TABLE 1705A.3 INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MEMBER THICKNESS, HOLE DIMENSIONS, ANCHOR EMBEDMENT AND ADHERENCE TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. IN ADDITION, FOLLOW THE PROVISIONS OF THE 2016 CALIFORNIA BUILDING CODE SECTION 1910A.5.5. TORQUE CONTROLLED POST-INSTALLED ANCHORS - TEST USING A CALIBRATED TORQUE WRENCH; 60 FOOT-POUNDS TORQUE FOR 5/8" ANCHORS AND 40 FOOT-POUNDS FOR 1/2" ANCHORS SHALL BE ACHIEVED WITHIN ONE-HALF TURN OF THE NUT. TEST 50% OF THE ANCHORS FOR EACH PIECE OF EQUIPMENT. IF ANY ANCHOR FAILS TEST ALL ANCHORS. REPORT OF TEST RESULTS ARE TO BE SUBMITTED TO THE ENFORCEMENT AGENCY. THE SEOR SHALL PROVIDE REMEDIAL ANCHORAGE DETAILS IN THE EVENT THAT AN ANCHOR FAILS TO MEET THE TEST REQUIREMENTS. FOR THROUGH BOLTS MARK THE NUT LOCATION AT SNUG TIGHT CONDITION. INSPECTOR IS TO VERIFY 3/4 TURN.
3. STRENGTH DESIGN WAS USED FOR ANCHOR FORCE CALCULATIONS INCLUDING ϕ PER ACI 318-14 WHERE REQUIRED FOR ATTACHMENT TO CONCRETE.
4. PROVIDE FOR FULL THREAD ENGAGEMENT OF THE NUT AND WASHER.

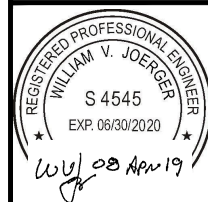
RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

1. CONFIRM THE MATERIAL PROPERTIES AND THICKNESS OF THE CONCRETE SLAB TO WHICH THE EQUIPMENT IS ATTACHED MEETS THE REQUIREMENTS OF THIS OPM.
2. PROVIDE A PLAN FOR INSPECTION OF SUPPORTS AND ATTACHMENTS AND VERIFY ITS IMPLEMENTATION.
3. CONFIRM THE SPECIFIED MINIMUM CONCRETE EDGE DISTANCES ARE MAINTAINED BASED ON THE ACTUAL EQUIPMENT LOCATION. VERIFY THAT EXISTING OR NEW ANCHORS ARE AN ADEQUATE DISTANCE FROM THIS UNIT'S ATTACHMENT.
4. VERIFY THAT THE EXISTING STRUCTURE IS ADEQUATE FOR THE IMPOSED DEAD, LATERAL AND TENSION FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
5. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH CBC 2016 AND WITH THE OPM-0498-13 DETAILS INCLUDING MATERIALS AND DIMENSIONS OF THE SUPPORT WHERE THE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN.
6. VERIFY THAT THE PROJECT SPECIFIC S_{DS} AND z/h VALUES RESULT IN SEISMIC FORCES (E_h AND E_v) DO NOT EXCEED THE VALUES SHOWN IN THESE DETAILS.

OPM-0498-13 BELIMED WD750 STERILIZER ATTACHMENT NOTES

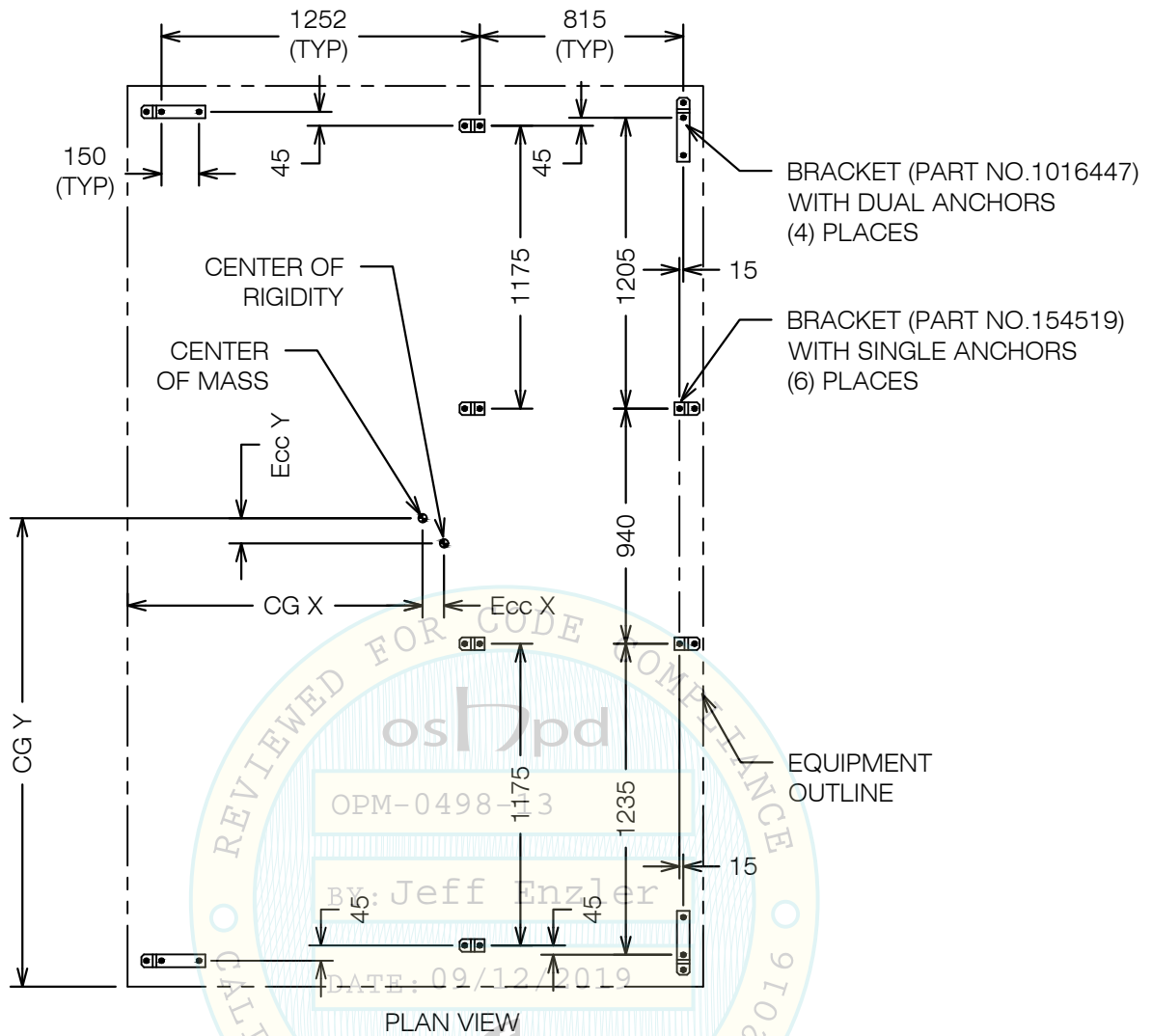


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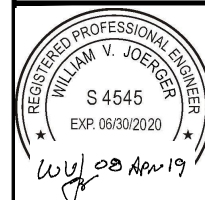


ANCHORS ARE BY INSTALLATION CONTRACTOR. SEE PAGE "GEN NOTES" NOTE 7 FOR ANCHORS AT GRADE AND PAGE "ELEVATED" FOR ANCHORS AT ELEVATED SLABS. SEE PAGE "BRACKETS" FOR BRACKET DIMENSIONS. ALL DIMENSIONS ARE IN MM.

OPM-0498-13 BELIMED WD750L ATTACHMENT PLAN

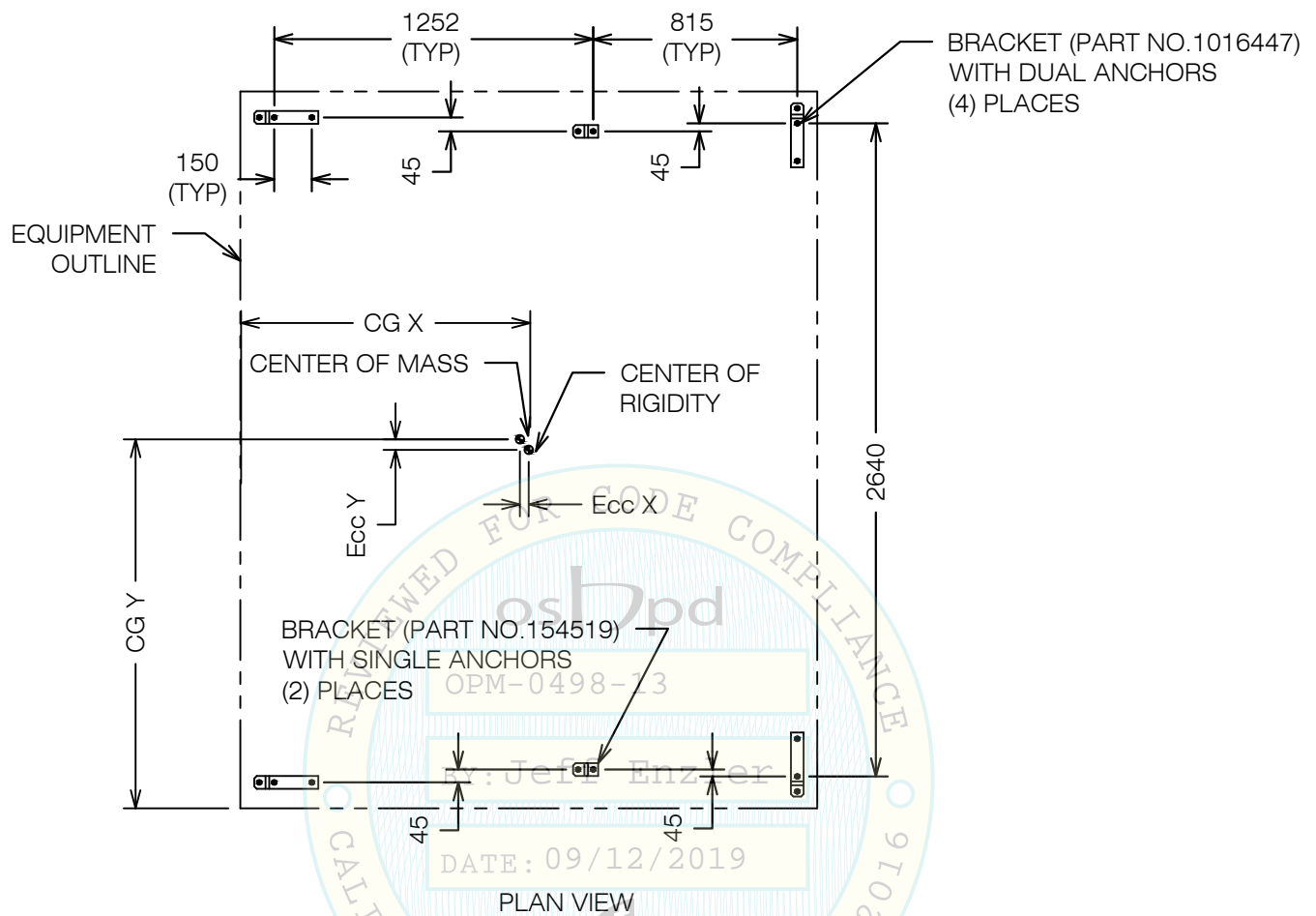


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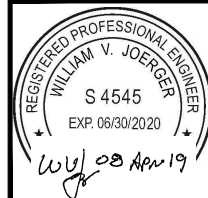


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OPM-0498-13 BELIMED WD750M ATTACHMENT PLAN

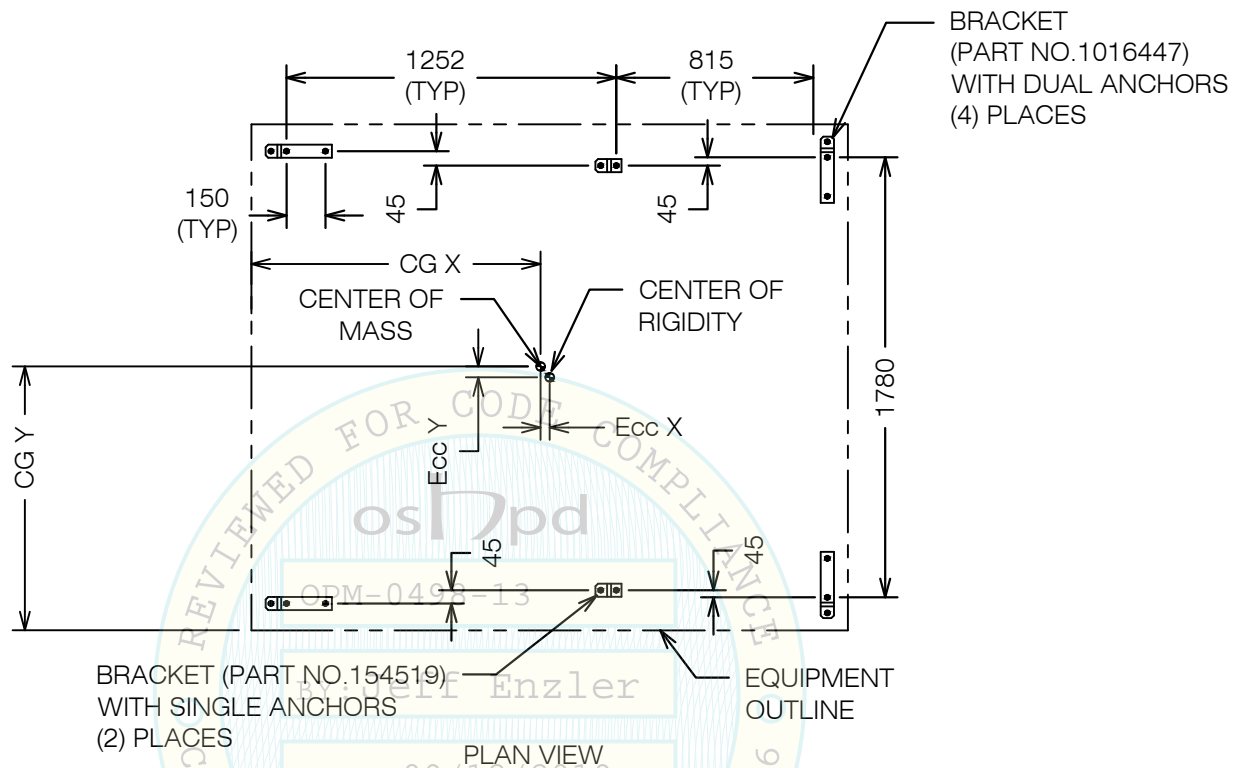


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SCALE N.T.S. **PAGE** WD750M PLAN

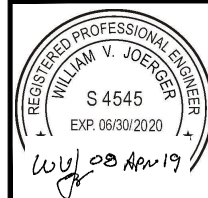


ANCHORS ARE BY INSTALLATION CONTRACTOR. SEE PAGE "GEN NOTES" NOTE 7 FOR ANCHORS AT GRADE AND PAGE "ELEVATED" FOR ANCHORS AT ELEVATED SLABS. SEE PAGE "BRACKETS" FOR BRACKET DIMENSIONS.

OPM-0498-13 BELIMED WD750S ATTACHMENT PLAN

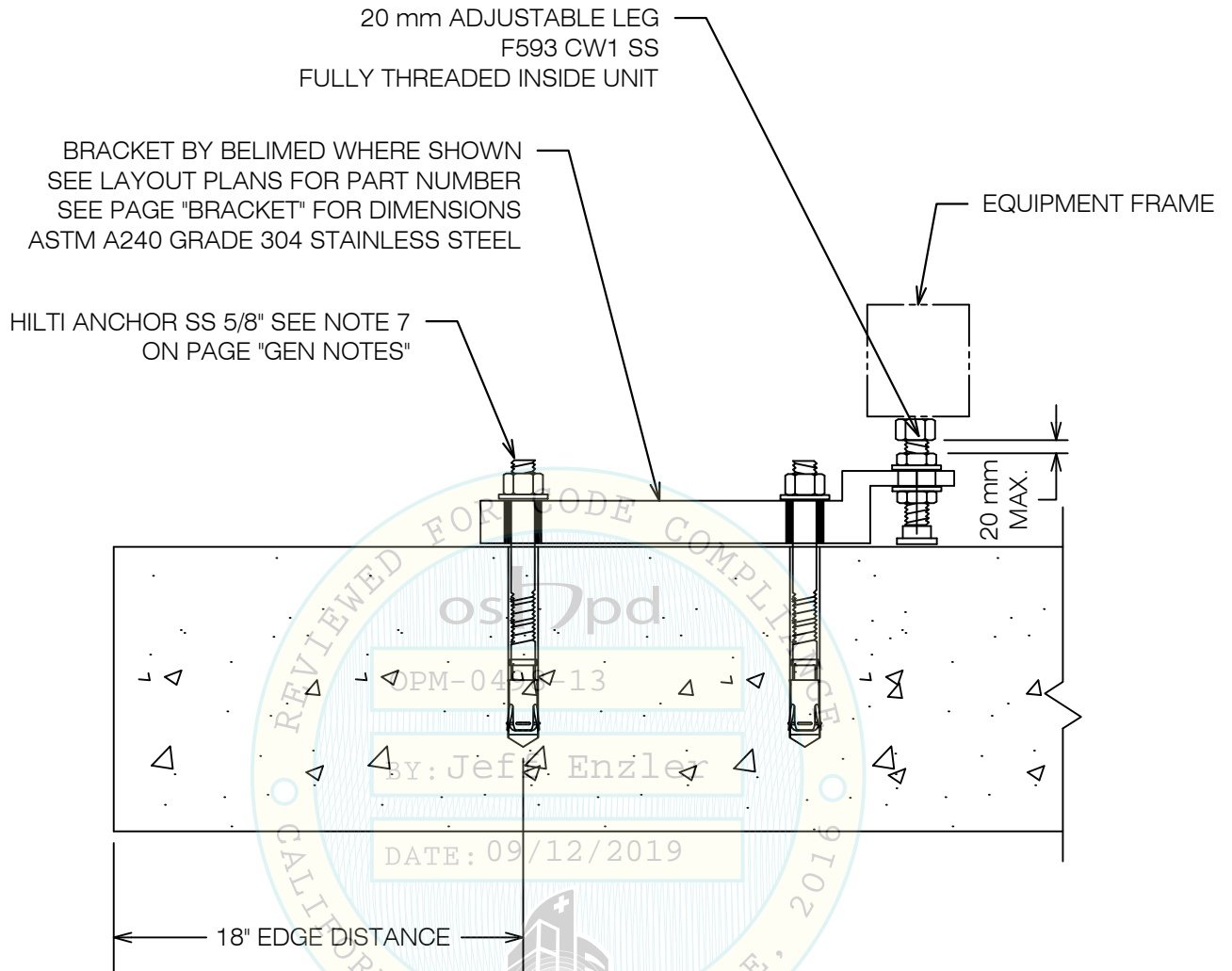


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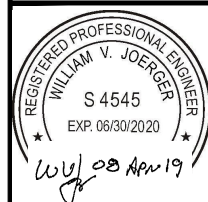
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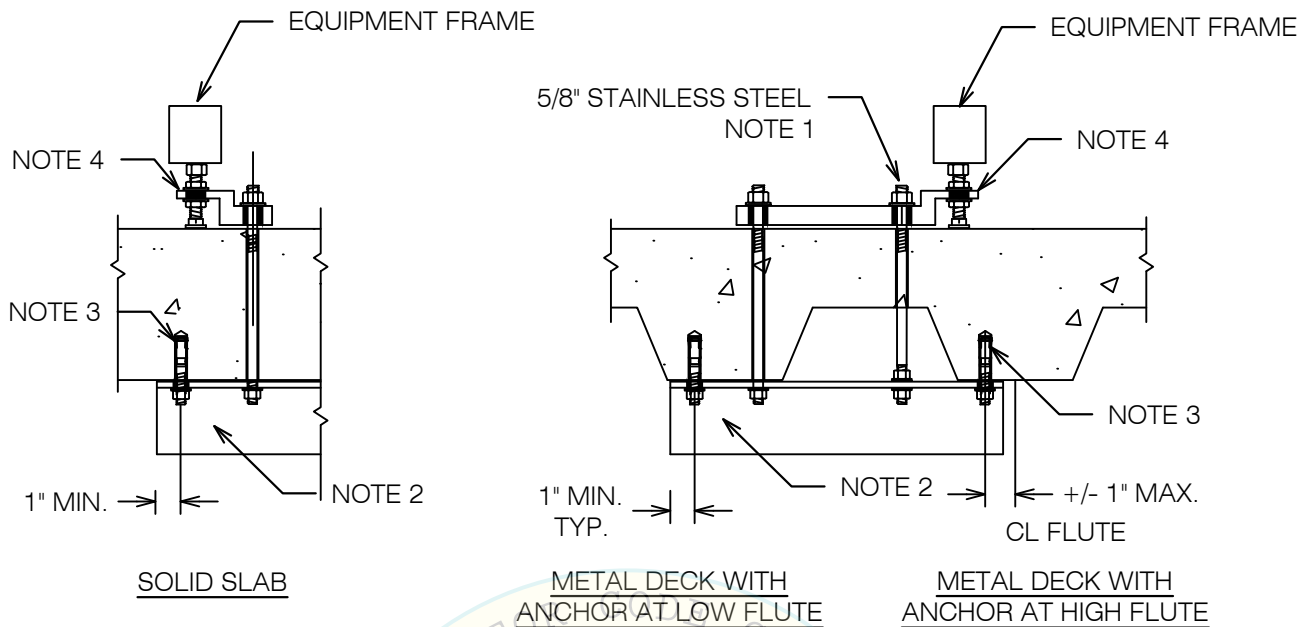
OPM-0498-13 BELIMED WD750L,WD750M,WD750S
STERILIZER EQUIPMENT ANCHORAGE AT SLAB-ON-GRADE



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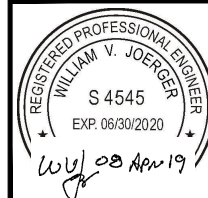
NOTES:

1. DRILL 11/16" HOLE IN THE CONCRETE SLAB TO RECEIVE THE 5/8" ASTM F593 CW1 304 STAINLESS STEEL RODS WITH MATCHING WASHERS AND NUTS. BOLT SHALL BE TORQUED BY 3/4 TURN OF THE NUTS AFTER SNUG TIGHT (THE SNUG TIGHT CONDITION DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT) CONDITION IS ACHIEVED, UNLESS NOTED OTHERWISE. THROUGH-BOLTS IN CONCRETE SHALL RECEIVE SPECIAL INSPECTION AND TESTING (THROUGH BOLTS WITH STEEL TO STEEL CONNECTION IN TENSION DO NOT REQUIRE TENSION TESTING) IN ACCORDANCE WITH REQUIREMENTS FOR POST-INSTALLED ANCHORS.
2. SUPPLEMENTAL ANGLE SHALL BE L3x3x1/4 ASTM A36. DRILL 11/16" HOLES IN ANGLE FOR EQUIPMENT BOLTS. FOR LOCATIONS WHERE A TOP NUT CANNOT BE INSTALLED, DRILL AND TAP THE ANGLE TO RECEIVE THE 5/8" EQUIPMENT ANCHORAGE BOLT.
3. ANCHOR INTO BOTTOM OF SLAB SHALL BE HILTI KWIK BOLT TZ 1/2", SEE NOTE 7 ON PAGE "GEN NOTES".
4. BRACKET BY BELIMED WHERE SHOWN SEE LAYOUT PLANS FOR PART NUMBER SEE PAGE "BRACKET" FOR DIMENSIONS ASTM A240 GRADE 304 STAINLESS STEEL. ADJUSTABLE LEG BY BELIMED SHALL BE 20 mm F593 CW1 WITH 20 mm MAXIMUM BETWEEN NUTS.

OPM-0498-13 BELIMED WD750L,WD750M,WD750S
STERILIZER ATTACHMENT DETAILS AT ELEVATED SLABS



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BELIMED WD750 STERILIZERS DIMENSIONS AND WEIGHTS							
Sterilizer		WD750L-1ST	WD750M-1ST	WD750S-1ST	WD750L-2ST	WD750M-2ST	WD750S-2ST
Operating Wt	kg [lbs]	2794 [1270]	2440 [1109]	2095 [952]	2794 [1270]	2440 [1109]	2095 [952]
CG X1	mm [in]	1178 [46]	1154 [45]	1094 [43]	1178 [46]	1154 [45]	1094 [43]
Ecc X1	mm [in]	2794 [110]	95.5 [4]	35.2 [1]	87.5 [3]	95.5 [4]	35.2 [1]
CG Y1	mm [in]	1872 [74]	1470 [58]	979 [39]	1872 [74]	1470 [58]	1021 [40]
Ecc Y1	mm [in]	202 [8]	170 [7]	134 [5]	202 [8]	170 [7]	134 [5]
CG Z1	mm [in]	1154 [45]	1164 [46]	1195 [47]	1154 [45]	1164 [46]	1195 [47]


NOTES:

1. CG Z IS THE VERTICAL CENTER OF GRAVITY MEASURED FROM THE FLOOR. CG X AND CG Y ARE THE CENTER OF GRAVITY MEASURED FROM THE CORNER OF THE EQUIPMENT. Ecc X AND Ecc Y IS THE DISTANCE FROM THE CENTER OF MASS TO THE CENTER OF RIGIDITY OF THE BOLT GROUP.

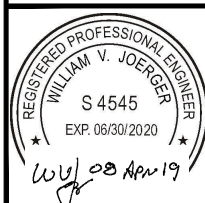
	Attachment at Grade						Attachment at Elevated Slab			
Model	Anchor Type See Page "GEN NOTES" - Note 7	Forces at Grade				Anchor Type Note 3	Forces at Elevated Slab			
		Tu		Vu			Tu		Vu	
		LBF	kN	LBF	kN		LBF	kN	LBF	kN
WD750L-1ST	HILTI KB ZT SS 0.625" x 4" EFF. EMBED.	0	0.0	1236	5.5	0.625" SS ROD	3619	16.1	3867	17.2
WD750M-1ST	HILTI KB ZT SS 0.625" x 4" EFF. EMBED.	67	0.3	1169	5.2	0.625" SS ROD	3619	16.1	3867	17.2
WD750S-1ST	HILTI KB ZT SS 0.625" x 4" EFF. EMBED.	832	3.7	1034	4.6	0.625" SS ROD	3619	16.1	3867	17.2
WD750L-2ST	HILTI KB ZT SS 0.625" x 4" EFF. EMBED.	0	0.0	1236	5.5	0.625" SS ROD	3619	16.1	3867	17.2
WD750M-2ST	HILTI KB ZT SS 0.625" x 4" EFF. EMBED.	67	0.3	1169	5.2	0.625" SS ROD	3619	16.1	3867	17.2
WD750S-2ST	HILTI KB ZT SS 0.625" x 4" EFF. EMBED.	832	3.7	1034	4.6	0.625" SS ROD	3619	16.1	3867	17.2

1. Tu AND Vu VALUES INCLUDE AN OVERSTRENGTH FACTOR OF 1.5 IN ACCORDANCE WITH ASCE 7-10 SUPPLEMENT No. 1.
2. FOR INTERACTION CHECKS THE CALCULATED ANCHOR CAPACITY HAS BEEN MULTIPLIED BY 0.75 TO ACCOUNT FOR THE CONCRETE ANCHORAGE CAPACITY REDUCTION FROM ACI 318-14 SECTION 17.2.3.4.4.
3. SEE NOTE 6 ON PAGE "GEN NOTES".

OPM-0498-13 BELIMED WD750L, WD750M, WD750S
STERILIZER DIMENSIONS AND ANCHORAGE FORCES



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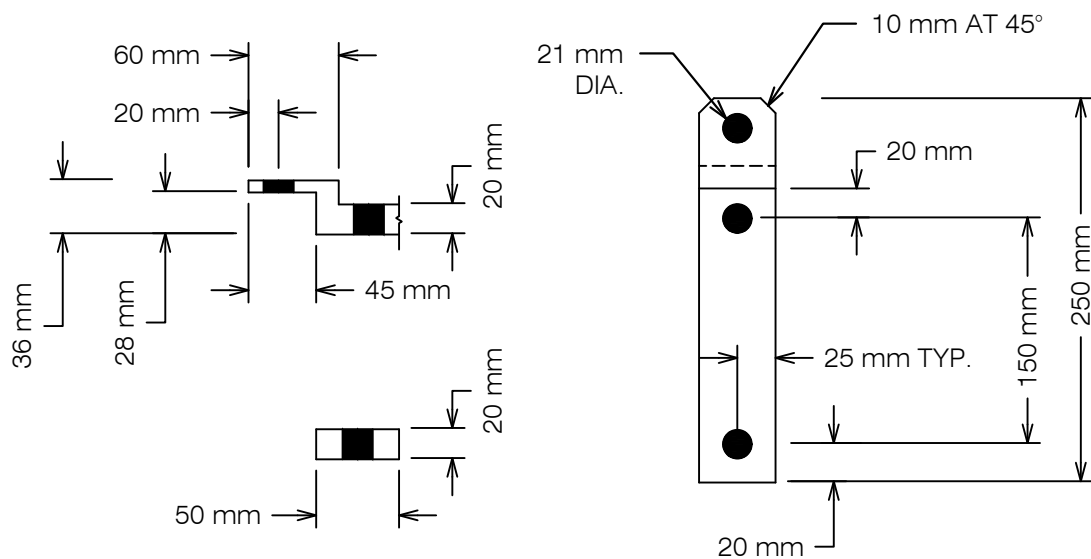
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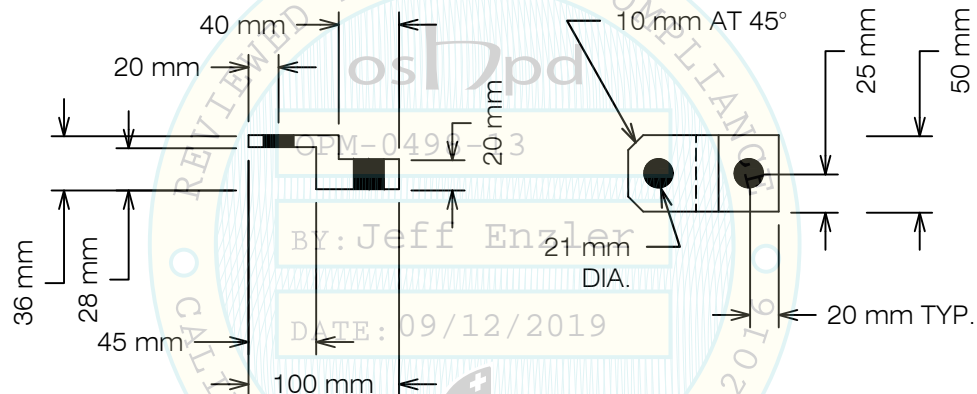
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PART NO. 1016447 304 SS STAINLESS STEEL
(EN 10088-2:2005); FY=30 KSI MINIMUM)

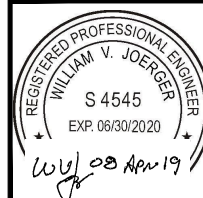


PART NO. 154519 304 SS STAINLESS STEEL
(EN 10088-2:2005); FY=30 KSI MINIMUM)

OPM-0498-13 BELIMED WD750 MODEL BRACKETS



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