

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

WWW.						
APPLICATION FOR HCAI PR		OFFICE USE ONLY				
MANUFACTURER'S CERTIF	ICATION (OPM)	APPLICATION #: OPM-0507				
HCAI Preapproval of Manufacturer's	Certification (OPM)					
Type: New X Renewal/Update	9					
Manufacturer Information						
Manufacturer: Belimed, Inc						
Manufacturer's Technical Representative:	Jay Upchurch					
Mailing Address: 8351 Palmetto Commerc	ce Parkway, Suite 10, Ladson, SC 294	56				
Telephone: (843) 216-7424	Email: jay.upchurch@belime	ed.com				
	(DECOMPOSITION OF THE PROPERTY					
Bradust Information						
Product Information		7				
Product Name: MST-H(10.02) 96XHSX an	d HSXE Sterilizers - 0507	C				
Product Type: Sterilizers						
Product Model Number: 9612HS1, 9612H	S1E, 9615HS1, 9615HS1E, 9618HS1	, and <mark>961</mark> 8HS1E				
	medical steam sterilizers with an optio ingle door and double door configuration	nal internally mounted steam generator. These ons.				
		20/				
Applicant Information	Op MININE BRINDS	4 '/				
Applicant Company Name: Belimed, Inc	A PLANT TAIG					

Contact Person: Jay Upchurch

Mailing Address: 8351 Palmetto Commerce Parkway, Suite 10, Ladson, SC 29456

Telephone: (843) 216-7424 Email: jay.upchurch@belimed.com

Title: Product Manager

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STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION FACILITIES DEVELOPMENT DIVISION

Registered Design Professonal Preparing Engineering Recommendations						
Company Name: ISAT SEISMIC BRACING						
Name: Deep Shah California License Number: S5867						
Mailing Address: 14848 Northam Street, La Mirada, CA 90638						
Telephone: (714) 523-1771						
110 A1 0 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1						
HCAI Special Seismic Certification Preapproval (OSP)						
Special Seismic Certification is preapproved under OSP OSP Number:						
OR CODE O						
Contitionation Mothers						
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, 2022 (CBSC 2022) 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 2022 may be used when approved by HCAI prior to testing.						
X Analysis						
Experience Data DATE: 02/29/2024						
Combination of Testing, Analysis, and/or Experience Data (Please Specify):						
HCAI Approval						
Date: 2/29/2024						
Name: Timothy Piland Title: Senior Structural Engineer						
Condition of Approval (if applicable):						

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HCAi

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY



Submittal Documents

OSHPD OPM-0507

SUPPORT AND ATTACHMENT CONSTRUCTION DRAWINGS

DATE: 02/29/2024

MST-H (10.02) 9-6-X HSX AND HSXE STERILIZERS

BELIMED

ISAT 14848 Northam Street, La Mirada, CA 90638 877-999-4728

FILE NO.: CLT1018-215





A Division of Tomarco Contractor Specialties

OSHPD OPM-0507

DRAWING INDEX FOR MST-H (10.02) 9-6-X HSX AND HSXE STERILIZERS

BY: Timothy Piland

DATF: 02/29/2024

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FILE NO.: CLT-1018-215 "Empowered by Experience"

OSHPD OPM-0507

MANUFACTURER: BELIMED **EQUIPMENT TYPE: STERILIZER**

GENERAL NOTES

- 1. THIS OSHPD PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE ČBČ 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE CBC 2019
- 2. SEISMIC CRITERIA USED: FOR MODELS HS1, HS2 AND HS1E WHERE $S_{DS} = 2.25$ $I_P = 1.5$ ap = 1.0 Rp = 1.5 (OTHER MECHANICAL COMPONENT) FOR z/h = 0.0 FpH = 1.01 AND FOR z/h <= 1.0 FpH = 2.70 AND FpV = 0.45. FOR MODEL HS2E WHERE $S_{DS} = 1.8$, FOR z/h = 0 FpH = 0.81, FOR z/h = 1.0 FpH = 2.16 AND FpV = 0.36.
- 3. SUPPORT AND ATTACHMENT FORCES ARE DETERMINED USING ASCE 7-16 CHAPTER 13 "SEISMIC DESIGN REQUIREMENTS FOR NONSTRUCTURAL COMPONENTS". AN OVERSTRENGTH FACTOR $\Omega 0 = 1.5$ is used for CONCRETE ANCHORAGE FORCES PERCEC 2019 SECTION 1617A.1.23 LOADS SHOWN ARE STRENGTH DESIGN LOADS PERCEC 2019 SECTION 1605A.2
- 4. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE. RCUDE
- 5. VOIDED
- 6. STEEL MATERIALS: THROUGH BOLTS AISI A2 STAINLESS STEEL (ULTIMATE TENSILE STRENGTH OF 73.2 KSI [505 MPa]) WITH MATCHING WASHERS AND NUTS. ATTACHMENT BRACKET BY BELIMED EURONORM 1.4301 STAINLESS STEEL WITH A TENSILE STRENGTH OF 75 KSI [520 Mpa] AND MINIMUM YIELD STRENGTH OF 39 KSI [270 MPa].

OPM-0507

- 7. CONCRETE SLABS:
 - a. FOR SLAB ON GRADE OR ELEVATED SOLID CONCRETE SLABS: 6" MINIMUM THICKNESS OF NORMAL WEIGHT CONCRETE WITH 3000 PSI MINIMUM STRENGTH, Piland
 - b. METAL DECK: 3" DEEP COMPOSITE STEEL DECK, 20 GAGE MINIMUM WITH FLUTE SPACING OF 12", 4.5 INCH MINIMUM BOTTOM FLUTE WIDTH WITH 3.25" SAND LIGHT WEIGHT OR NORMAL WEIGHT CONCRETE COVER AT 02/29/2024 4000 PSI MINIMUM STRENGTH.
- 8. POST-INSTALLED CONCRETE ANCHORS (HILTI KWIK BOLTS TZ2 (ESR-4266) STAINLESS STEEL 0.625" DIAMETER X 4.75" MINIMUM HOLE DEPTH (4" EFFECTIVE EMBEDMENT) AND 60 FT-LBS INSTALLATION TORQUE. EDGE DISTANCE IS 18" MINIMUM.

OPM-0507 BELIMED MST-H(10.02) 9-6-X HSX AND HSXE STERILIZER GENERAL NOTES



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PAGE **GEN NOTES**

OSHPD OPM-0507

MANUFACTURE: BELIMED EQUIPMENT TYPE: STERILIZER

ATTACHMENT NOTES:

- 1. REFER TO OPM-0587 DETAILS FOR THE MATERIALS OF CONSTRUCTION AND FASTENER DIMENSIONS.
- 2. THROUGH BOLT INSTALLATION AND INSPECTION (DETAILS OF THE SUPPLEMENTAL STEEL AND CONNECTIONS TO STRUCTURE ARE SHOWN ON PAGE "MISC STEEL".)
 - a. THROUGH BOLTS ARE TO BE TORQUED BY 3/4 TURN OF THE NUT AFTER SNUG TIGHT CONDITION IS ACHIEVED. SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS REQUIRED TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
 - b. THROUGH BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT SIZE (HOLE SIZE = BOLT SIZE + 1/16") FOR BOTH THE STEEL AND CONCRETE.
 - c. THROUGH BOLTS WITH STEEL-TO-STEEL CONNECTION IN TENSION DO NOT REQUIRE TESTING.
- 3. FOR POST INSTALLED CONCRETE ANCHORS PERIODIC SPECIAL INSPECTION SHALL BE IN ACCORDANCE WITH CBC 2019 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 2019 CALIFONIA 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. A 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
- 4. EXERCISE CARE WHEN DRILLING POST-INSTALLED ANCHORS TO AVOID DAMAGING CONCRETE REINFORCEMENT OR
- PROVIDE FOR FULL THREAD ENGAGEMENT OF NUT AND WASHER.

RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD

- CONFIRM THE MINIMUM REQUIREMENTS SPECIFIED IN THIS OPM FOR THE CONCRETE SLAB ARE MET, INCLUDING MATERIAL PROPERTIES AND THICKNESS OF CONCRETE SLAB.
- 2. PROVIDE A PLAN FOR INSPECTION OF SUPPORTS AND ATTACHMENTS AND VERIFY ITS IMPLEMENTATION.
- 3. VERIFY THAT THE EXISITING STRUCTURE IS ADEQUATE FOR THE IMPOSED DEAD, LATERAL AND TENSION FORCES SHOWN IN ADDITION TO ALL OTHER LOADS.
- 4. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH CBC 2019 AND WITH THE OPM-0507 DETAILS.
- 5. VERIFY THAT THE PROJECT SPECIFIC Sos AND z/h VALUES RESULT IN SEISMIC FORCES (En AND EV) DO NOT EXCEED THE VALUES SHOWN IN THESE DETAILS.

BELIMED MST-H(10.02) 9-6-X HSX AND 9-6-X HSXE STERILIZER ATTACHMENT NOTES

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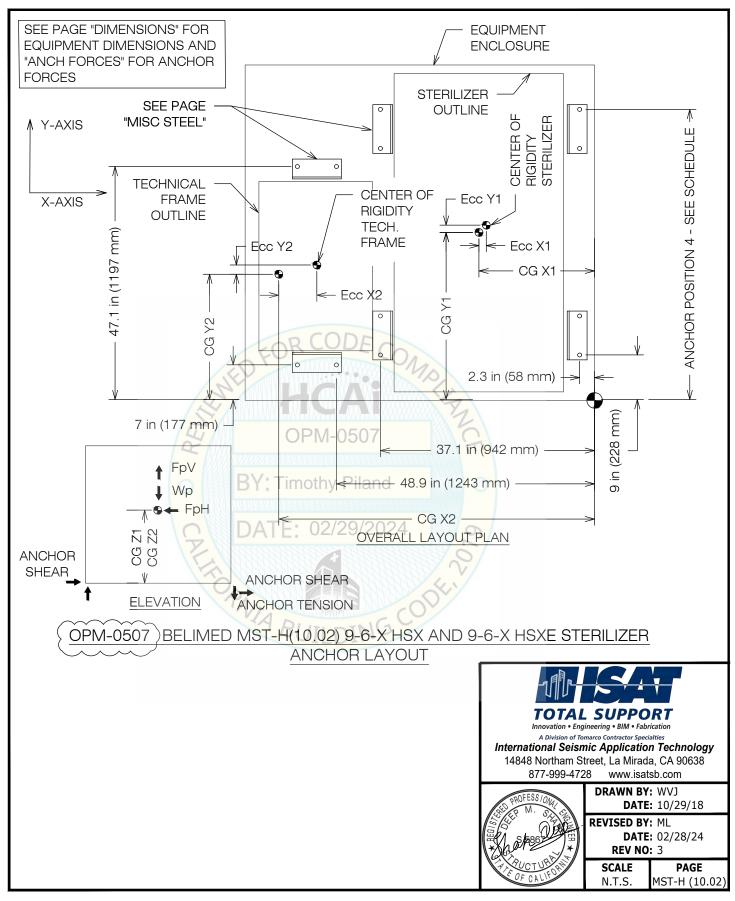
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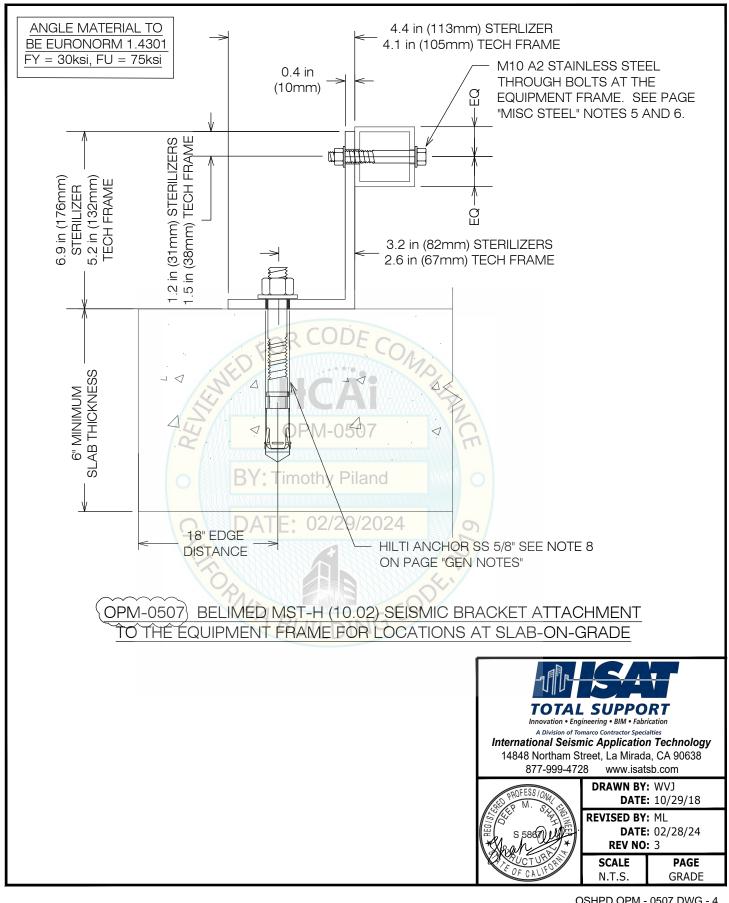
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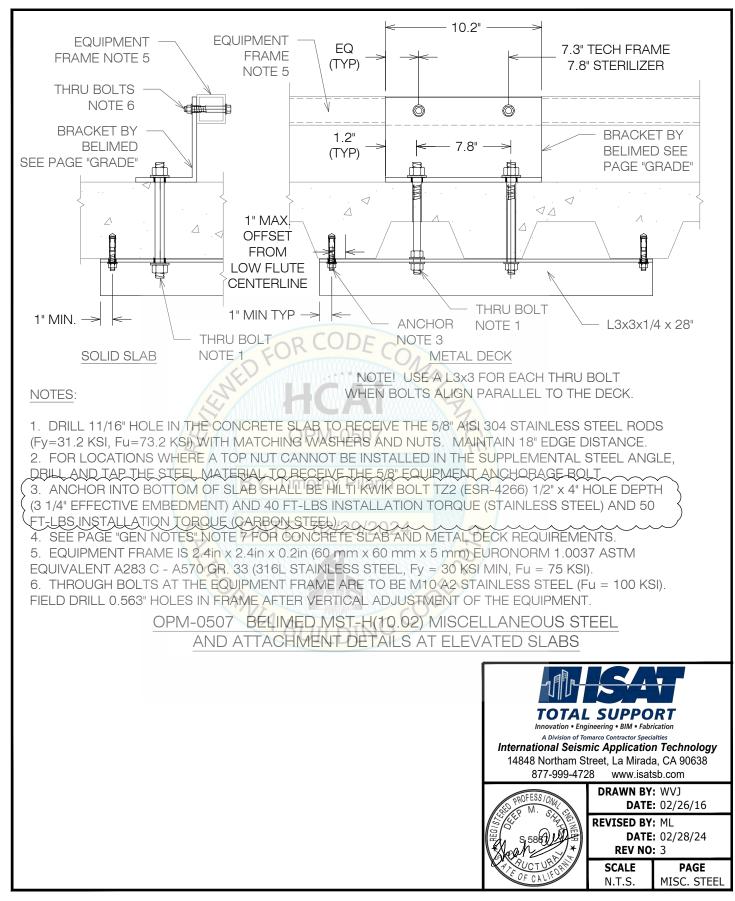
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TAL SUPPORT

PAGE **ATTACHMENT**







BELIMED MST-H (10.02) 9-6-X HSX STERILIZERS DIMENSIONS AND WEIGHTS											
Sterilizer		9-6-12 HS1	9-6-15 HS1	9-6-18-HS1	9-6-9 HS2	HS2 9-6-12 HS2 9-6-15 HS2 9-6-18-H					
Operating Wt	lb	3783	4332	4738	4279	4758	5317	5743			
CG X1	in	22.2	22.2	22.2	22.2	22.2	22.2	22.2			
Ecc X1	in	2.6	2.6	2.6	2.5	2.5	2.5	2.5			
CG Y1	in	28.6	34.3	40.1	27.1	33.9	40.0	45.9			
Ecc Y1	in	-5.1	-5.5	-5.7	0.0	0.1	0.2	0.1			
CG Z1	in	33.6	33.6	33.6	33.7	33.7	33.7	33.7			
Anchor Postion 4	in	58.5	70.6	82.8	45.1	58.5	70.6	82.8			
Technical Frame		9-6-12 HS1	9-6-15 HS1	9-6-18-HS1	9-6-9 HS2	9-6-12 HS2	9-6-15 HS2	9-6-18-HS2			
Operating Wt	lb	463	485	485	463	463	485	485			
CG X2	in	60.2	60.0	60.0	60.2	60.2	60.0	60.0			
Ecc X2	in	7.5	7.5	7.5	8.9	8.9	8.7	8.7			
CG Y2	in	25.3	25.3	25.3	25.3	25.3	25.3	25.3			
Ecc Y2	in	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7			
CG Z2	in	23.0	21.7	21.7	23.0	23.0	21.7	21.7			

BELIMED MST-H (10.02) 9-6-X HSXE STERILIZERS WITH STEAM GENERATOR DIMENSIONS AND WEIGHTS									
Sterilizer		9-6-12 HS1E	9-6-15 HS1E	9-6-18-HS1E	9-6-9 HS2E	9-6-12 HS2E	9- 6-15 HS2E	9-6-18-HS2E	
Operating Wt	lb	4634	5311	5717	5018	5609	6301	6722	
CG X1	in	22.8	22.8	22.7	22.6	22.6	22.6	22.6	
Ecc X1	in	3.1	3.1	3.1	2.9	3.0	3.0	2.9	
CG Y1	in	29.1	33.8	45.9	27.0	33.5	38.7	43.8	
Ecc Y1	in	-4.6	-6.0	050.0	0.0	-0.3	-1.1	-2.1	
CG Z1	in	41.2	41.3	40.8	39.8	40.0	40.2	39.8	
Anchor Postion 4	in	58.5	70.7	82.8	45.1	58.5	70.6	82.8	
Technical Frame	0	9-6-12 HS1E	9-6-15 HS1E	9-6-18-HS1E	9-6-9 HS2E	9-6-12 HS2E	9- 6-15 HS2E	9-6-18-HS2E	
Operating Wt	lb	463	485	485	463	463	485	485	
CG X2	in	60.2	T 60.0)	/2060.012	60.2	60.2	60.0	60.0	
Ecc X2	in	8.9	8.7	8.7	8.9	8.9	8.7	8.7	
CG Y2	in	25.3	25.3	25.3	25.3	25.3	25.3	25.3	
Ecc Y2	in	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	
CG Z2	in	23.0	21.7	21.7	23.0	23.0	21.7	21.7	

OPM-0507 BELIMED MST-H(10.02) 9-6-X HSX AND HSXE DIMENSIONS AND WEIGHTS



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BELIMED MST-H (10.02) 9-6-X HSX STERILIZERS ANCHORAGE FORCES								
Model		Attachment at Grad	Attachment at Elevated Slab					
MST-H (10.02)		Anchor Type	Forces a	t Grade ⁴	Anchor Type ²	Forces at Elevated Slab		
STERLIZER	S_{DS}	See Page "GEN NOTES" - Note 8	Tu - Lbs	Vu - Lbs	Note 2	Tu - Lbs	Vu - Lbs	
9-6-12 HS1	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	1637	737	0.625" SS ROD	3128	1966	
9-6-15 HS1	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	1616	821	0.625" SS ROD	3141	2190	
9-6-18 HS1	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	1615	884	0.625" SS ROD	3176	2358	
9-6-9 HS2	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2571	1084	0.625" SS ROD	4705	2891	
9-6-12 HS2	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2212	1216	0.625" SS ROD	4097	3243	
9-6-15 HS2	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2173	1349	0.625" SS ROD	4054	3597	
9-6-18 HS2	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2611	1444	0.625" SS ROD	4857	3850	
Technical Frame	2.25	HILTI KB TZ SS 0.625" x 3.125" EFF. EMBED.	1024	155	0.625" SS ROD	1837	514	

BELIMED MST-H (10.02) 9-6-X HSXE STERILIZERS WITH STEAM GENERATOR ANCHORAGE FORCES									
Model		Attachment at Grad	Attachment at Elevated Slab						
MST-H (10.02)		Anchor Type	Forces a	t Grade ⁴	Anchor Type ²	Forces at Ele	Forces at Elevated Slab		
STERLIZER	Sps	See Page "GEN NOTES" - Note 8	Tu - Lbs	Vu - Lbs		Tu - Lbs	Vu - Lbs		
9-6-12 HS1E	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2565	968	0.625" SS ROD	4806	2581		
9-6-15 HS1E	2.25	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2535	1028	0.625" SS ROD	4835	2742		
9-6-18 HS1E	2.25	HILTI KB TZ SS 0.625" x 4" EFF, EMBED.	2676	1458	0.625" SS ROD	4965	3888		
9-6-9 HS2E	1.8	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2847	1044	0.625" SS ROD	5211	2784		
9-6-12 HS2E	1.8	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2410	1157	0.625" SS ROD	4518	3085		
9-6-15 HS2E	1.8	HILTI KB TZ SS 0.625" x 4" EFF, EMBED.	2338	1248	0.625" SS ROD	4463	3328		
9-6-18 HS2E	1.8	HILTI KB TZ SS 0.625" x 4" EFF. EMBED.	2222	1248	0.625" SS ROD	4325	3328		
Technical Frame	2.25	HILTI KB TZ SS 0.625" x 3.125" EFF. EMBED.	1024	155	0.625" SS ROD	1837	514		

- ´TŮ AND VŮ VAĽUEŠ FOŘ AŇCHÔRAĞE ÁT GŘADĚ INČLUĎES ÁN OVEŘSTRĚNGŤH FACTOR ŎF 1.5 IN ACČORĎANČE WITH PAĞE "ĞEN NOTES" - NOTE 3. Vu VALUES FOR ANCHORAGE AT ELEVATED FLOORS INCLUDES AN OVERSTRENGTH FACTOR OF 1.5 IN ACCORDANCE WITH PAGE "GEN NOTES" - NOTE 3. THE VALUES FOR ANCHORAGE AT ELEVATED FLOORS INCLUDES AN OVERSTRENGTH FACTOR OF 1.0.
- 2. SEE NOTE 6 ON PAGE "GEN NOTES"
- 3. SEE TABLE FOR SDS VALUES. SDS = 2.25 FOR HS1, HS2, HS1E AND TECHNICAL FRAME WITH FPH GRADE = 1.01 AND FPH ELEVATED = 2.70 AND FpV = 0.45. Sps = 1.8 FOR HSE2 WITH FpH GRADE = 0.81 AND FpH ELEVATED = 2.16 AND FpV = 0.36.
- 4. FORCES ARE STRENGTH DESIGN AND ARE PER ANCHOR BOLT.

BELIMED MST-H(10.02) 9-6-X HSX AND 9-6-X HSXE OPM-0507 { ANCHORAGE FORCES



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PAGE **ANCH FORCES**