

KINETICS™

Roof Curb and 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

- Internal seismic restraint
- 1" or 2" deflection springs
- Supply and return flexible connector support hardware
- EPDM air- and weather-tight seal for non-ducted applications
- High profile, non-interference aluminum equipment rail
- Accessible, interchangeable springs

Options

- Multiple roof pitch interface
- Additional height
- Exterior thermal insulation
- Acoustical treatments
 - 1" fiberglass absorber along inside perimeter of curb
 - 2" fiberglass absorber in bottom of curb
 - High-mass composite floating floor in bottom of curb
- Certification of seismic and wind load engineering

Specifications

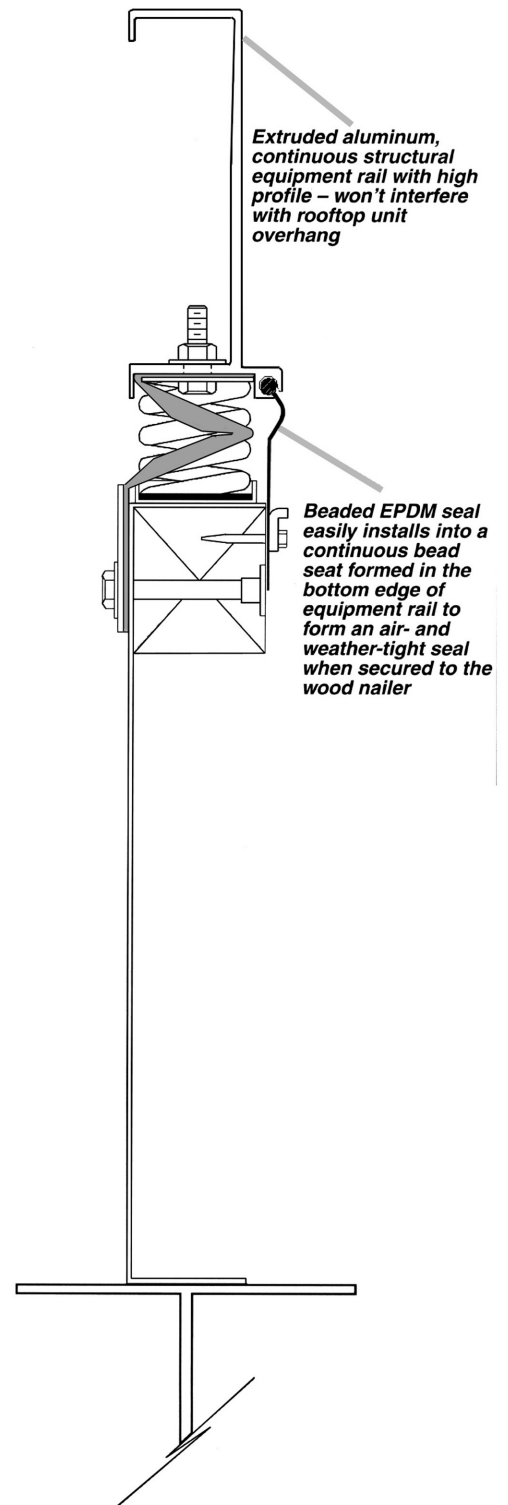
All rooftop air-handling units shall be supported by vibration isolation curbs as manufactured by Kinetics Noise Control. The vibration isolation curbs shall be complete assemblies designed to resiliently support the equipment at the specified elevation and shall constitute a fully enclosed air- and weather-tight system.

The isolation curb shall consist of an upper support rail with supply and return flexible connector supports on which the equipment and duct openings rest and a lower support curb which is attached to the roof structure, separated by free-standing, unhoused, laterally stable steel springs and lateral seismic and/or wind load restraints.

The upper support rail shall provide continuous structural support for the rooftop equipment and shall be designed to provide isolation against casing-radiated vibration in the rooftop equipment housing and structureborne vibration from rotating and mechanical equipment in the rooftop package.

The upper support rail shall consist of an extruded aluminum structural shape with a minimum height of 4.75" (121 mm) above the spring to preclude interference with the rooftop equipment and permit access to inspect, level, or change the springs after placement of the rooftop equipment.

The upper support rail extrusion shall include a continuous keyway to accommodate the beaded elastomeric weather seal and a channel to maintain proper spring alignment.



The lower support curb shall be a formed channel fabricated of heavy gauge galvanized steel with a continuous 1-1/2" x 1-1/2" (38 mm x 38 mm) nominal wood nailer. The base plate of the curb shall be 1" (25 mm) wide and shall be welded, bolted or screwed to the building support steel.

The lower support curb shall have a minimum elevation of 14" (356 mm). Spring components shall be 1" (25 mm) 2" (51 mm) deflection, free-standing, unhooused, laterally stable steel springs. Springs shall have a lateral stiffness greater than 1.0 times the rated vertical stiffness and shall be designed for a typical 50% overload to solid. All springs shall have an polyester powder coated finish and be color coded to indicate load capacity. Springs shall rest on a neoprene noise pad. The spring and noise pad shall be captured in a retainer cap secured to the lower support curb. The lateral stabilizers shall be stainless steel spring assemblies factory located and installed to provide seismic and/or wind load restraint.

Standard units are designed to withstand a 43 psf horizontal and 25 psf vertical wind load. Resistance to higher loads or for ratings on extended height curbs or units attached to wood or concrete will require analysis by KNC, but can in most cases be met with only minor modification.

The weather seal shall run continuously around the perimeter of the curb and be joined in the field with one seam using a double-faced elastomeric adhesive. The weather seal shall be fastened to the wood nailer of the lower support curb using screws and an aluminum fascia strip.

Supply and return flexible connector support hardware shall be supplied for installation by the contractor in the field. The supports will be clearly marked and dimensioned on the submittal and installation drawings. The support hardware shall be cut-to-length, galvanized steel channels supported and connected with stamped and punched galvanized steel duct support hangers. The support hangers shall allow the duct support elevation to be equal to or lower than the equipment rail elevation. Supply and return air duct shall be flexibly attached by the contractor to prevent transmission of vibration to the building structure.

The isolation curb assemblies shall be shipped to the job site with the upper support rail, lower support curb, springs, and stabilizers completely assembled. The contractor shall assemble the four corners and attach the curb to the roof structure.

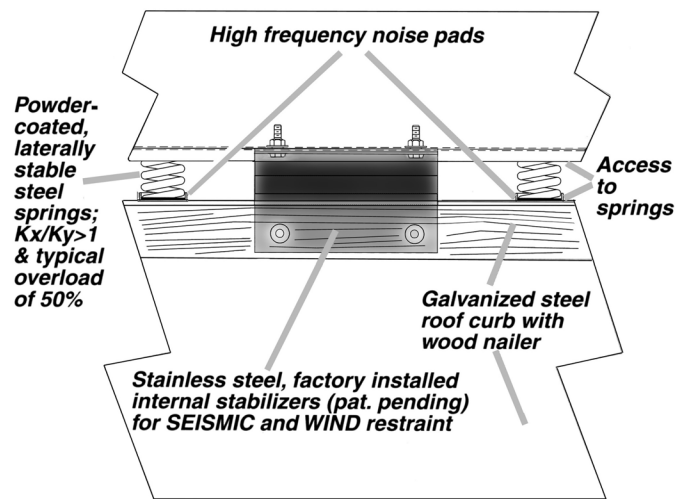
The isolation curb assembly shall include a troubleshooting kit to permit the contractor to level or adjust the loading of the isolation system immediately after placement of the rooftop equipment should the actual weight and/or distribution differ from design values.

Vibration isolators shall be selected by the manufacturer for each specific application to comply with deflection requirements as shown on the Vibration Isolation Schedule or as indicated on the project documents.

Optional Certification

The manufacturer shall submit certified engineering drawings and calculations stamped by a licensed Professional Engineer demonstrating the isolation curb system has been designed (for a ___mph/___km/h wind load), (for seismic Zone ___per code), (to withstand ___g horizontal force and ___g vertical force).

Roof curb shall be model KSCR as manufactured by Kinetics Noise Control Inc.



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