



KINETICS NOISE CONTROL, INC
6300 IRELAN PLACE
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Ph 614-889-0480, FAX 614-889-0540

KineticsCurb Installation Instructions

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Note: In the event that installation of the type KineticsCurb base is not done in accordance with these instructions, the manufacturer will not accept responsibility for malfunctions of the base or any damage resulting from installation.



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Section 1: KineticsCurb General Information

General Notes:

A standard Manufacturer's roof curb is NOT required for this installation.

The KineticsCurb Vibration isolation curb is designed to connect the equipment being isolated to the building structure and at the same time, provide a weather tight envelope. If fixed perimeter curb is resting on decking material, decking must provide even support throughout curb length and be adequately connected to structure to resist wind and seismic loads.

Refer to the KineticsCurb submittal information for base drawings, isolator identification, duct block-offs and roof slope information. See figure 1-1 for a typical section through a KineticsCurb.

IMPORTANT!

Do not remove shipping bands before curb is set in place on roof.

Do not remove wood blocking spacer until isolator spring coil is properly adjusted. See figure 1-2.

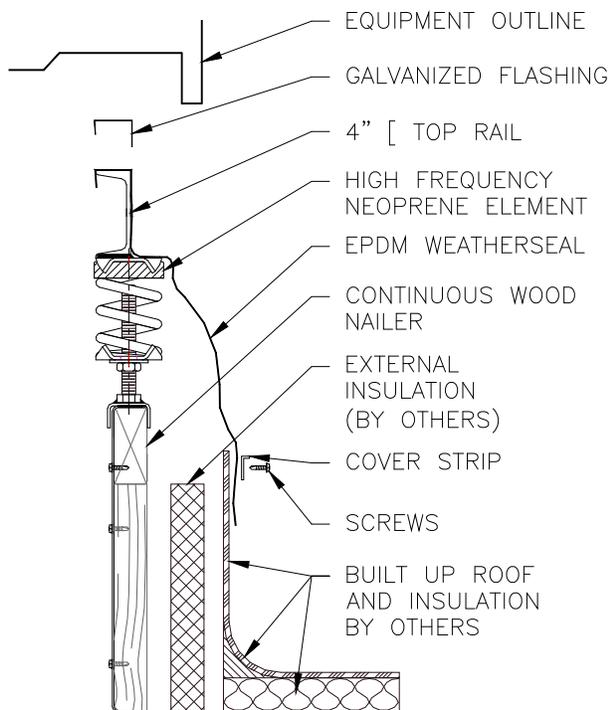


Fig.1-1

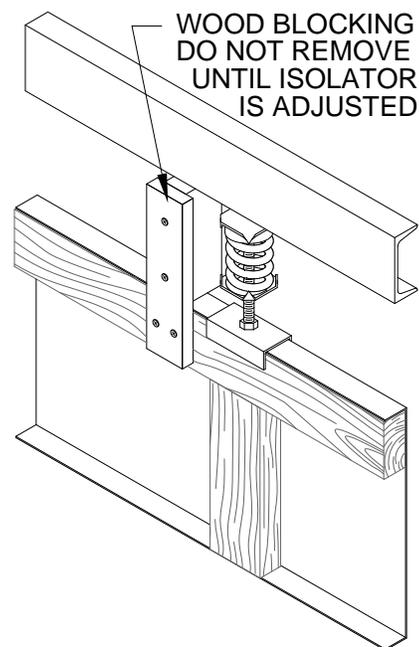


Fig. 1-2

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Section 2: KineticsCurb Standard Packing List

The KineticsCurb is shipped as an assembled curb, with respect to the main curb. For purposes of shipping, some options are shipped separate to be attached on site. Promptly report any shipping damage to the carrier.

Miscellaneous hardware consisting of cover strip for clamping the EPDM weather seal to the nailer, screws, and caulk for sealing ship loose.

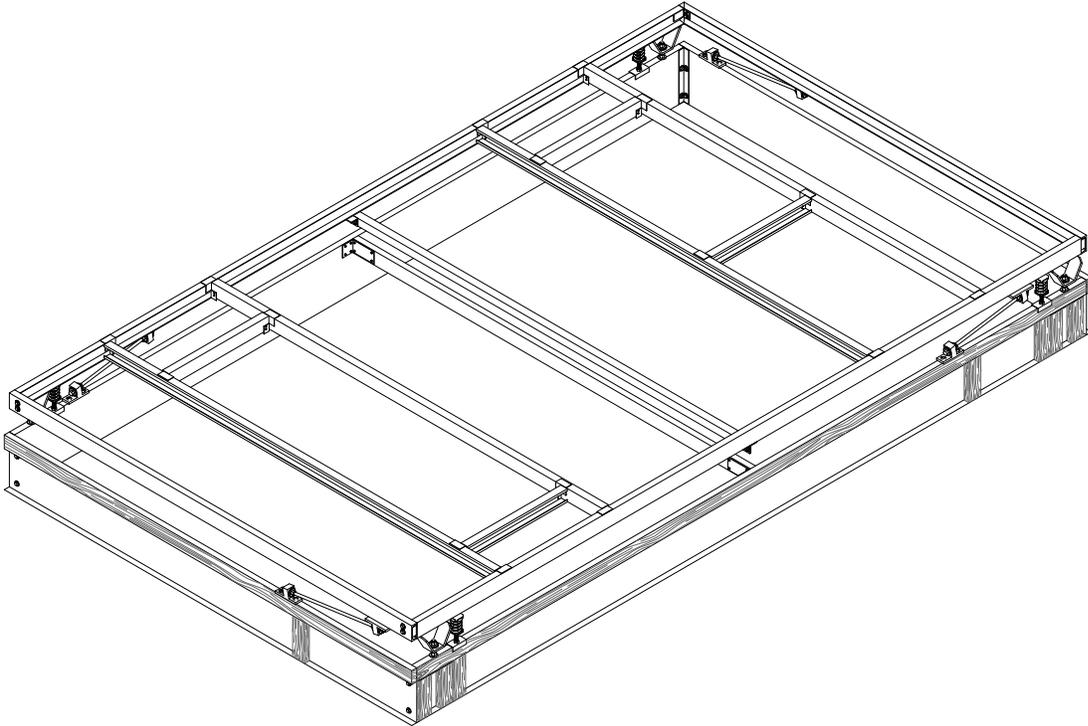


Figure 2-1

Additional components required for common options are listed below:

Condenser Island Support (Optional)

If fitted with an island support, this section will be provided preassembled. The support includes the fixed curb element, the isolated rail section and the interfacing isolators.

Condenser Island Support (Optional)

If a pipe chase was to be provided by KNC it will ship assembled but unattached to the main curb. The pipe chase includes assembled pipe chase box section and attachment hardware.

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Section 3: KineticsCurb Lifting Detail and Basic Orientation

1. Lift KineticsCurb at vertical restraint in corners, points "A", see figure 3-1. Lifting strap should be placed through vertical restraint bracket, see figure 3-2. If curb length is greater than 240", additional lifting straps should be used at center of length, points "B". Do not remove shipping bands before unit is set in place on roof.
Note: When lifting and placing KineticsCurb, make sure not to pinch neoprene weather seal attached to top support rail, see figure 3-3.

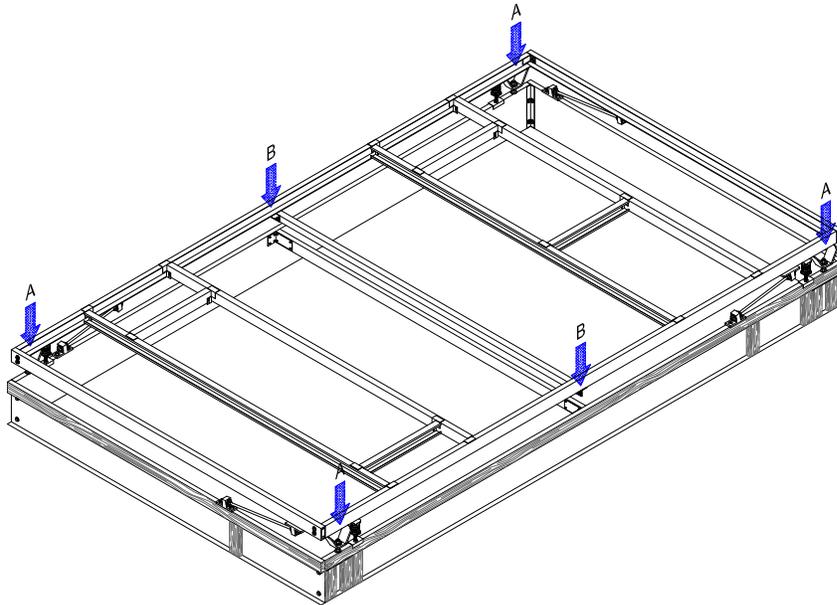


Figure 3-1

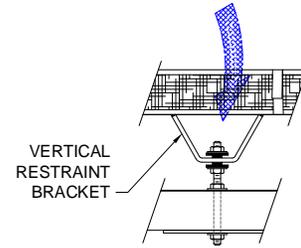


Figure 3-2

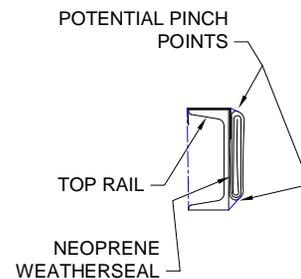


Figure 3-3

2. Determine the orientation of the KineticsCurb relative to the equipment by matching the identified end of the KineticsCurb submittal information with the corresponding end on the equipment. (May be marked "Cond End", "Supply End", etc.) A typical label example is shown in figure 3-4 below.

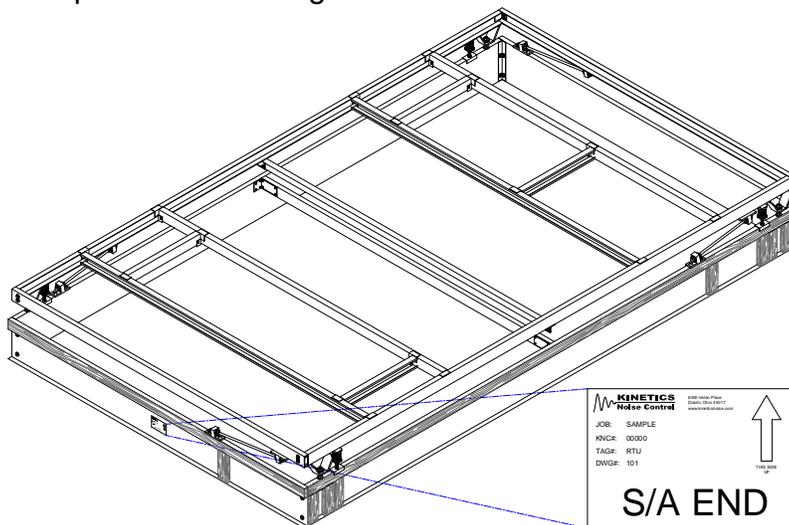


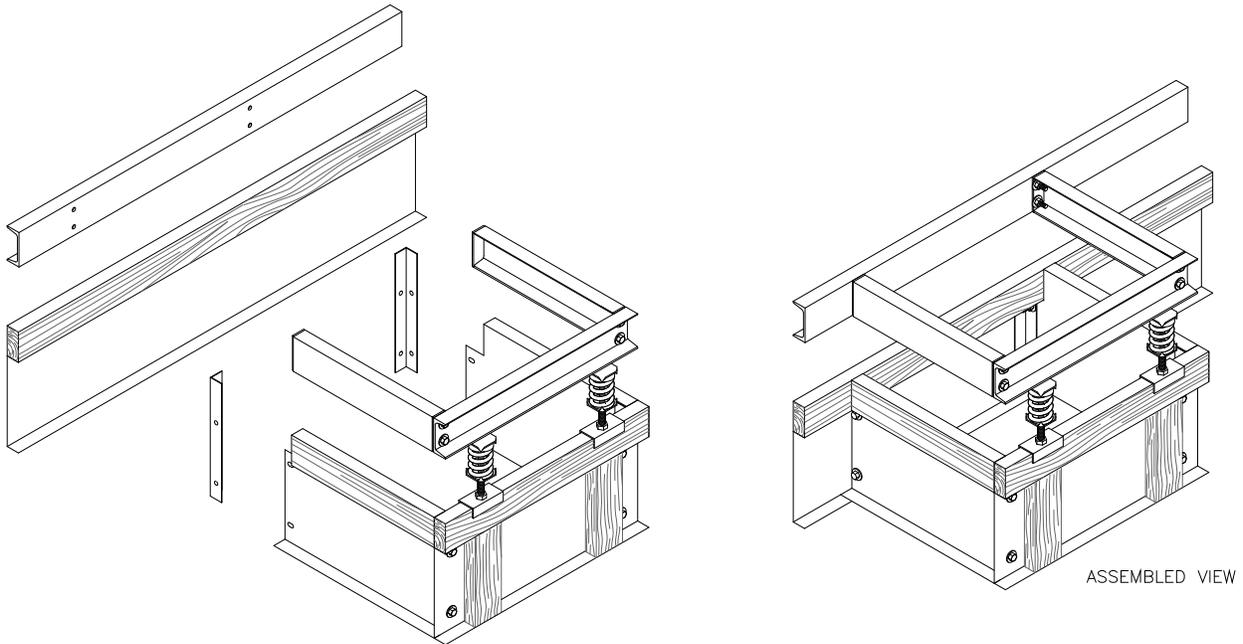
Figure 3-4



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Section 3B: KineticsCurb Pipe Chase (Option)

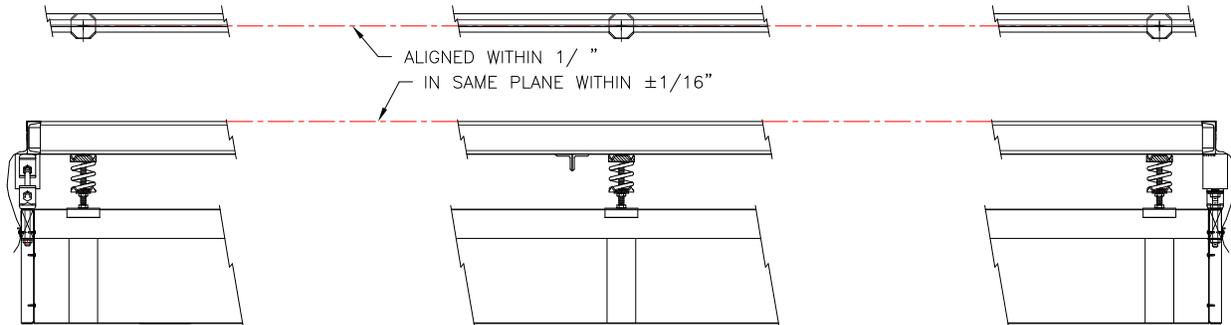
1. Attach the top side pipe chase rails to the main KineticsCurb rail at the attachment holes provided in the top side rails.
2. Attach the bottom side channels to the main ESR side rails using the corner attachment angles and hardware provided.
3. Align spring coils and leveling bolts to a vertical position. Coils will be adjusted at the same time as the main isolation rail.
4. Later when installing the weather stripping, it should be routed out and around the pipe chase to form a weather tight seal.



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Section 4: KineticsCurb Alignment and Attachment to Structure

1. After placing the curb in its final location, it is VITAL that the top rail be aligned so that the top surface of the rail is in the same plane +/- 1/4". If necessary, shims should be fitted between the perimeter base and the structural support members to ensure that this is the case.

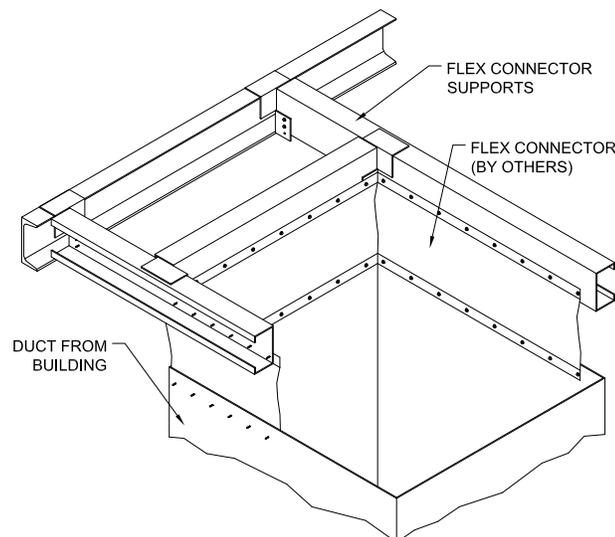


Note: Wood blocking are fitted between the top of the lower fixed curb and the underside of the equipment support rail. These are required for isolator adjustment and should not be removed at this point.

2. It is important that the sides of the curb be square and that the spring coils are in line. Diagonal measurements must be equal within 1/4" and spring coils along the long axis must be aligned within 1/8". Once this is accomplished, the lower fixed curb should be bolted to the supporting structure using (3) 3/8" bolts, or (6) 1/4" bolts or the equivalent for each lateral or vertical restraint.

Section 5: KineticsCurb Duct Flex Supports

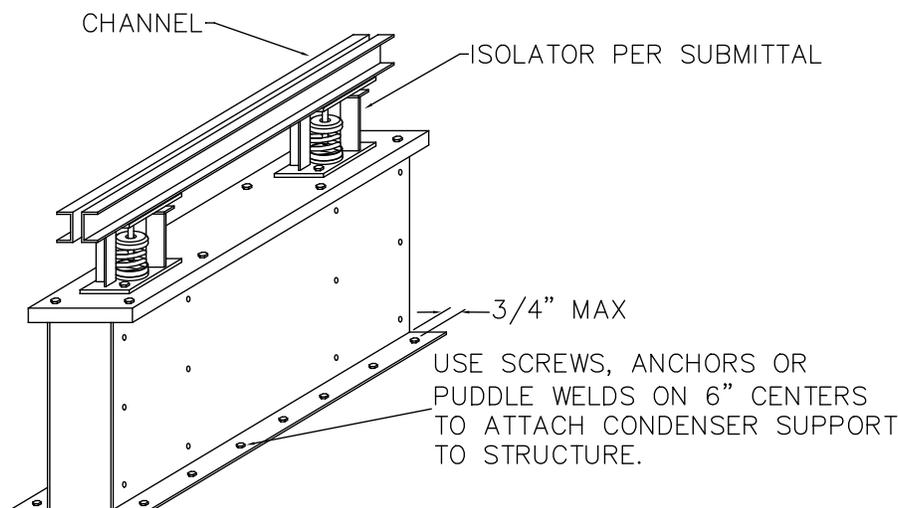
1. Install flex (by others) between the duct flex supports and the internal ducting in the building.



Section 6: KineticsCurb Condenser Support Assembly (Optional)

1. Position the condenser support so that it will be aligned with the support member on the equipment to be supported. See also the equipment or KineticsCurb submittal information for this location.
2. The condenser support is designed assuming that the roof to which it attaches is at the same elevation as is the structure that supports the KineticsCurb itself (for non-sloped applications). If the KineticsCurb is designed for a sloped roof, the Condenser support is designed to mount to a surface that would be consistent with the slope under the bulk of the KineticsCurb, but extended out to the condenser support location.

For example: If the KineticsCurb penetrates the roof decking and mounts directly to the structural steel beneath, the condenser support should do the same.



3. Attach to the roof structure using #10 screws on 6" (inch) centers, both sides. (As an option and depending on the material to which the condenser support is to be attached, 1/4" seismically rated anchors or puddle welds using 3/4" diameter washers can be substituted. In all cases, the connections must be within 3/4" of the vertical condenser support side panel.
4. After the equipment has been set, adjust the support isolators per the isolator instructions provided separately.
5. For seismic or high wind applications, the equipment must be welded or bolted to the support channel. For other applications it is not necessary to weld or bolt this joint.



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Section 7: KineticsCurb Setting Equipment

1. If using the gasketing material provided by the equipment vendor, check it to be sure that it is flat and smooth and will seal against the top of the isolation rail. If there is any concern about the ability of this material to seal, it should be removed and a bead of caulk applied to the top surface of the perimeter channels and duct block-off prior to setting the unit.
2. Check also the seal at the duct block off locations. Ensure that the duct block offs are aligned with the mating surfaces on the underside of the unit and that they are either provided with a flat smooth foam seal or are provided with a bead of caulk that will act as a seal.

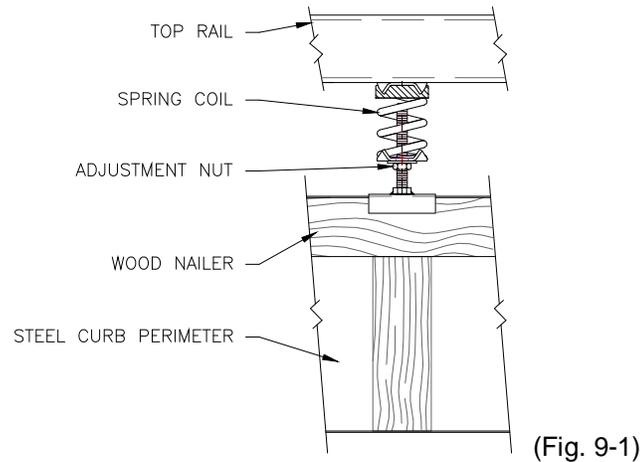
Note: Foam seals are frequently preferred over caulk as when aligning the unit the caulk will tend to "glue" the KineticsCurb to the underside of the AHU making adjustment difficult.

3. Do not remove the wood blocking that are fitted between the underside of the isolation support rail and the lower fixed curb, near each coil assembly. These are intended to support the equipment until the springs are adjusted.
4. Carefully align the supported equipment with the KineticsCurb and set it into place using caution not to damage the EPDM weather seal.
5. In high wind or seismic applications, the equipment must be bolted into place on the KineticsCurb. Generally (1) ½" diameter bolt per restraint is adequate, but this should be verified using an appropriate analysis. Normal installation is to open access panels in the equipment and either use existing mounting holes or drill through the bottom of the unit in line with the rail. Holes should also be drilled in the top leg of the isolated channel and through bolts fitted.

Section 8: KineticsCurb Adjustment Procedure

NOTE: Before adjusting the isolators on the KineticsCurb, it is necessary that the supported equipment be brought up to its installed operating weight. If the unit is to be filled with a fluid, this should be done prior to final adjustment of the isolators.

Tip: Prior to adjusting the leveling nuts and screws, apply a grease with EP additives to the leveling screw to reduce friction.



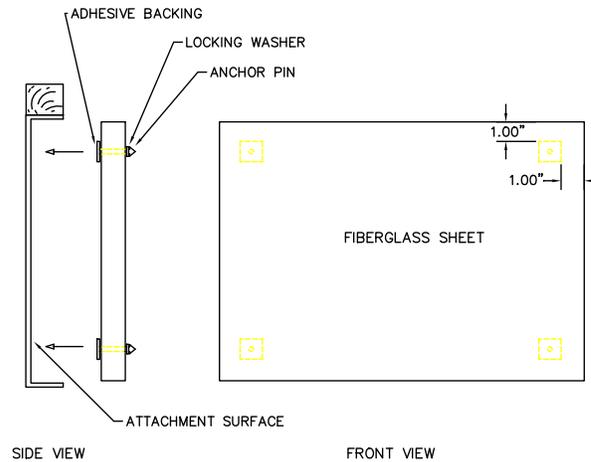
1. Coil Adjustment Procedure: Rotate the adjustment nut counter-clockwise several complete turns at each spring coil until the wood blocking is just barely free to move. It may be necessary to make several circuits of the isolators as adjustments on adjacent pedestals may affect the load on those previously adjusted.

Do not over adjust the springs. Once all springs are adjusted, wood blocking may be removed by removing the lower screws attaching the blocking to the lower fixed curb. Confirm that the unit is now level within the manufacturer's specifications.

Note: If it is found during adjustment that some of the restraint snubbers are tight on the bottom when others are tight on the top and that adjustment does not cure this situation, it is likely that the curb is not level. Refer back to section 4 for more information.

Section 9: KineticsCurb Final Installation and Test

1. Add 1-1/2" insulation panels to the outside of the lower curb perimeter and flash to the roof structure (by others). If optional external insulation is supplied with the KineticsCurb, it should be installed using Anchor pins as shown below. If it is provided by others, follow the manufacturer's recommendation.



(Fig. 10-1)

Procedure for Kinetics Provided Insulation

- A) Trim Fiberglass panels to desired size.
 - B) Press a minimum of 4 anchor pins (1 per corner) through the fiberglass sheet, locating approximately 1" in from the corners and secure them with locking washers.
 - C) For 6 to 8 ft long panels, 8 anchor pins (4 top and 4 bottom) should be used. For 4 to 6 ft long panels, 6 anchor pins (3 top and 3 bottom) should be used and for under 4 ft long panels, 4 pins are sufficient.
 - D) Clean the metal surface and be sure it is free of dirt, oil and water.
 - E) Peel the cover off the adhesive backed mounting plate and place the sheets against the metal perimeter panels and press them firmly to anchor the pins.
2. Flash the curb into the roof in a normal fashion.
 3. Attach the bottom edge of the EPDM weather seal to the wood nailer on the curb (overlapping the roof flashing) and secure it with the pre-punched 5 ft cover strip, 24" OC using the wood screws provided.
 4. After completing the connection, the excess weather seal can be trimmed.
 5. Once the installation is complete, before the lifting equipment is permitted to leave the site and before interior ceiling tiles or other water damageable items are installed, spray the unit and KineticsCurb base with water to check for and correct any leaks.