

Kingspan KoolDuct

Ross Baynham



Who is Kingspan?

- Manufacturing and distribution operations throughout Europe, North America and Australasia
- 103 locations: 65 manufacturing and 38 sales offices



Types of Rigid Ducting

Pre-Insulated Ducting

or

Sheet Metal Ducting

- **Koolduct Panel**

with internal or
external insulation



Koolduct



Externally insulated



What is the Koolduct System?

- Super High Performance Koolduct Pre-Insulated Ductwork System
 - Rigid thermoset resin insulation forms the walls of the duct
- Alternative to Insulated Galvanised Steel



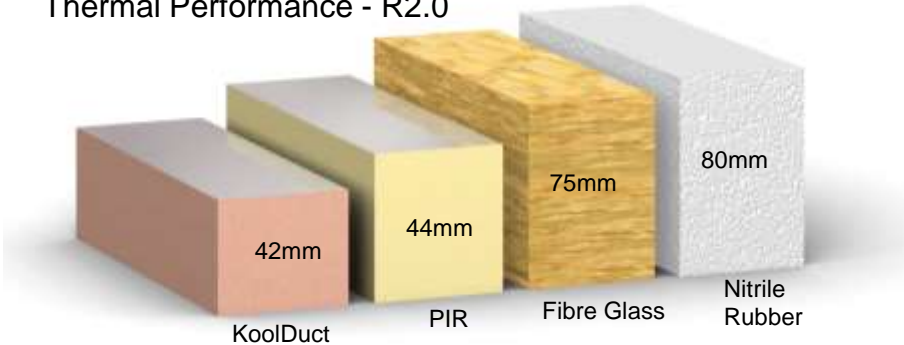
KoolDuct – Easy to Manufacture

- Workshop Fabrication
 - Using integrated computer generated CNC cutting
 - Flat pack to site for easy access



KoolDuct – High Thermal Performance

Thermal Performance - R2.0



Highest Performance, Lowest Profile



KoolDuct – Light Weight

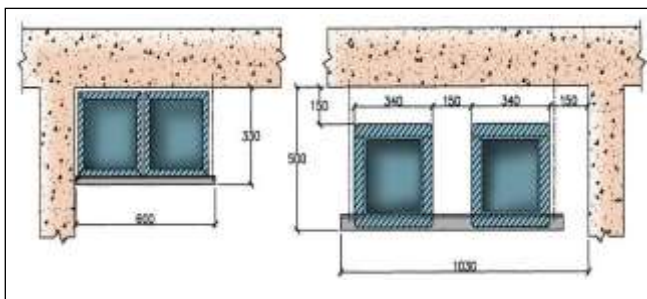


- Approximately 80% lighter than traditional metal ducting
- R2.0 ducting -1m*1m*1m
 - Koolduct – approx 10kg
 - Insulated steel – approx 48kg
- Reduced structural load for retro-fit or heritage buildings



KoolDuct – Valuable Space Saving

- No lagging required – can be installed flush to ceilings or soffits
 - Save 150mm above ducting
 - Comparison of single R2.0 300mm square duct
 - ❖ Koolduct – < 400mm of space required
 - ❖ Insulated Steel Duct – 600mm of space required (min 150mm for lagging access)



KoolDuct - Air Quality

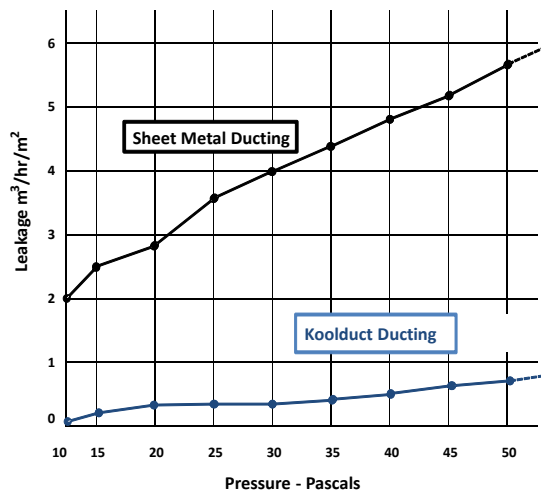


- No loose fibres
- >90% Closed cell
- Suitable for high spec projects
 - Health and hygiene industry
- Suitable for high humidity apps
 - Swimming Pools
- Will resist attack from mould and microbial growth
- Rodent and Vermin resistant
- Cleanable ductwork



KoolDuct - Air Leakage

- Reduced Air Leakage
 - Up to 85% reduction
- Greater flexibility in energy efficient design
 - Reduce plant size
- SMACNA Class 3
- BSRIA (Building Services Research & Info Assoc)
 - 30% energy consumption reduction



NCC 2013 Requirements

Climate Zone and Element	Minimum Total R-Value for ductwork							
	Climate Zone							
Climate Zone	1	2	3	4	5	6	7	8
Ductwork within a Conditioned Space	R1.2	R1.2	R1.2	R1.2	R1.2	R1.2	R1.2	R1.6
Ductwork in all other locations	R2.0	R2.0	R2.0	R2.0	R2.0	R2.0	R2.0	R2.4
Ductwork exposed to the sun	R3.0	R3.0	R3.0	R3.0	R3.0	R3.0	R3.0	R3.4



What is a Conditioned Space?

NCC Definitions A1.1

Conditioned Space means a space within a building, including a ceiling or under-floor supply air plenum or return air plenum, where the environment is likely, by the intended use of the space, to have its temperature controlled by air-conditioning....



Does it need to be insulated?

Spec J5.2

3. Ductwork Insulation

- (d) The requirements of (a) do not apply to –
 - (ii) air registers, diffusers, outlets, grilles.....



Any Questions?

