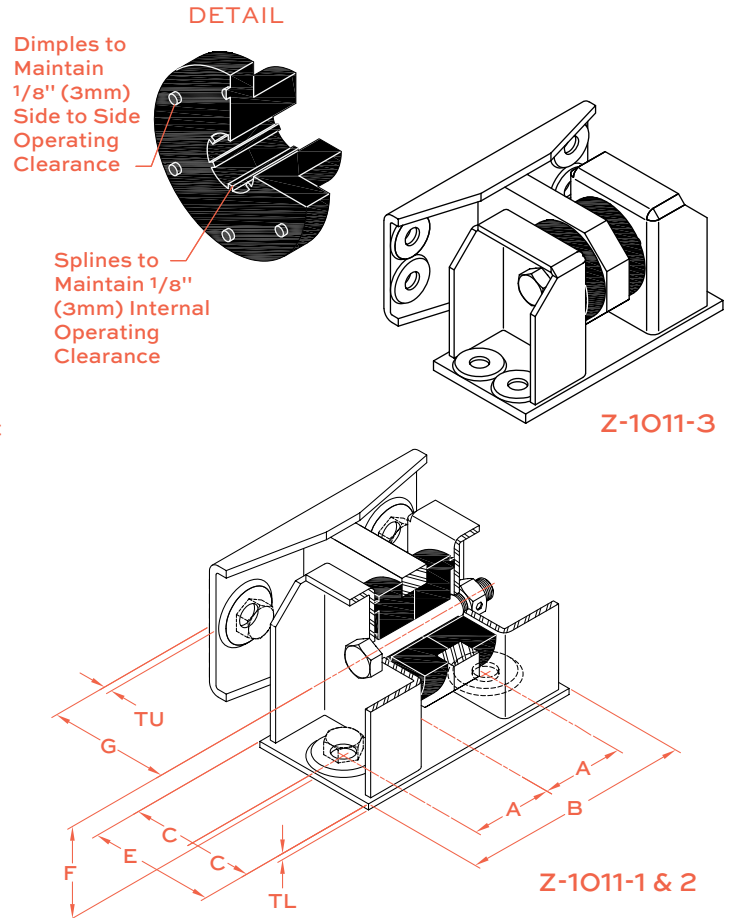
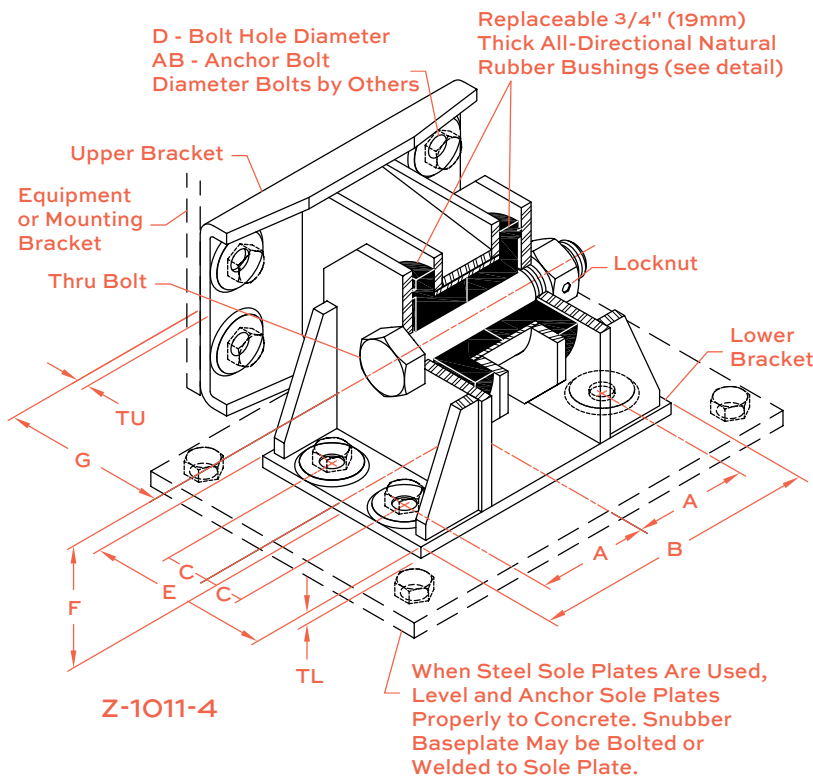


# ALL-DIRECTIONAL SEISMIC SNUBBERS

with CALIFORNIA OSHPD NO. OPM-0043-13

# Z-1011

## Z-1011 All-Directional Seismic Snubber NORMAL 90° POSITION



Z-1011 mounts include seismic and wind restraints with code compliant all-directional neoprene bushings and 1/4" maximum air gap.

### TYPE Z-1011 1G ALL-DIRECTIONAL LOAD RATINGS & DIMENSIONS

Type & Size	All Directional Load Ratings		A		AB		B		C		D		E		F		G		TL		TU	
	(lb)	(kN)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
Z-1011-1	625	2.8	21/8	54	1/2	13	6	152	17/16	37	9/16	14	27/8	73	21/4	57	23/4	70	1/8	3	1/8	3
Z-1011-2	1300	5.8	21/8	54	1/2	13	6	152	111/16	43	9/16	14	33/8	86	23/8	60	31/8	79	5/32	4	3/16	5
Z-1011-3	1925	8.5	31/8	79	1/2	13	73/4	197	3/4	19	9/16	14	35/8	92	25/8	67	33/4	95	5/16	8	3/4	6
Z-1011-4	3190	14.1	31/2	89	5/8	16	9	229	11/4	32	11/16	17	51/2	140	33/4	95	5	127	3/8	10	5/16	8

### INSTALLATION INSTRUCTIONS

If Snubbers are installed on equipment such as blowers or pumps with flexible connections that move and remain in a different position during operation, final positioning of Snubbers must be made with equipment in operation.

1. Use shims at Upper or Lower Brackets of the Snubbers as required so that units are installed without applying pressure on the Rubber Bushings.

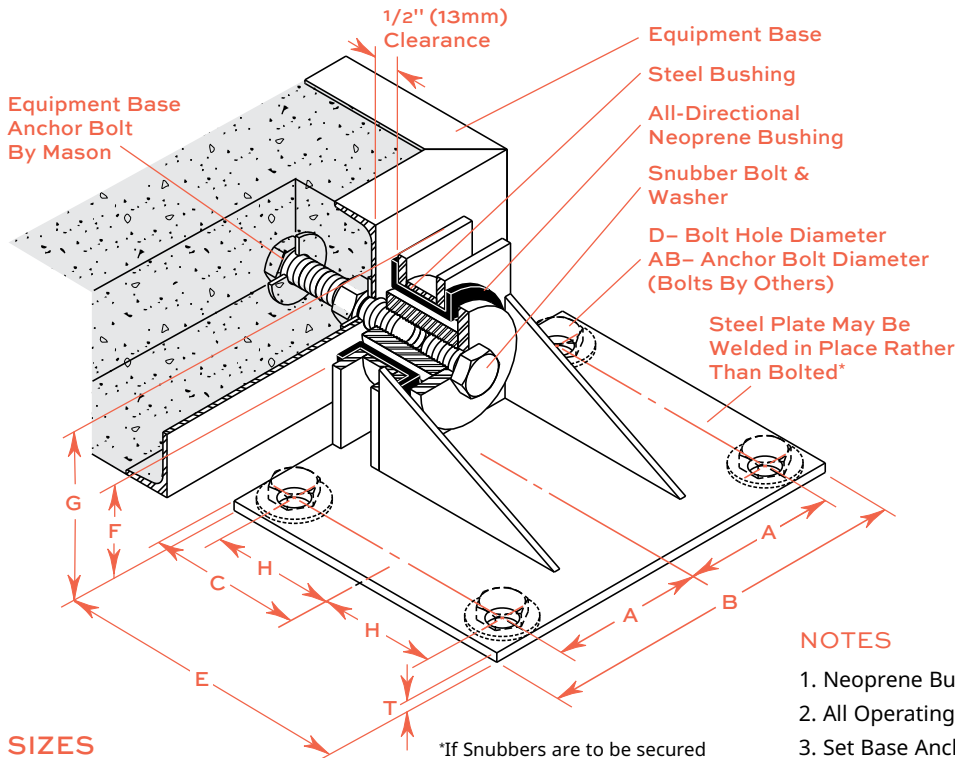
2. Use the Upper and Lower Brackets bolt holes to layout then drill attachment holes.
3. Bolt the Snubber on the attachment steel or Sole Plate and against the Equipment.
4. For additional design and selection procedures for Z-1011 Snubbers, refer to section X9 of OSHPD OPM-0043-13 or section FM55 (A, B & C) of Seismic Restraint Guidelines 3/2020.

# ALL-DIRECTIONAL SEISMIC SNUBBERS

with CALIFORNIA OSHPD NO. OPA-196

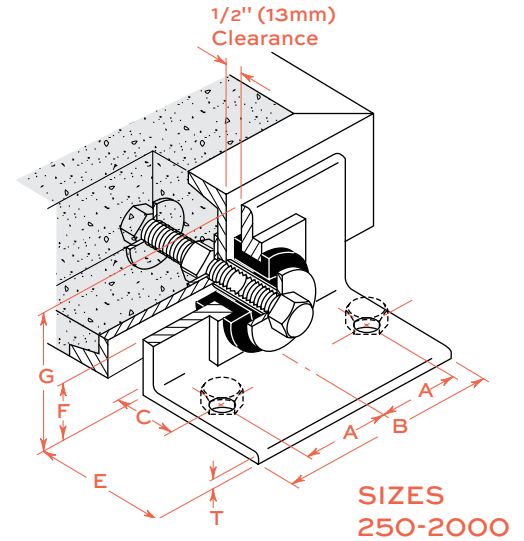
# Z-1225

## Z-1225 All-Directional Seismic Snubber Sizes 250 - 5000



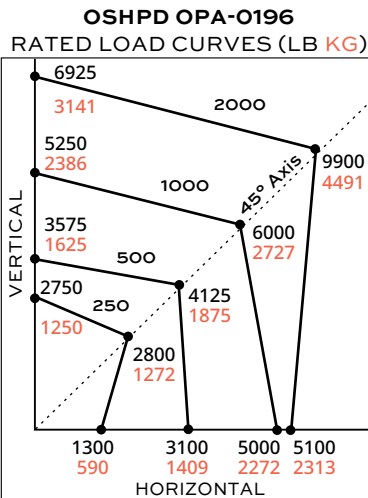
**SIZES 3000 & 5000**

\*If Snubbers are to be secured by welding, they must be located over beams or sole plates.



### NOTES

1. Neoprene Bushings are 1/4" (6mm) thick throughout.
2. All Operating Clearances are 1/4" (6mm).
3. Set Base Anchor to protrude 3/4" (19mm) from face to face.
4. A continuous rod, threaded on each end and protruding 3/4" (19mm) from both the faces of the base may be used to secure the threaded steel bushings in lieu of the individual Base Anchor Bolts.
5. Normal clearance between base & floor is 1" (25mm).
6. Distance from Base Anchor Bolt centerline to bottom of base is F minus 1" (25mm).
7. When 2" (51mm) clearance between base and floor is specified, use 1" (25mm) spacer plate under snubber angle.
8. Earthquake restraining angles are to be installed after equipment is in operation to assure design clearances are maintained as follows:
  - a. Remove snubber bolt and washer.
  - b. Screw steel bushing on Base Anchor Bolt protrusion.
  - c. Pass Restraining Angle over steel bushing so it is centered horizontally.
  - d. Raise or lower base with spring adjustments or shim Restraining Angle so steel bushing is centered vertically.
  - e. Set Restraining Angle so inside vertical face is 1/2" (13mm) clear of base and parallel to it.
  - f. Mark and set AB anchor bolts or weld angle in position.
  - g. Replace snubber bolt and washer and tighten in position.



Horizontal, Vertical and 45° plotted Ratings are California OSHPD submitted values having the OSHPD Anchorage Preapproval Number OPA-0196. Testing and calculations were performed to meet OSHPD criteria.

### To use OSHPD submitted rated load curves:

1. Calculate Vertical and Horizontal Forces on mountings including translations and overturning moments.
2. Plot Horizontal and Vertical Loads. The intersection must fall within the area below the OSHPD curve.

### TYPE Z-1225 1G ALL-DIRECTIONAL LOAD RATINGS & DIMENSIONS

Type & Size	1G All Directional Load Ratings		A		AB		B		C		D		E		F		G		H		T		Equipment Base Anchor Bolt Size & Length
	(lb)	(kg)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	
Z-1225-250	250	113	2	51	1/2	13	5	127	1 1/2	38	5/8	16	3	76	2 1/8	54	3 1/2	89	—	—	1/4	6	1/2"-13 UNC-4"
Z-1225-500	500	227	2 3/4	70	1/2	13	7	178	2	51	5/8	16	4	102	2 3/8	60	4	102	—	—	1/4	6	5/8"-11 UNC-6"
Z-1225-1000	1000	455	3	76	5/8	16	8	203	2 1/2	64	3/4	19	5	127	2 1/2	64	5	127	—	—	3/8	10	3/4"-10 UNC-6"
Z-1225-2000	2000	909	5	127	3/4	19	12	305	3	76	7/8	22	6	152	3	76	6	152	—	—	1/2	13	3/4"-10 UNC-6"
Z-1225-3000	3000	1364	4 3/4	121	3/4	19	12	305	5	127	7/8	22	10	254	3 1/4	83	6 3/8	162	3 3/4	95	3/8	10	7/8"-9 UNC-6"
Z-1225-5000	5000	2273	6	152	1	25	15	381	6	152	1 1/8	29	12	305	3 1/2	89	6 3/8	162	4 3/4	121	3/8	10	1"-8 UNC-6"