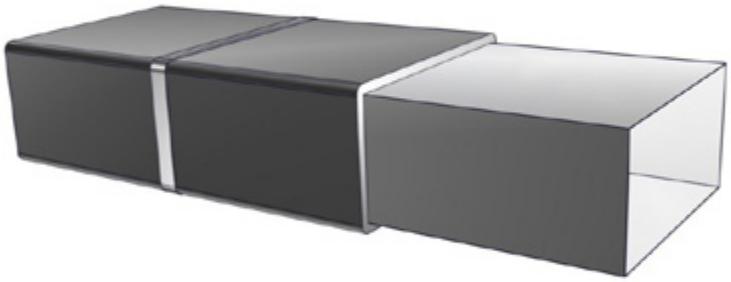
RenewAire
Energy Recovery Ventilation

Duct Lagging

Supplemental Installation Manual for Accessories

SB4x10
SB4x20
SB4x30



Duct Lagging (Typical)

⚠ WARNING

Product contains fiberglass wool!

Handling the fiberglass during installation will expose you to airborne particles of glass wool fibers and ceramic particles know to the State of California to cause cancer through inhalation. Glass wool fibers may also cause respiratory, skin, or eye irritation.

Precautions:

As with all fiberglass wool products, when handling or installing this material:

- Wear long sleeves, gloves, and caps.
- Wear eye protection (googles, safety glasses, or face mask).
- Use a NIOSH-certified particulate respirator with an efficiency rating of N95 or higher, such as a 3M model #8210, #8511, or #8233.
- After handling or installing, bathe with soap and warm water.
- Wash work clothes separately and rinse washer after use.

TABLE OF ILLUSTRATIONS

1.0 OVERVIEW

1.1 DESCRIPTION

Duct lagging reduces transmission of noise into or out of a duct through its walls. Noise radiating into a space from duct walls is often called "break-out" noise.

RenewAire's duct lagging material is a composite. The outer layer is a limp, mass-loaded vinyl layer, with an aluminized outer face that provides a Class A flammability rating. The outer layer provides most of the sound absorbtion. Ther inner layer of quilted acoustic fiberglass absorbs some break-out noise, but its primary function is to decouple the outer mass layer from the duct.

1.2 MATERIAL SPECIFICATIONS

Thickness:	1" (nominal)
Outer Mass Layer:	Foil-scrim faced limp vinyl 0.1" thickness, 1psf Mass-loaded with barium sulfate (no lead)
Inner Decoupler Layer:	1" thick quilted fiberglass
Total Weight:	1.2 pounds per square foot
"R" Factor:	3.4
Temperature Range:	-40˚F to 220˚F
Flame Spread Index:	10 per ASTM E-84
Smoke Density Index:	40 per ASTM E-84

2.0 INSTALLATION

2.1 SUMMARY OF INSTALLATION METHOD

The duct lagging is wrapped around the duct, sealed with tape or adhesive, and secured with banding. Tape with vinyl-compatible adhesive is available from RenewAire. See next page for installation details.

2.2 SIZES AND WEIGHTS

SB4x10	48" wide x 10' long 6" overlap along long edge 55 pounds
SB4x20	48" wide x 20' long 6" overlap along long edge 112 pounds
SB4x30	48" wide x 30' long 6" overlap along long edge 158 pounds

2.3 MATERIAL REQUIRED FOR TYPICAL INSTALLATIONS

- Duct Lagging (required): RenewAire PNs SB4x10, SN4x20, or SB4x30.
- Nylon Ties (straps): RenewAire PN SBBAND, packs of (10). Use to hold the duct lagging in place during installation, and as back-up to the tape or adhesive(s) used to seal the overlapping joints.
- Vinyl-compatible Tape (optional): RenewAire PN SBTAPE. Used forpermanent sealing of seams in duct lagging's outer mass layer.
- Vinyl Adhesive (optional, by others)—may be used to adhere vinyl noise barrier overlap joints. Use an MEK-based solvent adhesive (example: adhesive used with vinyl flooring). Follow the manufacturer's recommendations concerning ventilation and application.
- Insulation Stick Pins (optional, by others)—may be used to secure the duct lagging.
- Spray Contact Adhesive (optional, by others)—may be used to adhere the inner fiberglass layer of duct lagging to the duct surface (example: "3M 77+").

2.4 INSTALLATION DETAILS

- Clean the duct surface thoroughly if you plan to use spray adhesive to attach the inner (fiberglass) layer of the duct lagging to the duct.
- Cut the duct lagging to size and wrap it around the outside of the duct. Do not overlap the fiberglass insulation—make butt joints instead. At all seams overlap the outer barrier layer by a minimum of 2" and adhere using vinyl adhesive. Alternatively, butt the barrier together at joints, covering the seam using either:
    - SBTAPE 2" wide tape vinyl-compatible adhesive, available from RenewAire; or
    - a 2" wise cut piece of the barrier material, glued on with vinyl adhesive.
- Duct tape can be used to help align the pieces or to remporarily hold the noise barrier in place while adhesive cures, or while applying the SBTAPE. SBTAPE is preferred to conventional duct tape because it has a permanent bond (see CAUTION below).
- SSBAND nylon ties can be wrapped around the outside of the barrier to take the strain off the adhesive. If used, this banding should be placed on either side of all radial seams in addition to the midpoint on longer sections. Tighten the ties just enough to support the duct lagging—do not compress fiberglass decoupler layer.
- Alternatey, use insulation "stick pins" or "weld pins." Again, do not compress the fiberglass decoupler layer.

⚠ CAUTION

DO NOT USE ORDINARY DUCT TAPE AS THE ONLY ATTACHMENT METHOD.

The plasticizers in the vinyl barrier will eventually weaken conventional duct tape's adhesive. Add straps to the installation if using conventional duct tape.

2.3 ILLUSTRATION OF BUTT JOINT AND OVERLAP METHODS

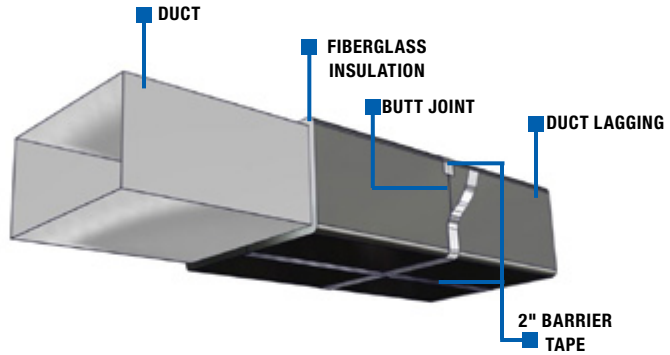


FIGURE 2.3.0 BUTT JOINT METHOD

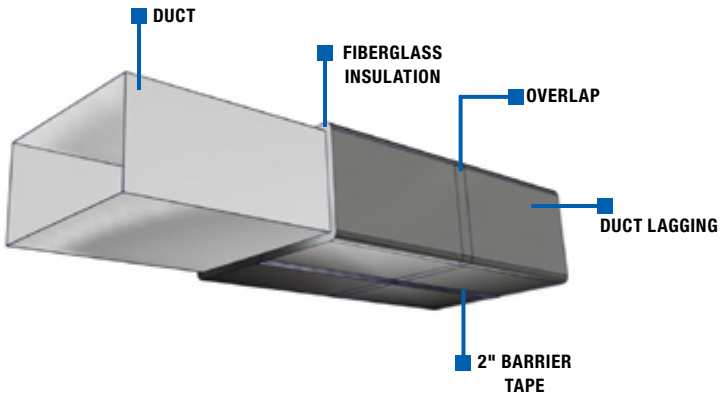


FIGURE 2.3.1 OVERLAP METHOD

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About RenewAire

For over 30 years, **RenewAire has been a pioneer in enhancing indoor air quality (IAQ)** in commercial and residential buildings of every size.This is achieved while maximizing sustainability through our fifth-generation, static-plate, enthalpic-core **Energy Recovery Ventilators (ERVs) that optimize energy efficiency**, lower capital costs via load reduction and decrease operational expenses by minimizing equipment needs, resulting in significant energy savings. Our ERVs are competitively priced, simple to install, easy to use and maintain and have a quick payback. They also enjoy the industry's best warranty with the lowest claims due to long-term reliability derived from innovative design practices, expert workmanship and **Quick Response Manufacturing (QRM)**.

As the pioneer of static-plate core technology in North America, RenewAire is the largest ERV producer in the USA. We're **committed to sustainable manufacturing** and lessening our environmental footprint, and to that end our Waunakee, WI plant is 100% powered by wind turbines. The facility is also one of the few buildings worldwide to be LEED and Green Globes certified, as well as having achieved ENERGY STAR Building status. In 2010, RenewAire joined the Soler & Palau (S&P) Ventilation Group in order to provide direct access to the latest in energy-efficient air-moving technologies. For more information, visit: renewaire.com

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