

IP UNITS (INCHES AND POUNDS)

TYPE	DIMENSION																			
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
FMSG	16.00	24.50	10.00	23.50	1.50	1.00	7.50	1.38	1.38	1.88	9.88	19.75	1.88	6.25	1.88	12.25	1.88	20.75	2.75	2.00

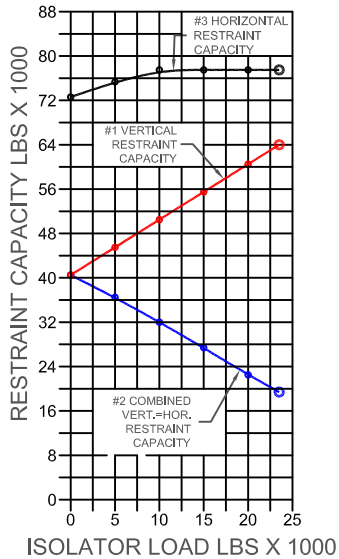


FIGURE 2
STEEL ATTACHMENT

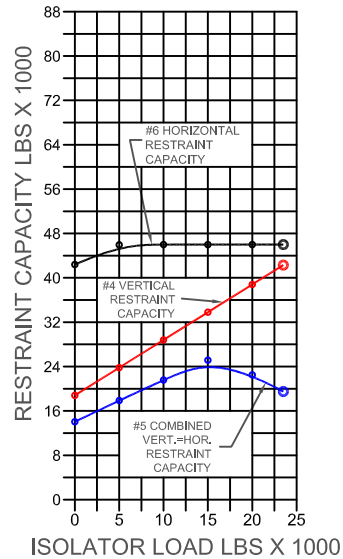


FIGURE 3
CONCRETE ATTACHMENT

FMSG REQUIRES 1.00 DIA X 6.00 MIN EMBED ANCHORS IN CONCRETE
(ALLOWABLE LOADS BASED ON 3000 PSI MIN CONCRETE)
FMSG ANCHOR BOLT TORQUE - 200 FT-LB, PULL TEST - 5310 LBS

RESTRAINT CAPACITY ENVELOPE GENERATION

RESTRAINT ONLY (NO SPRING ELEMENT)

1) READ THE ANCHORED (CONCRETE) OR BOLTED (STEEL) ENVELOPES DIRECTLY FROM FIGURE 1.

RESTRAINT WITH SPRING SUPPORT ELEMENT (ISOLATOR/RESTRAINT)

- 1) DETERMINE THE MAXIMUM EQUIPMENT LOAD SUPPORTED BY THE ISOLATOR(S)
- 2) IF THROUGH-BOLTED (STEEL), REFER TO FIGURE 2. IF ANCHORED (CONCRETE), REFER TO FIGURE 3.
- 3) PLOT THE VERTICAL RESTRAINT CAPACITY FROM CURVE #1 (FIGURE 2) OR #4 (FIGURE 3) ON THE VERTICAL AXIS OF FIGURE 1.
- 4) PLOT THE HORIZONTAL RESTRAINT CAPACITY FROM CURVE #3 (FIGURE 2) OR #6 (FIGURE 3) ON THE HORIZONTAL AXIS OF FIGURE 1.
- 5) PLOT THE COMBINED RESTRAINT CAPACITY FROM CURVE #2 (FIGURE 2) OR #5 (FIGURE 3) AT THE POINT ON FIGURE 1 WHERE THE VERTICAL AND HORIZONTAL FORCES BOTH MATCH THIS VALUE.
- 6) CONNECTING THESE POINTS CREATES AN ENVELOPE THAT SHOWS THE RESTRAINT'S CAPACITY WHEN SUBJECTED TO EQUIPMENT SUPPORT AND SEISMIC LOADS SIMULTANEOUSLY.
- 7) FOR THE RESTRAINT TO BE ADEQUATE, ALL WORST CASE SEISMIC LOADS MUST FALL WITHIN THE ENVELOPE.

SPECIFICATIONS:

- 3 AXIS RESTRAINT WITH REPLACEABLE NEOPRENE SNUBBING ELEMENTS.
- RESTRAINTS ARE POWDER COATED.
- HOUSINGS MAY BE USED FOR BLOCKING DURING EQUIPMENT ERECTION.
- CAN BE USED WITH OR WITHOUT SPRING COIL.

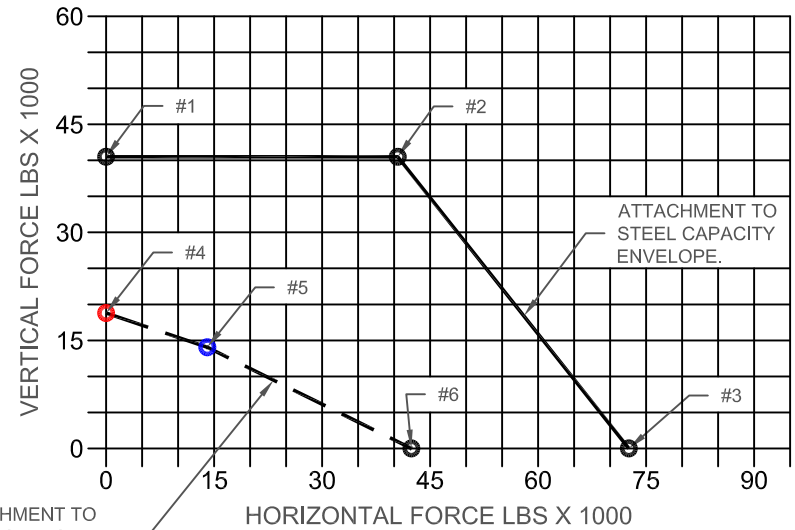
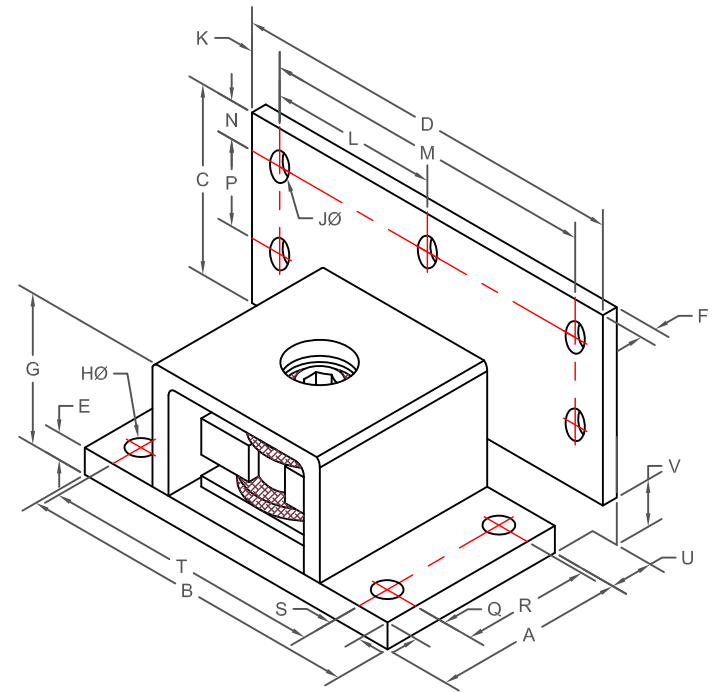


FIGURE 1
RESTRAINT CAPACITY ENVELOPE



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6300 IRELAN PL,
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Ph: 614 889-0480, Fax: 614 889-0540
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Model:
**FMSG
RESTRAINT**

By: **JMJ**
Date: **10/09/03**
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Drawing No:
S-01.40-700