

Spring Isolators
Isolation Hangers
Thrust Restraints
Flexible Connectors
Isolation Bases
Rooftop Isolation Curbs
Neoprene Isolators
Fiberglass Isolators
Air Mounts

Seismic and Wind
Restraint Isolators,
Curbs, Snubbers and
Cable Restraint Kits

Vertical Pipe Riser
Isolation Guides
and Anchors



Vibration Isolation Products

*The Engineering Experience, Manufacturing,
and Testing Capabilities to
Meet Your Application Requirements*



Free-Standing Spring Isolators - Model FDS

Highly effective for control of both high and low frequency vibration produced by fans and pumps located in floors. The model FDS can also be used in conjunction with wind or seismic restraint and installed outdoors. Operating static deflections are available up to 4" (102 mm) and with load capacities to 23,200 lbs. (10,523 kg) to compensate for long span flexible floor structures.



Restrained Spring Isolators Model FLS

Vibration isolators for mechanical equipment, when the equipment to be isolated has significant changes of weight during maintenance operations, and for equipment subjected to external forces or high wind loads. Operating static deflections are available up to 4" (102 mm) to compensate for long span flexible floor structures and maintain a high degree of noise and vibration isolation. Some restrained spring isolators are designed to provide seismic restraint as well.



Restrained Spring Isolators Model FRS

Isolate vibration produced by equipment subject to weight change or external forces, such as air-cooled condensers, fans, and other rooftop equipment. Support of vertical pipe risers, where upright motion must be limited, yet the riser isolated from the building. Operating static deflections are available up to 2.00" (51 mm), in capacities of up to 3500 lbs. (1588 kg).



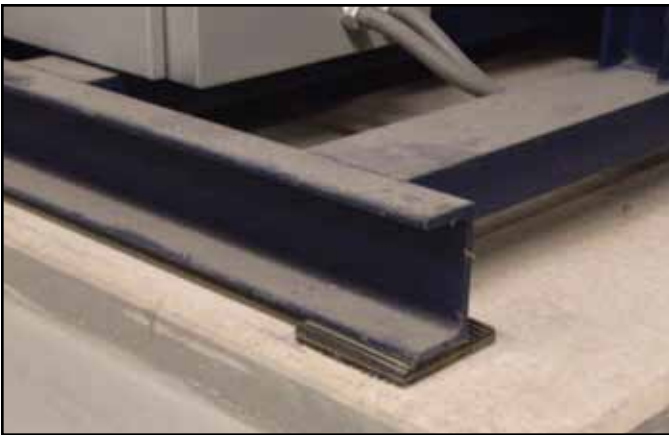
Housed Spring Isolators - Model SL and SM

Isolate high and low frequency vibration generated by floor-mounted mechanical equipment such as air compressors and generators which are prone to frequent start up and shut down, and equipment that is slow to reach operating speed. The model SL is designed with a pre-adjusted snubbing feature to reduce movement as the equipment passes through critical speed during start-up and shut-down. Available in deflections up to 1.84" (47 mm), and with load capacities from 35 to 3500 lbs. (16 to 1588 kg).



Fiberglass Isolation Pads Model KIP

KIP pads are applied in a wide range of noise, shock, and vibration isolation uses. Recommended whenever a consistent natural frequency under a range of loads and permanent load support characteristics are important. A range of densities and spring rates are available to provide load-bearing capacities from 1 to 500 PSI (0.07 to 35 kg per sq. cm). Uniquely allow a wide range of loading on a given isolator while maintaining a constant natural frequency.



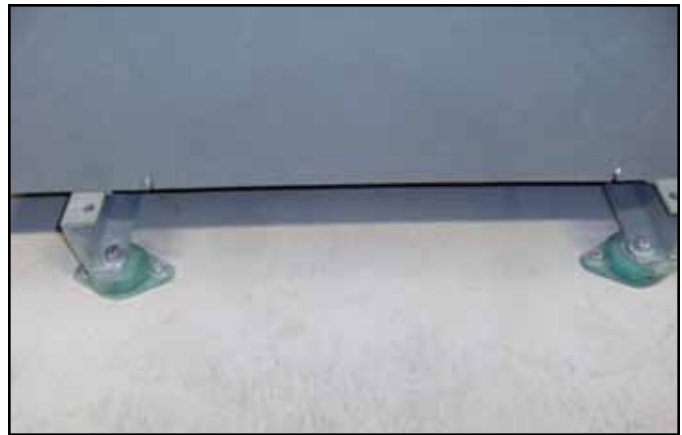
Neoprene Isolation Pads Model NP and NG

Ribbed neoprene isolation pads used to isolate noise, shock, and high frequency vibration, generated by mechanical equipment and industrial machinery located on a grade-supported structural slab. Applications limited to pad loadings of 60 PSI (4.2 kg/cm²) for 45 durometer material, and 120 PSI (8.4 kg/cm²) for 65 durometer material, and used with equipment having minimum operating speeds of 3600 RPM.



Fiberglass Isolation Mounts Model AC

Isolate audible frequency vibration or noise produced by small utility vent fans, vane axial fans, high speed motors and roof mounted exhaust fans with lowest operating speeds of 1750 RPM when mounted on a grade supported slab or pier with a bolt-down and vertical lift control feature. The fiber glass pad offers a constant natural frequency over a wide load range.



Neoprene Isolation Mounts Model RQ and RD

Isolate noise and high frequency vibration generated by mechanical equipment located on a grade-supported structural slab, pier or load-bearing wall. Equipment types include close coupled pumps with motors of 5 H.P. or less, small vent sets, low pressure packaged air handling units and wall-mounted electrical transformers. Model RQ mounts are also selected for use in seismic and wind load restraint applications.



Isolation Hangers - Models SFH, SRH, SH, FH and RH

Designed to reduce the transmission of vibration and noise from suspend mechanical equipment such as fans, pumps, air handling units, piping and ductwork. Hanger inserts are designed for up to 50% overload capacity and for rod misalignment over a 30-degree arc. Brackets will carry 500% overload without failure. Available to 4" deflection and in capacities to 3,850 lbs. Spring hangers feature Alara-Lukagro patented **No-Short** spring cap which contains indexed steps to correspond to standard washer diameters for the appropriate rod diameter.



Flexible Connectors KINFLEX

Prevent stresses due to expansion and contraction and compensate for misalignment. Absorb the continuing movement experienced in piping systems because of varying ambient temperatures, differences in temperature of materials being handled, and differences in composition. Reduce objectionable noise and vibration in piping systems, compressors, and other pulsating equipment.



Thrust Restraint Model HSR

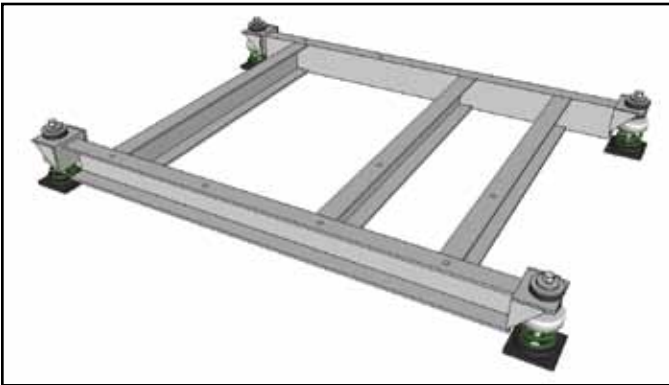
Counteracts the discharge force created by fans during operation. Always used in pairs, and best utilized when located on the centerline of the discharge outlet of the fan, bridging the flexible duct connector. Uses 1" and 2" deflection springs in 35 to 3,500 lbs capacities.



Inertia Base Frames

Model CIB

Specifically designed and engineered to receive field poured concrete, inertia bases are used to provide a rigid mounting platform to support mechanical equipment on vibration isolators. The added mass of the concrete reduces differential movement between driving and driven members, reduce rocking by lowering equipment center of gravity, reduce motion of equipment during start-up and shut-down, acts to reduce reaction movement due to operating loads on equipment, and as a noise barrier.



Structural Frame Bases

Model SFB

Used to support mechanical equipment and provide rigid platforms for attachment of vibration isolators, without allowing excessive differential movement between driving and driven members. Typical uses include support and isolation of reciprocating chillers, close coupled pumps, vent sets, packaged air handling units, centrifugal fans, evaporative condensers, and similar types of equipment.



Structural Beam Bases

Model SBB

Used to support mechanical equipment provide a means of attaching supporting isolators while maintaining a rigid supporting surface for the isolated equipment. Typical uses include support and isolation of absorption chillers, hermetic centrifugal chillers, package boilers, cooling towers, and similar types of equipment.



Roof Curb Rail Model KSR

Alara-Lukagro KSR Isolation Rails are the next generation isolation system designed and engineered to isolate packaged rooftop equipment from the roof structure while providing seismic and wind restraint. Designed for easy installation, minimum interference with equipment overhang, the Alara-Lukagro KSR goes well beyond internal isolation by reducing casing radiated vibration caused by turbulent air flow as well as compressor and fan vibration.



Roof Curb Isolation System Model KSCR

Affordable, easy-to-install, all-in-one roof curb AND vibration isolation for under 20-ton packaged rooftop units! Standard features include internal seismic and wind restraint, supply and return support hardware and EPDM air and weather tight seal.



Vibration Isolation Curb Curb

Complete curb and isolation system with Internal seismic and wind restraint for larger roof top equipment. Accessible and adjustable 1, 2 or 3" deflection springs, support hardware for supply and return duct, EPDM air and weather-tight seals.

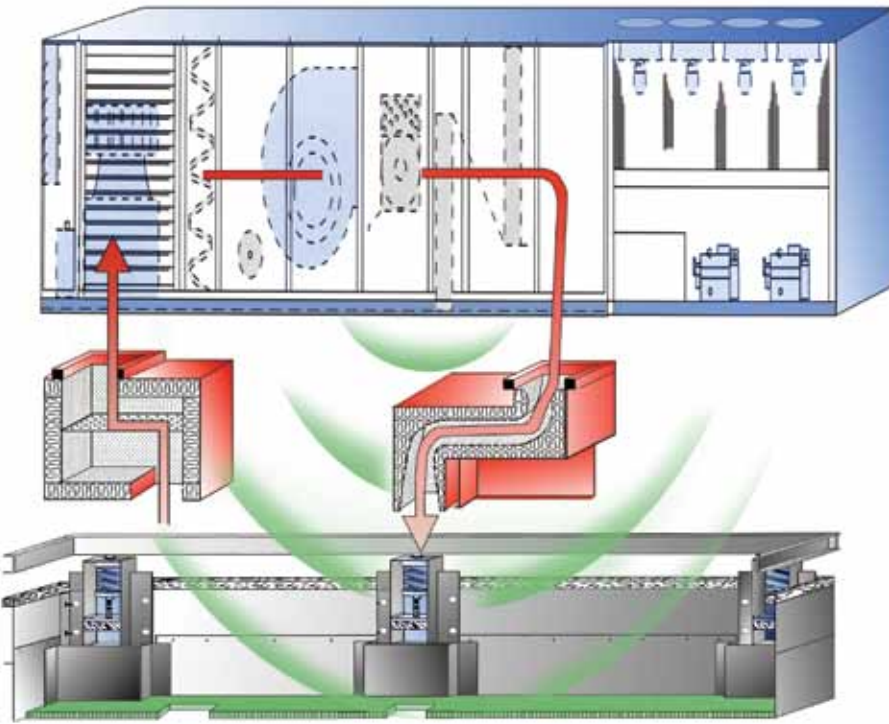


Vibration Isolation Curb Model ESR

Heavy-duty, complete vibration isolation curb for the BIG rooftop unit jobs! Code compliant seismic & wind restraint, access ports for each isolator to inspect, level, or change springs after equipment placement. Up to 4" deflection, powder-coated steel springs with 50% overload capacity. High-frequency noise isolation pads

Sound and Vibration Isolation Curb - Model ESSR

The Alara-Lukagro ESSR is the only isolated curb system that addresses all four noise sources associated with packaged rooftop equipment. The ESSR incorporates all the features of our ESR vibration isolation curb with our aerodynamic acoustical silencers; return air plenums and NOISEBLOCK™ STL panels. This gives you a noise control system that addresses all the noise and vibration concerns of your packaged rooftop equipment: vibration from the rotating equipment and casing radiation, duct-borne noise from supply and return fans, and breakout noise from the fans and compressors into the space below.

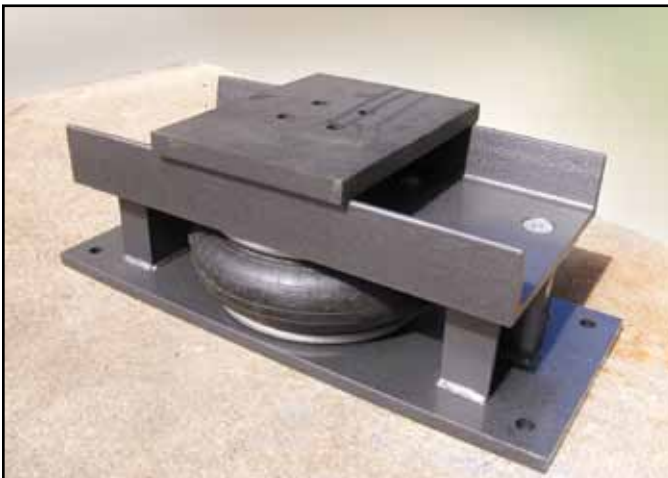


Vibration from fans and compressors (source 1) and vibration from casing-radiated noise caused by duct turbulence and the airborne noise of the fans and compressors (source 2) are controlled with Alara-Lukagro high deflection, laterally stable coil spring isolators and high frequency neoprene noise pads.

Duct-borne noise from the supply and return air fans (source 3) are controlled using an aerodynamic acoustical silencer on the supply fan and an acoustical plenum on the return air side - both with minimal pressure drop.

Breakout noise through the bottom of the rooftop unit (source 4) is controlled by the NOISEBLOCK™ STL acoustical panel located in the floor of the ESSR.

Air Mounts



Air Vibration Isolation Mounts Model KAM and CAM

Alara-Lukagro air mounts are pneumatic, elastomeric vibration mounts. The CAM is available in four (4) sizes supporting loads up to 7,500 lbs. The KAM is available in seven (7) sizes with capacities from 500 to 22,000 lbs. per mount.

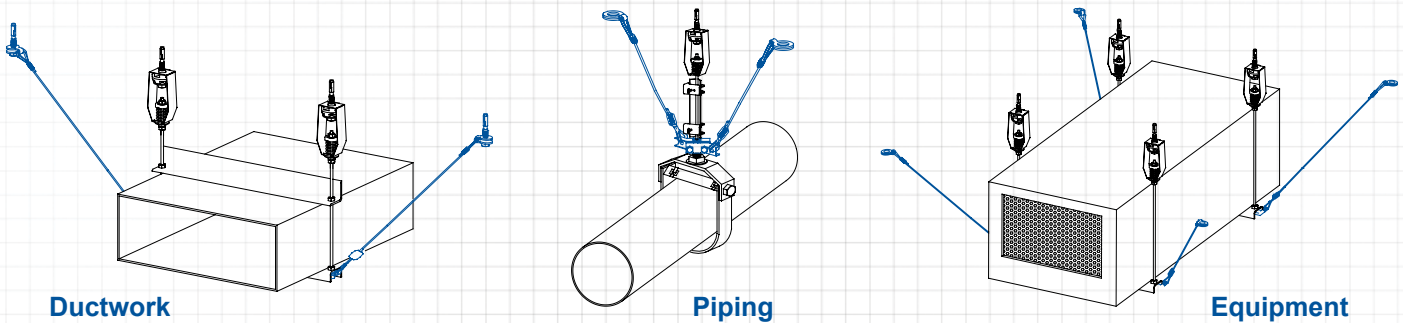
Both models are optionally available with automatic leveling controls and custom mounting to meet your specific needs.

Typical applications include mechanical equipment and industrial process equipment requiring low natural frequency isolation, as well as protecting sensitive equipment from disturbing floor-borne vibration.



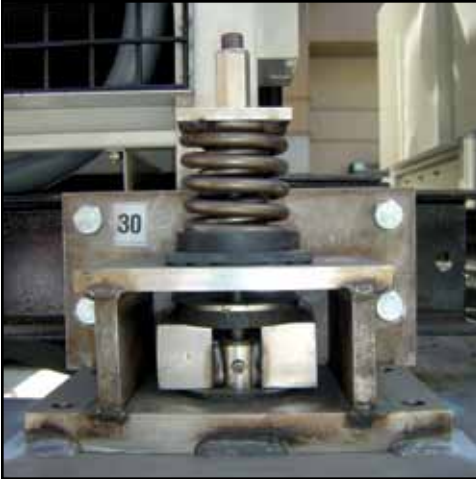
Seismic Cable Restraint Connector - QuakeLoc™

Alara-Lukagro QuakeLoc™ Connector is featured in our new lineup of standard seismic cable restraint systems. Sure to be a contractor favorite, the QuakeLoc™ connector quickly and easily fastens cables used in the seismic restraint of piping, duct, electrical cable trays, and suspended equipment. QuakeLoc™ is proudly made in the USA.



Hanging Rod Stiffener Clamps - Model KHRC

Clamp is required to brace threaded rod used to suspend piping, ductwork, and/or hanging equipment in a seismic application. It is designed to easily and securely attach steel stiffening bracing angles to the threaded rod, using common hand tools without disassembling the hanging rod.



Modular/Restraint Isolator

Model FMS - U.S. Patent No. 7,028,969

Because of the extreme design flexibility of the modular concept, Alara-Lukagro Model FMS Isolators can be used effectively for large, heavy pieces of equipment in highly active seismic or wind prone areas as well as for more common applications in less active areas without financial consequence. Ideal for equipment mounted on structural frame or concrete inertia bases. Because of the minimal vertical travel and near constant operating height, the FMS isolator is excellent for use on cooling towers, chillers, boilers or other equipment where the potential for wide weight variations during service is anticipated.



Restrained Spring Isolators

Model FLSS

Vertically restrained spring isolators designed for higher seismic and wind forces. The housings are fabricated to limit vertical movement of the isolated equipment if equipment loads are reduced or if the equipment is subjected to large external forces such as high winds or seismic events. The housings also provide a constant free and operating height to facilitate installation.



Restrained Spring Isolators

Model FHS

Vibration isolation with seismic and wind restraint capabilities for mechanical equipment. Featuring all-directional restraint with vertical limit stops, field-interchangeable spring coils, galvanized housing and polyester powder coated coils and a constant free height and operating height.

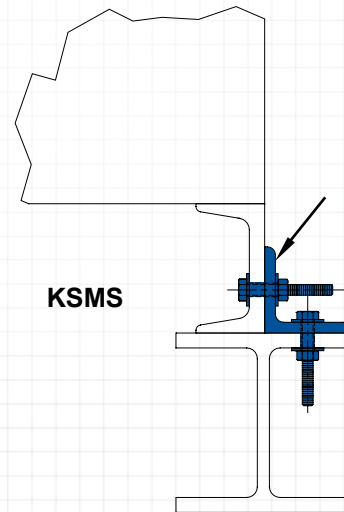


Seismic Snubbers - Model HS Series

Seismic snubbers are designed for use in locations subject to earthquakes or other external forces which could displace vibration isolated equipment. Rugged, heavy-duty products which have been designed to resist imposed forces from external sources yet remain out of contact during normal operation so that vibration will not be transmitted to the building.

Seismic Restraint Mounting Brackets Model KSMS

Model KSMS seismic and wind restraint brackets are used to solid-mount equipment to the building structure. It can be bolted or welded to the equipment, and is attached to the structure by anchoring to concrete or bolting to steel.



Vertical Pipe Riser Isolation Guides and Anchors



Spring Riser Guide Model KRG

Model KRG riser guide and isolator provides flexible support for a pipe riser by allowing it to expand and contract vertically while limiting its movement horizontally. The KRG is available with or without spring isolation. The deflection offered is 1", 2" and 4". The capacity range is from 35 lbs. to 23,000lbs.



Pipe Anchor Model KPA

Model KPA pipe anchors are used to secure the position of a vertical or horizontal riser. The anchors are selected based on the amount of force the pipe will transfer into the structure a specific point of attachment. Anchor capacities range from 2,500 lbs. to 20,000 lbs. and must be used in pairs.



Noteworthy Projects

- Indu & Raj Soin Medical Center, Beavercreek, OH
- Erie County Medical Center Kidney Care, Buffalo, NY
- Valley View Hospital, Glenwood Springs, Colorado
- Duke University Medical Pavilion, Durham, NC
- St. Joseph's Hospital, Hamilton, ON. CA.
- Cosmopolitan Hotel, Las Vegas, NV
- The M Resort Spa Casino, Las Vegas, NV
- St. Joseph's Hospital, Hamilton, Ontario, CA
- USO Tier III, Golden, CO
- Toronto Police Station, Toronto, Ontario, CA
- City Center, Las Vegas, NV
- Public Safety Building, Grand Junction, CO
- Goodyear Headquarters, Akron, OH
- Syracuse VA Hospital, Syracuse, NY
- Dublin Methodist Hospital, Dublin, OH
- Burj Khalifa Tower, Dubai
- Hard Rock Hotel Macau at City of Dreams
- Filmore County Hospital, Geneva, NE
- Nationwide Children's Hospital, Columbus, OH
- Orlando VA Hospital, Orlando, FL
- Unity Healthcare, Rochester, NY
- River Oaks Hospital, Jackson, MS
- New Quito International Airport, Quito, Ecuador