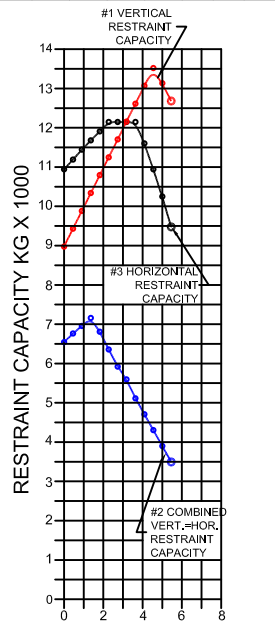
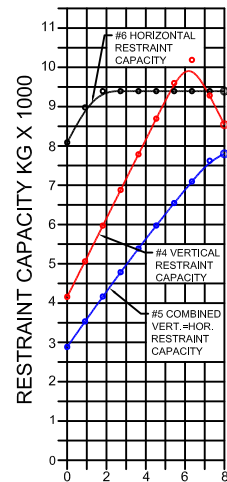


S-I UNITS (mm AND kg)																			
TYPE	DIMENSION																		
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U
FMSE	254	381	203	457	38	32	165	21	27	38	381	38	117	29	197	29	324	64	41



ISOLATOR LOAD KG X 1000  
**FIGURE 2**  
 STEEL ATTACHMENT



ISOLATOR LOAD KG X 1000  
**FIGURE 3**  
 CONCRETE ATTACHMENT

FMSE REQUIRES 19 X 121 MIN EMBED ANCHORS IN CONCRETE  
 (ALLOWABLE LOADS BASED ON 20700 kPa MIN CONCRETE)  
 FMSE ANCHOR BOLT TORQUE - 203 N-M, PULL TEST - 1646 KGS

**RESTRAINT CAPACITY ENVELOPE GENERATION**

**RESTRAINT ONLY (NO SPRING ELEMENT)**

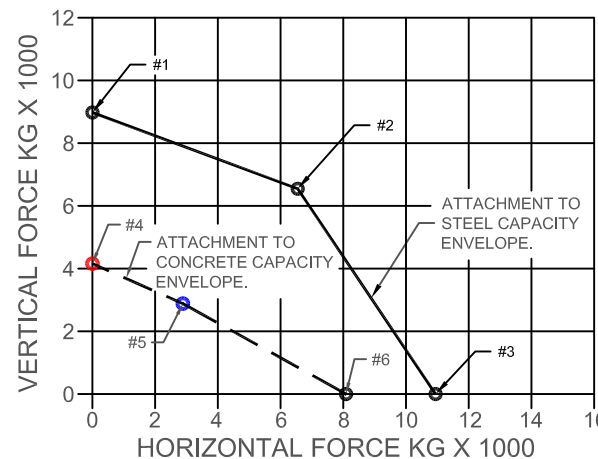
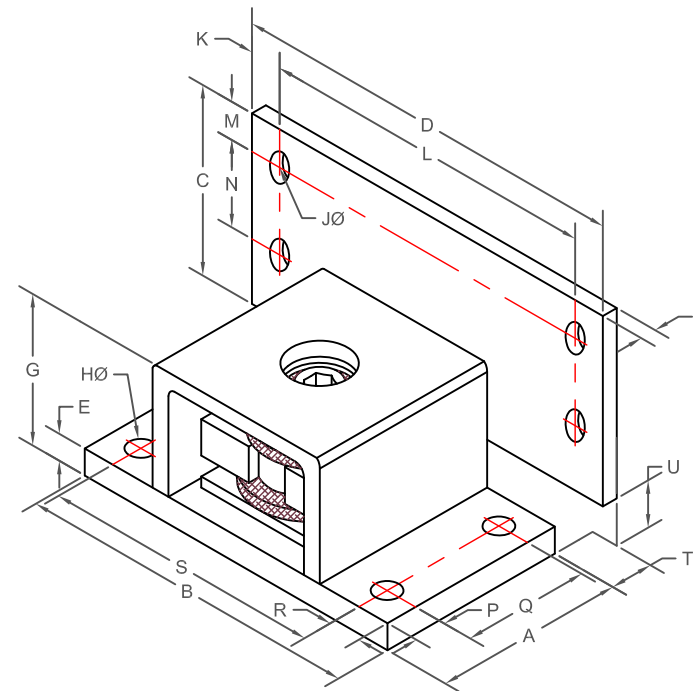
1) READ THE ANCHORED (CONCRETE) OR BOLTED (STEEL) ENVELOPES DIRECTLY FROM FIGURE 1.

**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



KINETICS NOISE CONTROL, INC  
 6300 IRELAN PL,  
 DUBLIN, OH 43017 USA  
 Ph: 614 889-0480, Fax: 614 889-0540  
 www.kineticsnoise.com

Model:  
**FMSE**  
**RESTRAINT**

By: **JMJ**  
 Date: **08/26/03**  
 Revised: **06/29/10 / BB**

Drawing No:  
**S-01.40-500**  
**METRIC**