

# Innovative, high performance, non-metallic, pre-insulated ductwork systems

– that save energy, cut costs, reduce environmental impact and deliver clean, uncontaminated air



MARKETING INFORMATION SHEET 11/2023

**EcoDuct is widely regarded to be the most sustainable and cost-effective HVAC ductwork system in the world.**

We are the only manufacturer of phenolic pre-insulated ductwork that comes in all shapes, sizes and colours and is suitable for indoor and outdoor applications – from large public, commercial and industrial to small scale residential – for new build, refurbishment and use in services modules.

**Our products are fully tested and certified and three simple examples illustrate the unrivalled environmental credentials:**

1. EcoDuct can reduce the embodied energy (CO<sub>2</sub> emissions) of an HVAC system – a major cost component of every building, by up to 75% – an important part of the journey to net zero carbon.

2. EcoDuct can reduce the energy consumption of an HVAC system by up to 45%. This represents 24% to 30% of the 30-year life-cycle costs of a property, so the potential savings are significant.

3. With offsite prefabrication of the pre-insulated ductwork, use of EcoDuct reduces waste on site to close to zero and our buy-back scheme optimises cradle-to-cradle circularity – recover re-use, recycle.

In an industry in which rigorous new standards and higher consumer demands are emerging, EcoDuct offers unrivalled energy efficiency, environmental and sustainability credentials. Innovative design delivers meaningful energy savings and a reduction of the carbon footprint (CO<sub>2</sub>) in every building in which it is installed. Fully compatible with the major international building assessment programs – BREEAM, LEED, the International WELL Standard and NABERS Design for Performance.

**In summary, EcoDuct transforms ductwork from a concealed component into a design asset, giving unparalleled design flexibility alongside unprecedented environmental benefits, sustainability, energy efficiency, performance and longevity with meaningful cost and time savings.**



CUTS CO<sub>2</sub>



SAVES ENERGY



GREATER CIRCULARITY



FULL FLEXIBILITY



CLEANER AIR



SAVES COST



SAVES WEIGHT



SAVES SPACE



ULTRA AIRTIGHT



IMPROVED PERFORMANCE



OPTIMAL IEQ



SAVES TIME

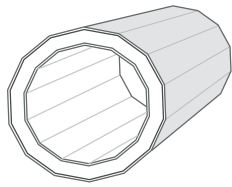


COMPLIANT

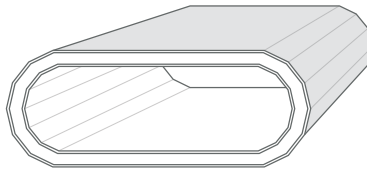
**Innovative, high performance, non-metallic, pre-insulated ductwork systems**  
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EcoDuct is the only pre-insulated ductwork system that offers all shapes and sizes, including circular, flat oval and rectangular, as well as accessories such as FCU plenums and grille boxes.

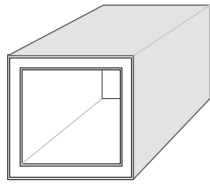
CIRCULAR



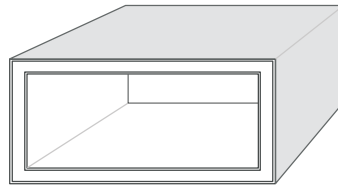
FLAT OVAL



SQUARE



RECTANGULAR



**KEY FEATURES:**

- Up to 85% lighter than insulated metal ductwork
- Up to 70% savings in installation time – a single fit of ductwork, insulation and final cover
- Saves up to 45% of the energy costs of AC systems
- Saves up to 75% in the carbon footprint (CO2) embodied energy of the installation
- Smooth inner surface allows delivery of the cleanest possible air with reduced contamination from pathogens including viruses and bacteria.
- Offers best possible airflow performance and thermal efficiency with excellent fire and smoke performance and safety
- Enhanced air tightness and pressure resistant – Class D for air leakage at 2,500Pa
- Enhanced robustness and longevity at least equal to the life of the mechanical plant
- High closed cell content and corrosion resistance, so minimal degradation of thermal properties from moisture or use in hostile atmospheres
- Very cost competitive on installation with reduced whole-of-life cost
- Material is non-toxic and not on prohibited/red lists – LBC, REACH, etc.
- Can be supplied in any shape, size, colour or effect, giving complete design flexibility

**Technical Specifications - Phenolic Insulation**

PARAMETERS	DETAILS AND COMPLIANCE
Air Leakage and Pressure Testing	Class D at 2,500 Pa (DW144: B&ESA – 2016 (with DW143 - Ductwork Air Leakage Testing))
Reaction to fire	EuroClass B, s2-d0 (BS EN 13501-1), Class 0 (BS476-6)
Flame Spread (FSI) and Smoke Developed (SDI)	FSI of less than 25 and SDI of less than 50 (ASTM E 84/ UL 723)
UL Listing	Listed as Class 1 to Standard for Safety UL181; UL 181 Burn Test (optional)
Density	55 – 60 kg/m <sup>3</sup>
Compressive Strength	200 kPa (EN 826)
Temperature range	From - 20° C to +80° C
Specific thermal (heat) capacity	1470 J/kgK (ref.CIBSE Guide A)
Coefficient of thermal conductivity & thickness	0.022W/m.K at 10-19° C (BS EN 12667: 2001 – Thermal Performance of Buildings)
Closed cell content	Minimum 90% (ISO 4590)
Melting point	N/A to thermoset insulation (chars when exposed to extreme heat)
Material Base	Phenolic – rigid foam from phenolic resin
Ozone Depletion Potential (ODP)	Zero ODP
Global Warming Potential (GWP)	Low GWP
VOC Content/Emissions	0.0054 mg/m <sup>2</sup> after 28 days (TVOC, Eurofins Product Testing, Test Chamber per ISO 16000-9)
CFC/HCFC/HFC Content	Zero
Material Safety/Asbestos/Chlorine	Phenolic is inert and non-toxic; has no Red List materials; REACH compliant
CE Certificate of Conformity	EN 14314; see Declaration of Performance (CE Mark - European Construction Products Regulations)
Ductwork and Building Standards	BS EN 14314:2015 – Factory Made Phenolic Foam Products BS EN13403:2003 Building non-metallic ducts. Ductwork made from installation duct boards BS 9999:2017- Code of Practice for Fire Safety. BS 5970:2012 – Thermal Insulation of Ductwork BS 5422:2023 – Thermal Insulation Standards Technical Guidance Documents B: 2024, F: 2019 and L: 2025

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