

KoolDuct®

The Future of Ductwork Systems

The Kingspan KoolDuct® System is an advanced performance pre-insulated HVAC ductwork system which is installed in a single step incorporating the ductwork and insulation all in one. Kingspan KoolDuct® panels comprise a fiber-free rigid thermoset phenolic insulation core faced with branded silver aluminum foil on one side and plain silver aluminum foil on the other. The Kingspan KoolDuct® System eliminates virtually all of the problems associated with galvanized sheet steel, fiber glass duct board and pre-insulated rigid polyiso (PIR) ductwork systems while, at the same time, offering additional advantages. Ductwork fabricated from The Kingspan KoolDuct® system can reduce air-leakage rates to a fraction of those typical of rectangular sheet metal ductwork. This state-of-the-art system has the potential to deliver a triple advantage by reducing energy consumption, consequently lowering operational carbon dioxide (CO₂) emissions, and potentially reducing expenses.

Kingspan KoolDuct's R-6, R8.1 and R12 panels are available to be used as a full 2-in-1 duct system or as a metal duct liner for both interior and exterior applications. To find out more about how KoolDuct can be a fit for you as a building owner, installer or fabrication shop, visit us online or talk to your local Kingspan Delivery Partner.

What's different about the Kingspan KoolDuct® System?



UL Listed – was the first premium performance pre-insulated ductwork in the world to be UL Listed as a Class 1 Air Duct, to Standard for Safety UL 181 (Underwriters Laboratories: Factory Made Air Ducts & Air Connectors), when fabricated to a specification clearly defined by UL.



Low weight – weighs up to 70% less than ductwork constructed from galvanized sheet steel and insulated with fiber glass duct wrap – this makes it ideal for refurbishment projects, where existing building structures have insufficient load capacities for new service loads.



Faster installation speeds – low weight ductwork fabricated in sections up to 13 ft / 3.93 m long, single-fix installation and no need to install insulation as a second operation, reduces project scheduling periods for insulated ductwork. This can provide an ideal value engineered ductwork solution without compromising performance.



Installed cost savings – reduced labor and materials, including fixings and first level support members, can provide an ideal value engineered ductwork solution without compromising performance.



LEED® – ductwork fabricated from The Kingspan KoolDuct® System can contribute points towards achieving credits, including pilot credits, in many of the LEED® rating systems.



Low air-leakage – rates can be reduced to a fraction of those typical of rectangular sheet metal ductwork – can easily achieve SMACNA air-leakage Class 3.



High R-values with thin insulation – the low thermal conductivity (k-value / l-value) of Kingspan KoolDuct® panels makes it the most thermally efficient, and hence the thinnest, insulation product commonly used for pre-insulated HVAC ductwork.



A fiber-free rigid insulation core – minimizes the risk of loose fibers entering the airstream through the ductwork, since distributed air does not come into contact with an insulation material that produces loose fibers.



CCRR Listed for Code Compliance KoolDuct is certified by Intertek's Code Compliance Research Report (CCRR), providing independent, third-party documentation of testing, compliance, and code evaluation—helping streamline acceptance by engineers and key decision-makers.



Koolduct is tested to the latest standard for Acoustic and air flow performance. ASTM E477-20 giving engineers the best data to design their systems.



Fiber-free
Core



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Comparative Data

Product Information	The Kingspan KoolDuct® System R6	Galvanized Doublewall R6	Galvanized Single Wall with R6 wrap	Galvanized Single Wall with R4 Liner
Interior	•	•	•	•
Mechanical Rooms	•	•	•	•
Shaft	•	•	•	•
Exposed	•	•	•	•
Weight 24" x 24" x 4'	12 lbs.	95 lbs.	46 lbs.	42 lbs.
Weight 48" x 48" x 4'	28 lbs.	190 lbs.	92 lbs.	84 lbs.
Approximate Cost / Sq. Ft. Assembly & Fab (Price Installed)	\$\$	\$\$\$\$\$	\$\$\$\$	\$\$\$

*KoolDuct is available for design for rooftop and exterior applications

Application Suitability

The Kingspan KoolDuct® System is designed for use in building services / HVAC applications. It is suitable for both new build and retrofit projects in the residential, commercial, institutional, light industrial and leisure sectors. Moreover, it is especially suitable for use in non-ferrous applications and on high profile projects where non-fibrous insulants may be preferred, for instance:

- Food, beverage and pharmaceutical industries
- Clean air and hygiene controlled environments (hospitals, server rooms)
- High relative humidity environments; and swimming pools*
- Koolduct as a liner for acoustic applications
- Koolduct as a liner for exterior duct systems that need to meet minimum insulation code requirements
- Data centers and mission critical applications

*For swimming pools, non-standard applications and project specific advice, please contact the Kingspan Insulation HVAC Technical Service Department.

To ensure you are viewing the most recent and accurate product information, please visit this link
<https://www.kingspan.com/us/en/business-groups/kingspan-insulation/koolduct/>

For more information on specific building product recommendations and installation guidelines, contact your Kingspan Insulation LLC representative.



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