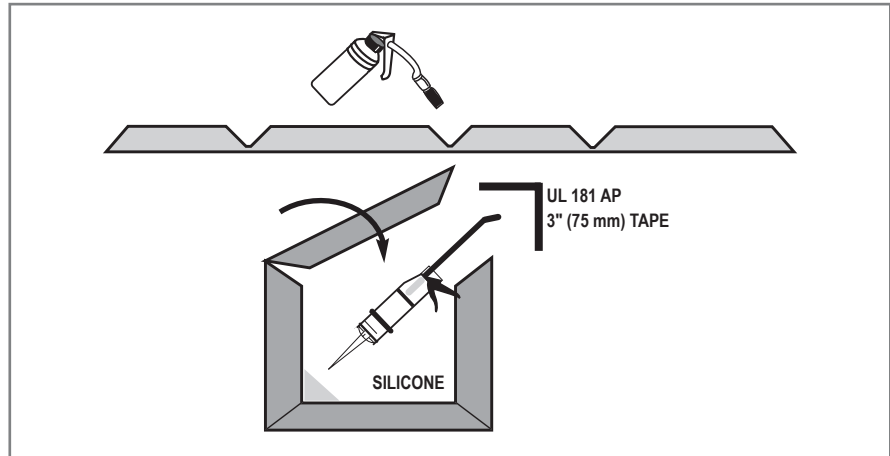


The KoolDuct System of pre-insulated ductwork is a highly specialized product which is fabricated and installed by authorized contractors. All materials utilized must be supplied by Knauf Insulation and fabricated in accordance with "Knauf KoolDuct System Design Guide" which should be referenced for full system details. The abbreviated instructions below are not a substitute for contractor training.

Duct Fabrication

Rectangular duct segments are fabricated utilizing the V-groove method. The steps involved are illustrated.

- Cut V-grooves to form sides.
- Apply glue to mitered surfaces and allow to cure before proceeding.
- Fold and/or fit panels to form desired duct segment (crease sides using stiff spatula).
- Tape external seams where separate panels have been joined (Use 3" (75 mm) UL181A-P tape, apply with spatula).
- Apply continuous bead of silicone to all internal seams and smooth.



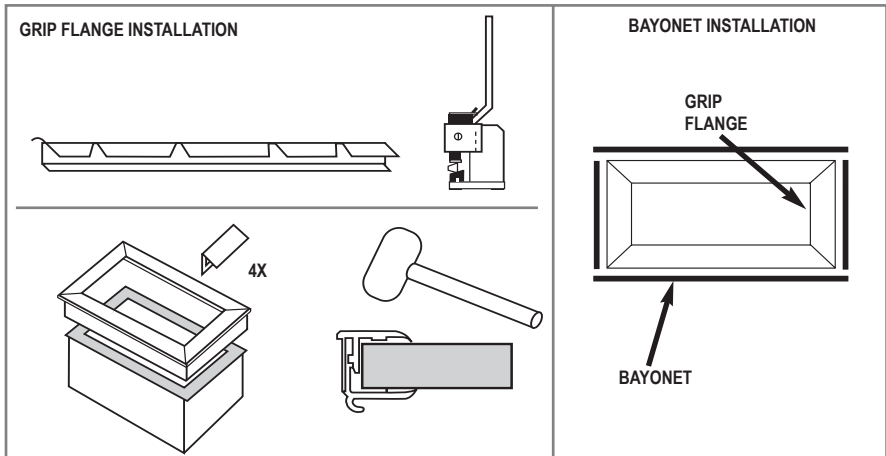
Grip Flange and Bayonet Installation

Grip Flange Installation:

- Install two piece aluminum grip on both ends of duct.
- Use grip notcher to prepare external grip.
- Each duct segment end requires four pieces internal, one piece external.

Bayonet Installation:

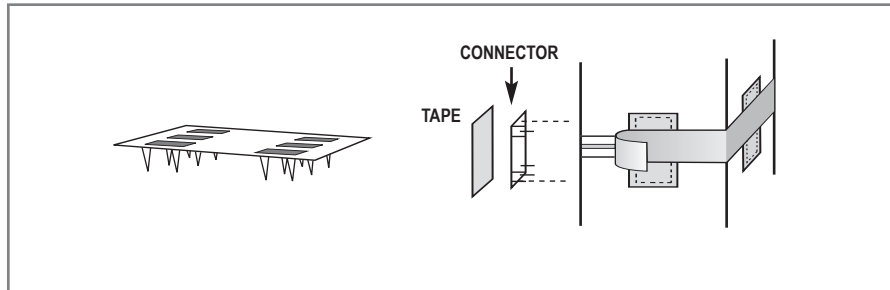
- Flanged segments are joined with aluminum bayonet.
- Apply one strip of gasket between adjoining segments.
- Horizontal bayonets overlap vertical bayonets.
- Apply silicone at tips of bayonet for leakage control.



Tiger Connector Installation

For ducts with sides less than 22" (550 mm) and pressure is less than 2" w.g. (500 Pa):

- Tape the foam ends of the duct segment.
- Apply silicone on one end, used as a gasket.
- Join two ducts, and press Tiger Connector on each side (use one for ducts that are up to 12" (300 mm) and two for ducts up to 22" (550 mm)).
- Apply a strip of UL181A-P tape over each Tiger Connector to complete vapor barrier, and then tape around duct joint.



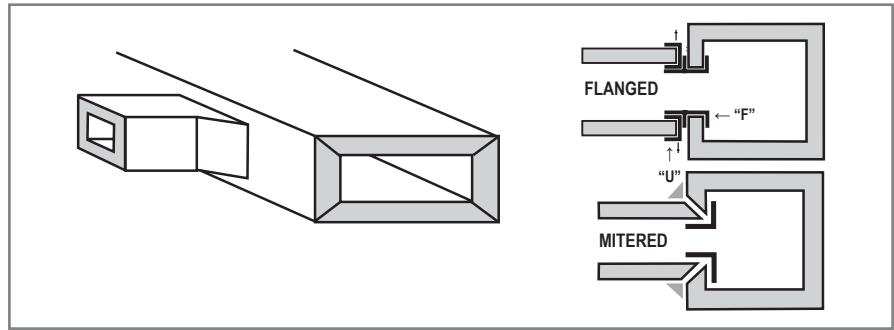
Boot Branch Connection

Flanged Connection:

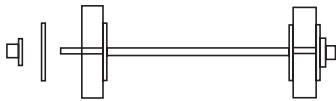
- Use "F" & "U" profile with gasket and rivets per "Knauf KoolDuct System Design Guide."

Mitered Connection:

- Use glue in joint, tape on inner seam and silicone on outer seam.
- Support accordingly.



Reinforcement, Support and Handling



Duct Reinforcement:

- Refer to the "Knauf KoolDuct System Design Guide" for requirements based on system pressure and duct size. Install as shown above.
- Maximum UL duct side without reinforcement: 30" (750 mm) (positive pressure).
- Minimum UL duct height without reinforcement: 8" (200 mm) (negative pressure).

Handling of Duct Segments:

- Exercise care in handling and transport of duct segments in order to prevent aesthetic damage.
- Storage of segments must be under cover and protected from environment.
- All externally mounted ductwork must be weather-proofed.
 - Aluminum clad per "Knauf KoolDuct System Design Guide."
 - Coating with glass scrim and mastic.

Support of Duct Segments:

- 13' (4000 mm) maximum distance between supports for ducts with sides less than 45" (1125 mm). Short segments and larger ducts require additional supports per "Knauf KoolDuct System Design Guide."
- Use supports at change of direction and branches.
- Supports can be 2" (50 mm) Steel Channel or Uni-Strut, or Tiger Support.
- Hanger can be 1" (25 mm) steel strap, ¼" (6 mm) bar or 12 ga. wire.
- Refer to the "Knauf KoolDuct System Design Guide" for additional detail.

KoolDuct Pattern Development

