

# Dual-Tech<sup>®</sup>

SMACNA Compliant Phenolic Exterior Ductwork



Pride Through Manufacturing

“Solutions Powered by Innovation”

Contact Us for Expert Advice: (800) 455-1402

## Description

Dual-Tech® is the PTM PATENTED pre-insulated ducting system that combines the features and benefits of the SMACNA compliant Kingspan KoolDuct® with Techna-Duc® in an all-in-one air distribution system.

Dual-Tech® is the pre-fabricated, double-layer ducting system that is suitable for indoor and outdoor applications. Its .032 aluminum jacketing is the exterior armor to the SMACNA compliant Kingspan KoolDuct® that is UL 181 Listed as a Class I Air Duct System. It is CFC/HCFC-free, using a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP), which makes it **Environmentally Friendly**.

The Dual-Tech® System Eliminates the need to install insulation as a second operation; this faster, **single trade install** reduces time onsite and improves overall construction schedules. If you want to save time, reduce construction timelines, and save money – then **Dual-Tech® is for you**.

PTM Dual-Tech® greatly reduces HVAC system run time by providing an airtight system with <1% air leakage with a standard R-16 insulation rating. This reduces utility costs greatly and virtually eliminates maintenance costs over the life of the product. In addition to all these benefits, we confidently back Dual-Tech® by PTM's **20 year limited warranty!**

## Recommended Uses:

PTM Dual-Tech® is primarily designed for exterior HVAC ducting application on new construction and existing HVAC upgrades. It delivers a maximum Static Pressure of positive 6 in. w.g./1500Pa and a negative 6 in. w.g./1500Pa. that will easily achieve SMACNA air leakage Class 3.

PTM Dual-Tech® is suitable for interior applications as well. It is ideal for exposed ducting in mechanical equipment rooms, gymnasiums or anywhere a protection jacketed duct is needed.

PTM Dual-Tech® is the perfect choice for all HVAC supply, return, fresh air, and outside air ducting needs, providing **long-term energy efficiencies** that will improve the **IAQ of the building**.



Central Dauphin School District  
Administration Building, Harrisburg PA



Sheridan College Tech Center  
Sheridan, WY



The Sheffield at Englewood South  
Englewood, NJ



Sight and Sound Theatre  
Strasburg, PA



## General Properties

Mean Air Velocity (Max.)	5000 fpm/ 25.4 m/s
Design Pressure (Higher Pressure Gauges Available Upon Request)	Positive: 6 in. w.g. / 1500Pa Negative: 6 in. w.g. / 1500 Pa
Nominal Density Range of Insulation	3.43-3.75 pcf/55-50 kg/m <sup>3</sup>
Closed Cell Content	>90%
Specific Heat Capacity of Insulation	0.45 Btu/lb*°F / 1.88 kJ/kg*°C
Minimum Compressive Strength at 10% Compression (BS EN 826: 1996)	29 psi / 200kpa
Thermal Conductivity (k-value) at 50-75°F Mean (ASTM C 518)	0.146 Btu*in/ft <sup>2</sup> *hr*°F
Thermal Resistance (Material R-Value: Installed & Out of Package) (ASTM C 518)	(2) 1-3/16" layers 16.2ft <sup>2</sup> *hr*°F/Btu
Internal Air Temperature	-15°F to +185°F

**Fire & Smoke Performance:** The panels successfully pass the Burning Test (UL 181) and do not exceed flame spread / smoke developed indices 25/50 (ASTM E 84 / UL 723).



## Features and Benefits:

- Dual-Tech® carries a 20 year limited warranty
- Dual-Tech® resolves issues that exist with many traditional sheet metal systems with insulation – such as weight, space, installation time, and energy performance
- Dual-Tech® is 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
- Dual-Tech®'s **patented system** combined with the fully sealed duct seams produce a system that is **virtually airtight**
- Dual-Tech® yields **significant savings** in reduced heating and cooling loads due to the superior insulating properties of the phenolic panel and minimal air leakage of the jointing system
- Dual-Tech® offers **significant installed cost savings** over other insulated sheet metal systems
- **Fully assembled and factory sealed**
- **Single trade installation**
- Improves installation speed (2x that of sheet metal and insulation)
- Superior strength (double-layer construction)
- R-16 Thermal rating (greater values available)
- Low air leakage: Less than 1%
- Inner layer fabricated to UL-181 Listed Class I Ducting
- Whole life cost savings up to 30% over 30 years
- Eliminates fibers from the air stream
- Reduces weight loads (1/3 the weight of sheet metal & insulation), less than 2lbs. / sq. ft.
- Reduction in CO2 emission (1.79 lb./sq. ft. of bldg. floor area)
- Ductwork fabricated from the SMACNA compliant **Kingspan KoolDuct®** system can contribute points towards achieving credits, including pilot credits, in many of the LEED (Leadership in Energy & Environment Design) rating systems, developed by the USBGC (United States Green Building Council)

## About Us

PTM Manufacturing, LLC, presents the solutions you are looking for. As an industry leader in advanced HVAC system air distribution and insulation technologies designed to improve building energy efficiency, reduce total energy consumption and lower cost, we provide custom fabricated, LEED eligible interior and exterior pre-insulated Kingspan KoolDuct®, Dual-Tech®, and Techna-Duc® which support sustainable building practices for industrial, commercial and residential applications.

PTM manufactures patented Techna-Duc® insulation systems for exterior HVAC ducting applications. Techna-Duc forms a water-tight shield against the environment and has been documented to reduce system energy output by up to 25%.

PTM also distributes and fabricates the Kingspan KoolDuct® product line – used worldwide as a premier air conveyance system. Designed to combine insulation and ducting for more thermally efficient HVAC performance, Kingspan KoolDuct® practically eliminates system air leakage, improves indoor air quality, boosts overall energy efficiency and can reduce unit fan operation by as much as 30%.

PTM has also combined the advantages of Kingspan KoolDuct® with the durability of our patented Techna-Duc® in its all-in-one patented Dual-Tech®. PTM's Dual-Tech® system is a pre-insulated air distribution system suitable for indoor and outdoor applications. The combined benefits yield a pre-insulated, water-tight shield that practically eliminates system air leakage, improves indoor air quality, boosts overall energy efficiency, and facilitates a one-trade installation that speeds up install time.

New construction or retrofit, PTM can maximize your building's HVAC efficiency and save you money... contact us to find out how.

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