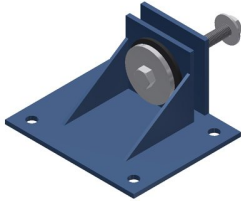


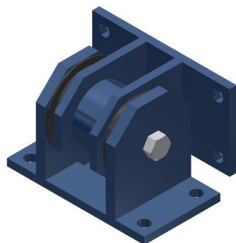
SEISMIC MOUNTS & RESTRAINTS

Seismic Applications are basically the same as Non Seismic but complicated by the need to keep equipment in place. Whenever we show our Z-1011 heavily cushioned snubbers, the input to the equipment will not exceed 4 G. All mountings, hanger-cables or snubbers are designed to resist the seismic force in any zone or specification. Many of the mountings and hangers are the same as in static locations but designated by numbers in the Selection Guide rather than letters to distinguish the two applications. We hope these illustrations will help.



Z-1225 Seismic Snubbers

All-directional seismic snubbers shall consist of interlocking steel members restrained by a one-piece molded neoprene bushing of bridge bearing neoprene. Bushing shall be replaceable and a minimum of 1/4" (6mm) thick. Rated loadings shall not exceed 1000 psi (.7kg/mm²). A minimum air gap of 1/8" (3mm) shall be incorporated in the snubber design in all directions before contact is made between the rigid and resilient surfaces. Snubber end caps shall be removable to allow inspection of internal clearances. Neoprene bushings shall be rotated to insure no short circuits exist before systems are activated. Snubbers shall have an Anchorage Preapproval "OPA" Number from OSHPD in the State of California verifying the maximum certified horizontal and vertical load ratings. Snubber shall be type **Z-1225** as manufactured by Mason Industries, Inc.



Z-1011 Seismic Snubbers

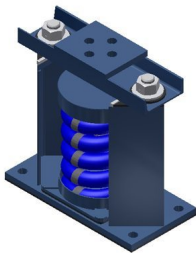
All directional seismic snubbers shall consist of interlocking steel members restrained by shock absorbent rubber materials compounded to bridge bearing specifications. Elastomeric materials shall be replaceable and a minimum of 3/4" (19mm) thick. Rated loadings shall not exceed 1000 psi (.7kg/mm²). Snubbers shall be manufactured with an air gap between hard and resilient material of not less than 1/8" (3mm) nor more than 1/4" (6mm). Snubbers shall be installed with factory set clearances. The capacity of the seismic snubber at 3/8" (9mm) deflection shall be equal or greater than the load assigned to the mounting grouping controlled by the snubber multiplied by the applicable "G" force. Submittals shall include the load deflection curves up to 1/2" (13mm) deflection in the x, y

and z planes. Snubbers shall have an anchorage preapproval "OPA" number from OSHPD in the state of California verifying the maximum certified horizontal and vertical load ratings. Snubbers shall be type Z-1011 as manufactured by Mason Industries, Inc.



SSLFH

Equipment shall be installed on resilient mountings designed and rated to resist seismic forces in all directions. The snubber shall be adjustable in the vertical up direction and allow a maximum of 1/4" (6mm) travel in the vertical and horizontal direction before contacting the resilient snubbing collars. Mountings shall have an Anchorage Preapproval "OPA" Number from OSHPD in the state of California attesting to the minimum listed certified Horizontal and Vertical load ratings. All mountings shall have adjusting bolts that are rigidly bolted to the equipment. Spring diameters shall be no less than 0.8 of the compressed height of the spring at rated load. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Mountings shall have a minimum of 2 spring inspection ports. Submittals shall include spring diameters, deflections, and calculations signed by a registered engineer showing that the seismic loads the mountings are to resist have been properly calculated. Mountings shall be type **SSLFH** as manufactured by Mason Industries, Inc.



SLR – 100 SERIES

Restrained spring mountings shall have an SLF mounting as described in SLF Specification, within a rigid housing that includes vertical limit stops to prevent spring extension when weight is removed. The housing shall serve as blocking during erection. Installed and operating heights are equal. Restraining Bolts shall have a neoprene bushing between the bolt and the housing. A clearance of 1/4" (6mm) shall be maintained around restraining bolts and the bushing so as not to interfere with the spring action. Limit stops shall be out of contact during normal operation. Since housings will be bolted or welded in position there must be an internal isolation pad. Housing shall be designed to resist all seismic forces. Mountings shall have an OPA preapproval from OSHPD in the state of California certifying

the maximum certified horizontal and vertical load ratings. Mountings shall be type **SLR** or **SLRS** as manufactured by Mason Industries, Inc.



HPA-Housekeeping Pad Anchors

The HPA anchor is manufactured in three sizes and has three anchoring capacities. The inverted hexagonal pyramid is self-locking in the housekeeping pad and has provision for passing 2 #3 rebars through the holes on top for positioning the pad reinforcement system. The number of anchors that are needed depend on the HPA size and the vertical rating of the SAS stud anchor as listed.



SRA-Seismic Rod Anchor

Adhesive type anchors shall include a two-component epoxy-based adhesive with zinc plated threaded anchor rods for interior application and stainless steel anchor rods for exterior application. The adhesive anchor shall have been tested and qualified for performance in cracked and un-cracked concrete per ICC-ES AC308. Anchors shall have an evaluation report from ICCES verifying allowable loads. Adhesive anchors shall be type SRA as manufactured by Mason Industries, Inc.



SAS,SASE-Seismic Anchor Stud

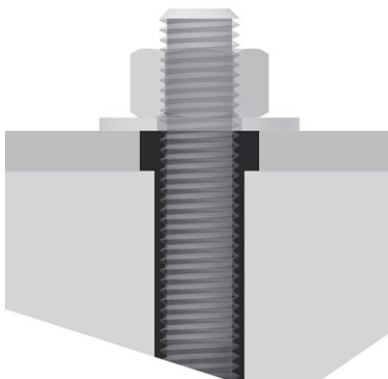
Stud wedge anchors shall be manufactured from full diameter wire, not from undersized wire that is rolled to create the thread. The stud anchor shall also have a safety shoulder

which fully supports the wedge ring under load. The stud anchor shall be zinc-coated steel for interior applications and stainless steel for exterior applications. The stud anchors shall have an evaluation report number from the ICC-ES verifying its allowable loads. Drill-in stud wedge anchors shall be type **SAS** or **SASE** as manufactured by Mason Industries, Inc.



SAST-Seismic Anchor Self Tapping

Screw type anchors are preferred in floor locations so anchors can be installed after isolators or equipment is in place. Anchors shall be manufactured from hardened steel and zinc electroplated for corrosion resistance. Screw type anchors shall have an evaluation report number from the ICC-ES verifying its allowable loads. Screw type anchors shall be type **SAST** as manufactured by Mason Industries, Inc.



HCF-Hole Clearance Filler

Type HCF hole clearance filler provides a quick solution as it fills this clearance created by practical tolerances, off center bolts or the extreme situation where holes are enlarged on the jobsite by drilling or burning.

Sold in 3.5 (in.) – 3 tubes