



## **INSTALLATION GUIDELINES – NOISE BARRIER/ACOUSTICAL LAGGING FOR PIPES AND DUCTS**

The following is intended to serve as general guidelines for installing Kinetics Noise Control, Inc.'s (Kinetics) noise barrier/acoustical lagging material around pipes and ducts. If there are questions due to unique on-site situations, please contact the local Kinetics sales representative's office for guidance.

### **MATERIALS LIST:**

1. Vapor Absorber/Barrier (*Optional*) – An absorption material is typically available in a pressure spray can and sprayed on the outside of the pipe or duct prior to the placement of the low-density insulation material. It is used to absorb water vapor that may condense within the pipe/duct treatment materials. Polyethylene sheeting could be used as a vapor barrier. Check local building code and generally accepted installation practices before installing an absorber or a barrier.
2. Insulation Decoupler – Minimum 1" thick fiber glass, polyurethane foam, or mineral wool insulation with density of 1-1/2 to 3 pounds per cubic foot (or as required by the project specifications). For fire-rated installations or for pipe and duct applications in service at higher than ambient temperatures, ensure that the insulation material is compatible with operating temperatures and conforms to local building code.
3. Kinetics Noise Barrier/Acoustical Lagging – The barrier/lagging material is typically 1/2 to 2 pounds per square foot limp mass loaded vinyl. For specific technical information or specifications, refer to the appropriate Kinetics product data sheet.
4. Duct Tape, Insulation Stick Pins, Spray Contact Adhesive, and Metal or Nylon Strapping – These items (or other similar techniques) may be used to temporarily hold the insulation decoupler during installation. The exact selection of material used will vary with the selection of the specific decoupler and the surface of the pipe or duct. (Reference Installation Procedures E, F, and G)

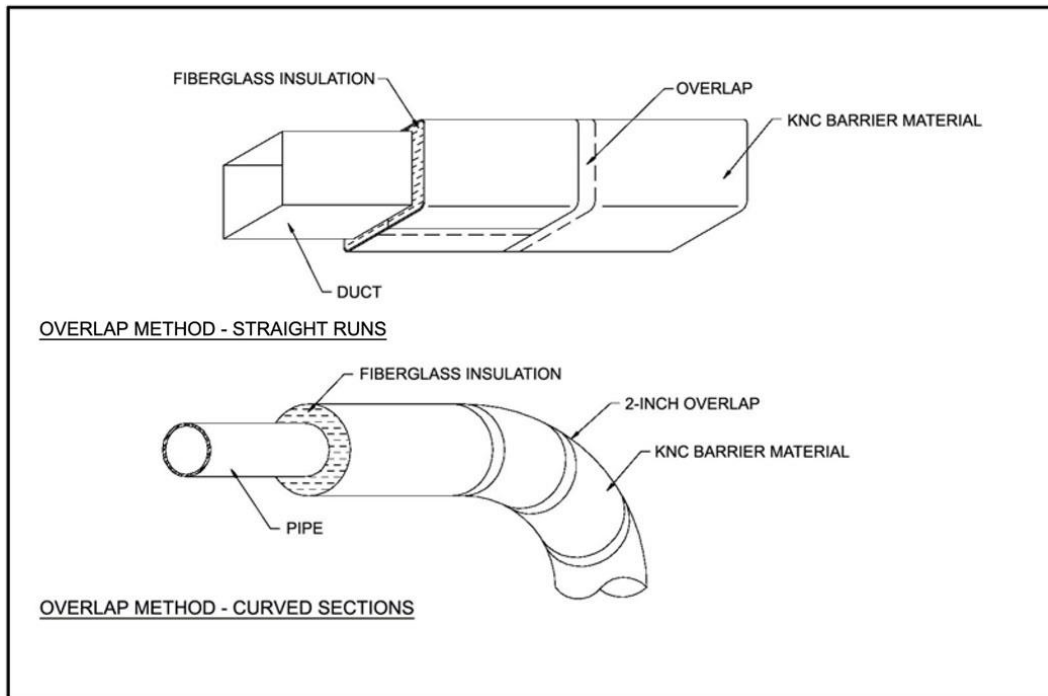
### **INSTALLATION PROCEDURES:**

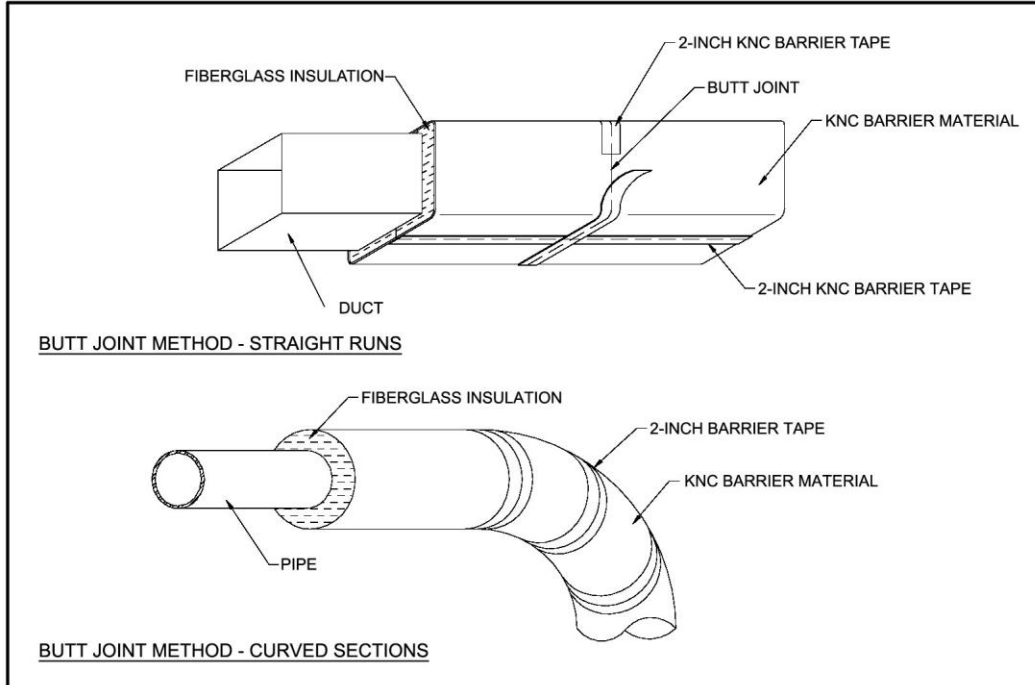
- A. Prior to installation, carefully review all applicable local, state, and federal construction fire codes to ensure that all materials used in this procedure are compatible with the standards appropriate for building construction.
- B. Ensure that the outer surface of the pipe or duct is clean and free of dust, dirt, or similar foreign matter. If desired, the outside of the pipe or duct can be painted with a rust-resistant paint in order to minimize potential corrosion.
- C. If required, stiffen duct to minimize noise attributed to "oil-canning." For light gage sheet metal duct, it is recommended that a vibration damping material, such as Kinetics Model KDD or Model KDC-E-162, be applied to the outside of the duct to minimize sheet metal "ringing." Specific application and technical information on Kinetics vibration damping material can be found on the appropriate product data sheet.
- D. If required, vapor absorber "anti-sweat" compound or poly sheeting can be applied to the pipe or duct (Reference Materials List Item 1).
- E. Field cut and apply the insulation decoupler to the outside of the pipe or duct. Obtain a uniform thickness by butting all seams together (do not overlap). At elbows or similar transitions field measure and miter cut the insulation to fit. The insulation can be temporarily held in place using the items discussed in Materials List Item 4, but ensure that the insulation is not compressed by the fastener used.



- F. Wrap the noise barrier around the insulation-covered pipe or duct. At all seams overlap the barrier by a minimum of 2" and adhere using acrylic-based spray contact adhesive. Alternately, the barrier can be butted together at joints with the seam covered by a 2" wide cut piece of the barrier material. This strip is adhered to the barrier on either side of the seam using an adhesive compatible with the barrier material, typically an acrylic-based product (contact the local Kinetics sales representative to purchase acrylic-based tape if preferred for use at the seam). To aid in alignment and to temporarily hold the noise barrier during the curing of the adhesive, duct tape can be used. NOTE: duct tape cannot be relied upon to hold the noise barrier into place permanently since the plasticizers in the barrier vinyl will attack the adhesive layer of the duct tape over a short length of time.
  
- G. Metal or nylon bands can be wrapped around the outside of the barrier to guard against the possibility of adhesive failure. If used, this banding should be placed on either side of all radial seams in addition to the midpoint on longer sections. Ensure that the banding is snug only and does not result in compression of the insulation decoupler beneath. In lieu of banding, insulation "stick pins" can be used to reinforce the seams in the noise barrier. These pins typically are impaled through the barrier and insulation, and are then fuse-welded to the pipe or duct beneath. As before, ensure that the pin does not compress the insulation or barrier material beneath.

PLEASE NOTE: As mentioned in Installation Procedure F, we do not recommend the wrapping of duct tape around the outside of the vinyl barrier material due to potential adhesion problems over an extended period.





**KINETICS NOISE BARRIER/ACOUSTICAL LAGGING PRODUCTS:**  
 KNM-50B, KNM-100B, KNM-200B  
 KNM-50RB, KNM-100RB  
 KBC-50BQQ, KBC-100BQQ  
 KBC-50RBQ, KBC-100RBQ