



The Knauf KoolDuct[®] System

High Performance Pre-Insulated Ductwork



Emphasis is on High Performance With the Knauf KoolDuct System

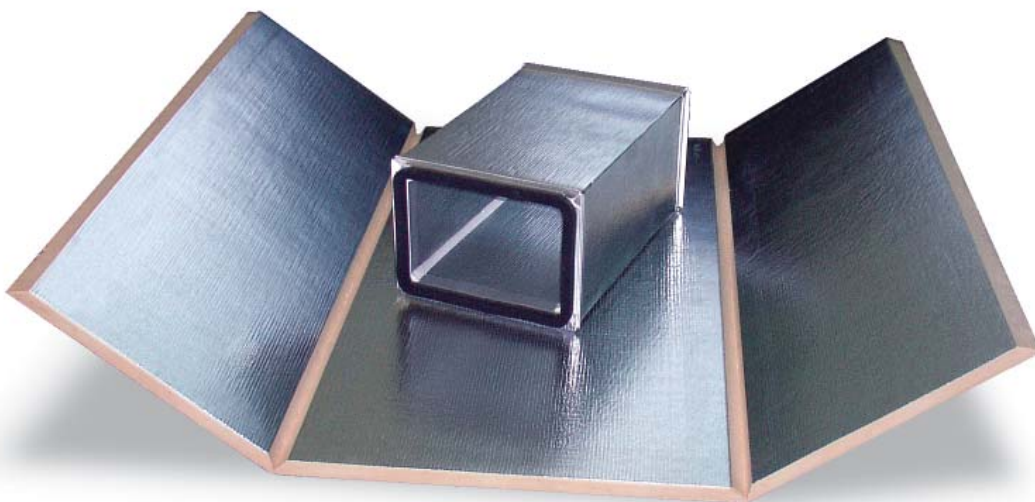
Knauf Insulation presents a revolutionary approach to HVAC ductwork—the Knauf KoolDuct System. This system is a high performance, pre-insulated air ducting system specifically designed for the demanding requirements of the commercial and light industrial sectors. It offers many competitive advantages over conventional sheet metal ductwork systems including 5-15% total installed cost savings, depending on the project.

The KoolDuct System, constructed with closed cell CFC/HCFC-free, zero ODP (ozone depletion potential) phenolic foam boards and patented aluminum flanges, resolves many common design issues such as weight, space, installation time and energy performance.

Complete System Technology

Why is the KoolDuct System a revolutionary approach? It's a comprehensive system. Along with the materials necessary to build high-specification ductwork, the system includes all the custom tools and machinery to efficiently fabricate every job and the specialized training to ensure our rigorous quality standards are maintained. Specifying the Knauf KoolDuct System assures a premium ductwork installation built with high quality materials—every time.

Knauf KoolDuct Systems are built with closed cell CFC/HCFC-free, zero ODP phenolic foamboard faced on both sides with reinforced aluminum foil. After the board is scored and folded into the specified duct sections, they are joined with patented aluminum flanges to assure a strong tight closure. The finished ductwork is ready to be installed internally or externally. Once installed, it is easy to modify and repair on-site.



KoolDuct Panels, manufactured of CFC/HCFC-free, zero ODP phenolic foam, form the basis of the UL 181 Listed system. Combined with patented aluminum flanges to connect duct sections, the KoolDuct System offers a superior approach to HVAC ductwork with consistently high performance for every installation.



The Benefits of a Better Insulated Air Duct System— the Knauf KoolDuct System

The Knauf KoolDuct System offers many advantages over conventional insulated sheet metal systems including the following:

- **Lightweight**

The weight of KoolDuct ductwork is only 15% of the weight of insulated sheet metal ductwork approximately 3.5 pounds per cubic foot (60 Kg per cubic meter).

- **Fast Track Installation**

Knauf KoolDuct ductwork can be erected at a substantially higher rate of speed than sheet metal ductwork by eliminating the secondary task of insulating the ducts.

- **Superb Insulation**

KoolDuct insulated panels are superior to all other forms of insulation with a thermal conductivity of 0.1475 BTU in/hr ft² °F (0.0206 Watt/m°C).

Available in thicknesses:

- R-8, 1 ³/₁₆" (30 mm ±1.5 mm)
- R-6.1, ²⁹/₃₂" (23 mm ± 1.5 mm)

- **Airtight**

The fully sealed duct seams combined with our patented jointing system produces ductwork with minimal leakage. The Knauf KoolDuct System easily meets SMACNA's Leakage Class 6.



Easy Handling: KoolDuct panels are 15% of the weight of insulated sheet metal ductwork, making fabrication, transport and installation fast and easy.

- **Energy Savings**

The superior insulating properties of the phenolic panel, combined with the minimal air leakage of a KoolDuct System yields significant savings in reduced heating and cooling loads.

- **Protected Airstream**

Ideal for jobs where a non-fibrous solution is desired. The air stream in the sealed duct flows only on aluminum, making it ideally suited for high specification applications.

- **Space Saver**

The Knauf KoolDuct System saves 6-8" (150-200 mm) of valuable space above the duct within a false ceiling in comparison to insulated sheet metal systems, since it can be installed flush to the slab. The low equivalent thickness of the high-density insulation further contributes to increased space savings.

Fabricating a KoolDuct Segment

Groove phenolic panels to desired dimensions.



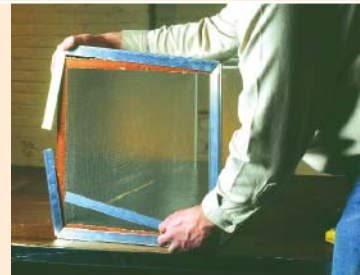
Glue and fold panels at grooves to form air duct segment.



Tape duct along outer edge(s) joined together.



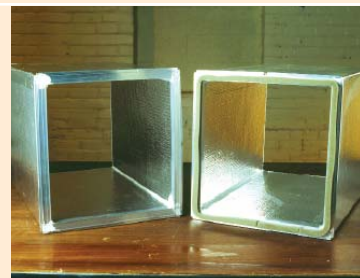
Install patented Grip Flanges on ends.



Seal the internal seams of the duct with silicon.



Apply self-adhesive gasket to the flange and the segment is ready for installation.



An Overview of Knauf KoolDuct System Projects:

Top left: The aluminum clad version of Knauf KoolDuct ductwork, ideal for outdoor roof-mounted air handling systems.

Top right: The view of KoolDuct from above at Oakleaf School in Jacksonville, Florida.

Bottom left: Superior insulating properties, fast track installation and minimal air leakage are all reasons why the Knauf KoolDuct System was the air handling system of choice at Florida International University's Marine Biology lab.

Bottom right: Final installation of the Knauf KoolDuct System has high visual appeal.



• Versatile Application

The Knauf KoolDuct System can be used in commercial, residential and industrial applications, both internally and externally. It is easily modified or repaired and can be fabricated on-site with portable non-powered tooling.

• Easy Cleaning

Knauf KoolDuct Systems can be cleaned easily using the latest non-abrasive cleaning methods.

• Fire & Smoke Performance

The Knauf KoolDuct System is listed to the UL 181 Class 1 Air Duct Standard by Underwriters Laboratories, approved for use in the USA and Canada (C-UL Listing). KoolDuct also passes the Corner Wall Fire Test, UL 1715: Fire Test of Interior Finish Materials.

• Maximum Air Velocity

5000 fpm (25m/s)

• Service Temperature

158°F (70°C)

• Internal Static Pressure

4" w.g. (1000 Pa) recommended; (UL rating: 15" w.g. positive, 4.5" w.g. negative)

• Microbial Growth

UL 181 tested. Does not promote or support the growth of mold, fungi or bacteria.

A Complete System, A Proven Performer

The Knauf KoolDuct System

A Complete System

The Knauf KoolDuct System offers a complete system technology approach for pre-insulated ductwork which includes:

- Complete line of components and accessories for fabrication and installation of Knauf KoolDuct Systems.
- Professional hand tools and automatic machinery to facilitate ductwork fabrication on a small, medium and large scale.
- Specialized training program for authorized contractors that combines theoretical and practical concepts.
- Cost Estimation Software

An Outdoor Solution

An equally innovative product is the aluminum clad version of Knauf KoolDuct ductwork. It is an extremely robust product that is fully fabricated in the shop and is ideally suited to the rigors of a roof-mounted system. And it shares the same compelling advantages of KoolDuct: lightweight, rapid, single-fix installation and high visual appeal.

An Environmentally Friendly Solution

The Knauf KoolDuct System is manufactured with closed cell phenolic foam panels that are CFC/HCFC-free and have zero ozone depletion potential (ODP). When combined with the significant savings in energy consumption derived from KoolDuct's strong thermal and leakage performance, the system's impressive environmental credentials are further enhanced.

A Proven Performer

Owners and specifiers take comfort in the knowledge that their Knauf KoolDuct Systems are installed by authorized contractors utilizing factory supplied materials in accordance with a proven methodology. This assures a consistent and high quality ductwork system.

Knauf KoolDuct Systems Installations Worldwide



For more information call (800) 825-4434, ext. 8283

or visit us online at www.KnaufInsulation.com

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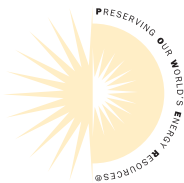
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At Knauf Insulation, we manufacture a wide variety of products that serve a common goal, helping to make the most of our planet's energy resources. A family-owned global company, we understand and are committed to high standards in quality, performance and environmental responsibility. Every step we take today toward energy conservation helps ensure better lives for generations to come.



LEED Eligible Product

Use of this product may help building projects meet green building standards as set by the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.