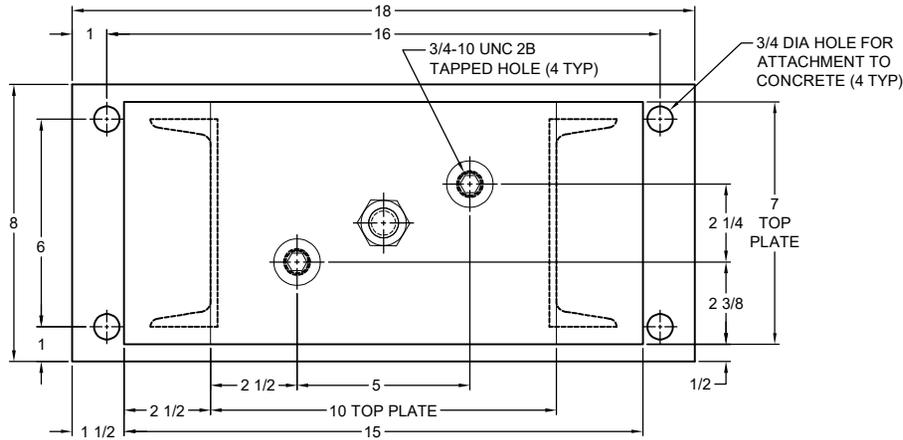


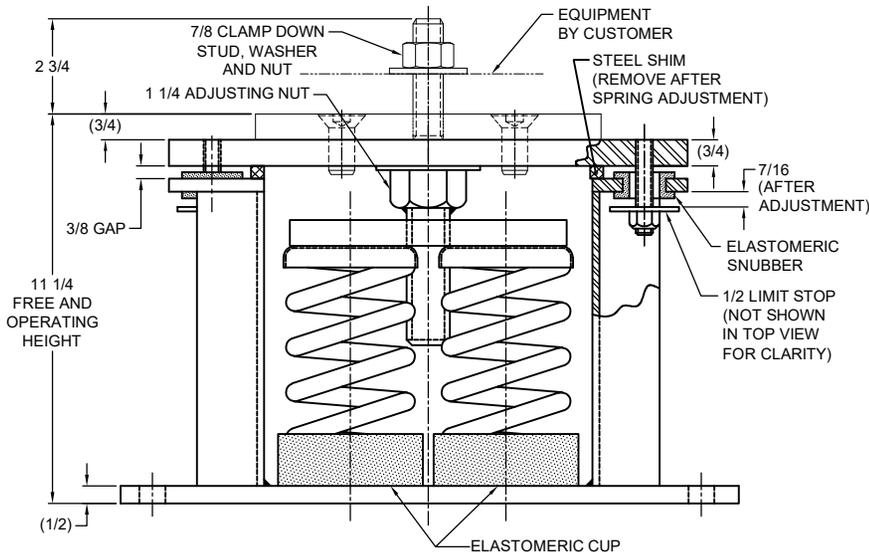
REV.	DESCRIPTION	DATE	BY



**MODEL M4SS-2F 4-SPRING SEISMIC ISOLATORS FOR NOMINAL 2" DEFLECTION**

MODEL	RATED LOAD (LBS)	RATED DEFLECTION (IN)	SPRING RATE (LB/IN)	SPRING COLOR CODE
M4SS-2F-1700N <sup>1</sup>	1700	2.00	850	BLACK/BLUE
M4SS-2F-2000	2000	2.00	1000	RED
M4SS-2F-2600N <sup>1</sup>	2600	2.00	1300	RED/BLUE
M4SS-2F-3100N <sup>1</sup>	3100	2.00	1550	RED/BLACK
M4SS-2F-4000	4000	2.00	2000	GREEN
M4SS-2F-4600N <sup>1</sup>	4600	2.00	2300	GREEN/BLUE
M4SS-2F-5100N <sup>1</sup>	5100	2.00	2550	GREEN/BLACK
M4SS-2F-5600	5600	2.00	2800	GRAY
M4SS-2F-6000N	6000	2.00	3000	GREEN/RED
M4SS-2F-6700N <sup>1</sup>	6700	2.00	3350	GRAY/BLACK
M4SS-2F-7600N <sup>1</sup>	7600	2.00	3800	GRAY/RED
M4SS-2F-8800N <sup>1</sup>	8800	2.00	4400	GRAY/GREEN

**NOTES:**  
 1. TWO NESTED SPRINGS YIELD THIS LOAD. THE COLOR CODE INDICATED IS FOR OUTER SPRING/ INNER SPRING.



- NOTES:**
- STANDARD ISOLATOR FINISH: WELDED HOUSINGS AND CASTINGS- ONE COAT BLACK PAINT, SPRINGS- POWDER COAT, HARDWARE- ZINC ELECTROPLATE.
  - STATIC LOAD RATINGS ON SHEET 2 OF 2 ARE FOR GUIDANCE ONLY. VALUES ARE BASED ON TESTS OR CALCULATIONS WITH BASE PLATES BOLTED TO STEEL. FOR ATTACHMENT TO CONCRETE, CONSULT FACTORY.
  - RATED DEFLECTIONS ARE WITHIN 25% OF NOMINAL. HIGHER DEFLECTIONS ARE ALLOWED IF THEY MEET SPECIFICATIONS.



ISOLATOR SELECTIONS	
LOC 1:	LOC 2:
LOC 3:	LOC 4:
LOC 5:	LOC 6:
LOC 7:	LOC 8:
CUSTOMER EQPT. TAG:	

NOTE: MATERIAL SHOWN IS FOR (1) SET.

OTHER MATERIALS, COMPOUNDS, OR FINISHES WITH EQUAL OR SUPERIOR PROPERTIES MAY BE SUBSTITUTED AS THEY BECOME AVAILABLE.

**CERTIFIED FOR:**

JOB NAME: \_\_\_\_\_  
 CUSTOMER : \_\_\_\_\_  
 CUSTOMER P.O.: \_\_\_\_\_  
 SALES ORDER: \_\_\_\_\_

**MODEL M4SS-2F 1700-8800 LBS.  
 VIBRATION ISOLATOR WITH  
 SINGLE BOLT ATTACHMENT SEISMIC  
 RESTRAINT  
 2 INCH DEFLECTION**



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 Bloomingdale, NJ 07403  
 Houston, TX 77041

SCALE :  
 NONE  
 SHEET:  
 1 OF 2



DRAWING NO.: \_\_\_\_\_ REVISION

REV.	DESCRIPTION	DATE	BY

**INSTALLATION AND ADJUSTMENT INSTRUCTIONS**

- 1) LOCATE MOUNTING AS SPECIFIED ON INSTALLATION DRAWING.
- 2) ATTACH MOUNTS TO SUPPORT STRUCTURES.
- 3) PLACE EQUIPMENT ON MOUNTS.
- 4) LOOSEN LIMIT STOP NUTS (DO NOT REMOVE).
- 5) TURN ADJUSTING NUT (MAINTAIN EVEN LOADING ON ALL ADJUSTING NUTS).
- 6) REPEAT STEPS 1 THROUGH 5 GOING FROM MOUNT TO MOUNT UNTIL EQUIPMENT IS RAISED SUFFICIENTLY TO PERMIT REMOVAL OF STEEL SHIMS.
- 7) CHECK LEVEL OF EQUIPMENT & ADJUST MOUNTS ACCORDINGLY.
- 8) AFTER ALL MOUNTS HAVE BEEN ADJUSTED TIGHTEN LIMIT STOP NUT TO MAINTAIN GAP AS ILLUSTRATED.

**NOTES:**

- 1) TOP PLATE OF HOUSING MUST BE FULLY LOADED BY THE EQUIPMENT SUPPORTING BRACKET OR STRUCTURAL STEEL BASE.

**GENERAL NOTES**

1. HORIZONTAL AND VERTICAL RATINGS OF M4SS-2E SERIES ARE SHOWN IN FIGURE 1, 2 AND 3. ANALYSIS HAVE BEEN PERFORMED IN ACCORDANCE WITH APPLICABLE CODES
2. TO USE RATED LOAD CURVES:
  - A. CALCULATE VERTICAL AND HORIZONTAL FORCES ACTING ON MOUNTINGS, INCLUDING TRANSLATIONS AND OVERTURNING MOMENTS.
  - B. THE INTERSECTION OF THE HORIZONTAL LOAD AND VERTICAL LOAD MUST FALL WITHIN THE RATING CURVE FOR THE SPECIFIED PART AND METHOD OF ATTACHMENT.
3. THE RATED LOAD CURVES ASSUME ONE OF THE FOLLOWING METHODS OF TIE-DOWN AT EACH MOUNT LOCATION:
  - A. FOUR (4) 5/8" DIA. HILTI "KWIK-BOLT II" WEDGE ANCHORS, WITH MINIMUM 4" EMBEDMENT INTO 3000 PSI NORMAL WEIGHT CONCRETE. MINIMUM EDGE DISTANCE IS 8 1/4".  
(NOTE: OTHER BRANDS OF ANCHOR BOLTS MAY BE USED, PROVIDED THEY ARE OF EQUAL STRENGTH) TO ACHIEVE RATED LOAD, "SPECIAL INSPECTION" IS REQUIRED ON ALL CONCRETE ANCHOR INSTALLATIONS, AS NOTED BELOW:
  - a) 50% OR ALTERNATE BOLTS IN A GROUP SHALL BE TESTED USING EITHER TEST VALUE SHOWN BELOW:

ANCHOR DIA.	WEDGE ANCHOR	
	TENSION LOAD (LBS)	TORQUE (FT-LB)
5/8"	2300	110

ANCHOR DIA REFERS TO THE THREAD SIZE FOR WEDGE ANCHOR.

- b) APPLY PROOF TEST LOAD TO WEDGE ANCHORS WITHOUT REMOVING THE NUT, IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.
- c) REACTION LOADS FROM TEST FIXTURE MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE.
- d) TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURE.
- e) TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER THE INSTALLATION OF THE ANCHORS.
- f) THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
 

**HYDRAULIC RAM METHOD**  
THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE SPECIFIED TEST LOAD. A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.

**TORQUE WRENCH METHOD**  
THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN ONE-HALF (1/2) TURN OF THE NUT.
- g) IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE PASS, THEN RESUME THE INITIAL TESTING FREQUENCY.
- B. FOUR (4) 5/8" DIA. BOLTS PER ASTM A307 OR BETTER.
4. THE SUPPORT STRUCTURE (BY OTHERS) INCLUDING FLOOR, IS THE RESPONSIBILITY OF STRUCTURAL ENGINEER OF RECORD FOR A SITE SPECIFIC PROJECT.
5. ALL UTILITY CONNECTIONS SHALL HAVE SUFFICIENT FLEXIBILITY TO PERMIT ADEQUATE MOTION IN ALL DIRECTIONS.

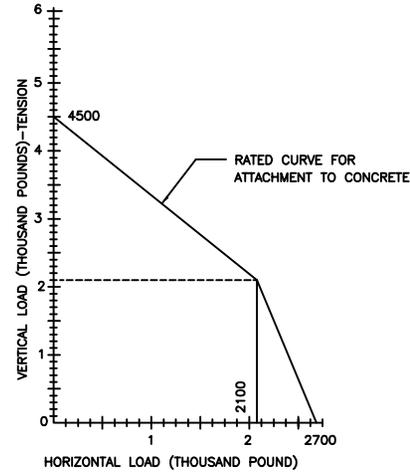


FIGURE 1

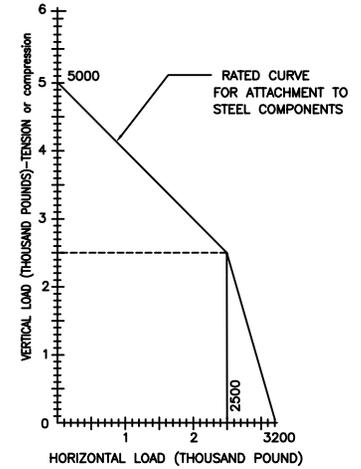


FIGURE 2

**RATED LOADS FOR M4SS-2E SERIES**

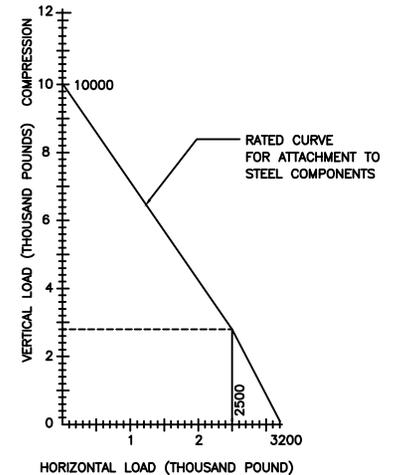


FIGURE 3

OTHER MATERIALS, COMPOUNDS, OR FINISHES WITH EQUAL OR SUPERIOR PROPERTIES MAY BE SUBSTITUTED AS THEY BECOME AVAILABLE.

**CERTIFIED FOR:**

JOB NAME: \_\_\_\_\_  
 CUSTOMER: \_\_\_\_\_  
 CUSTOMER P.O.: \_\_\_\_\_  
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SCALE:	NONE	
SHEET:	2 OF 2	
DRAWING NO.:		REVISION