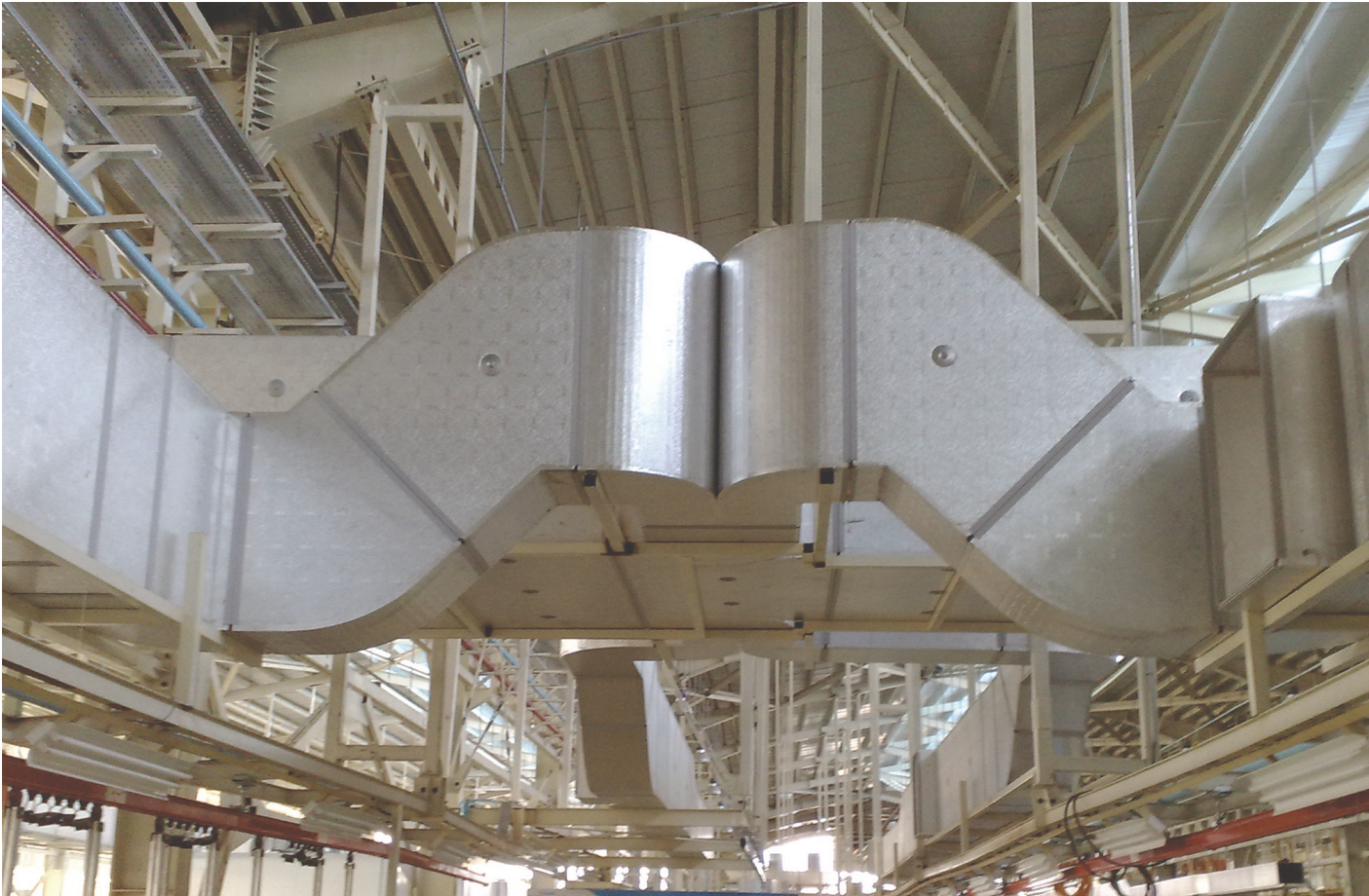


iPDuct PIR System

Product Catalogue



Fibre-free
Core

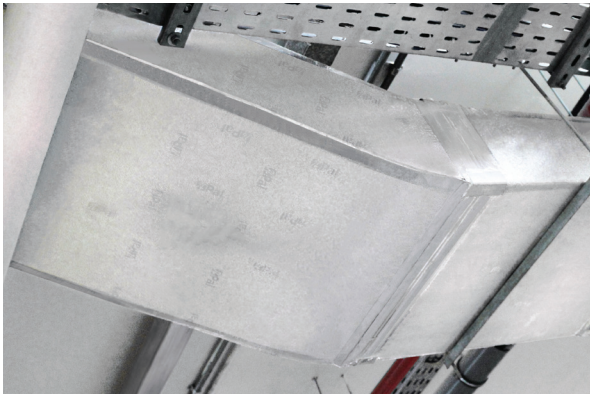
iPDuct
Insulation Pars

Introduction

Overview

The heating, ventilation and air-conditioning (HVAC) industry is in the midst of a dynamic era. However, air-distribution ductwork, a critical component of HVAC systems, has remained virtually unchanged since the early 1900s.

Several factors have introduced the need to revolutionise HVAC ductwork. Energy use has continued to escalate, and thus the demand for energy reducing solutions has intensified. Requirements for clean air are becoming increasingly prevalent. Speed of construction has become a valuable asset. Floor space and headroom are under constant pressure.



PalDuct systems have been the pioneer in pre-insulated ducting. Pal was the first company in the world to introduce the innovative and revolutionary rigid pre-insulated ductwork as an alternative to sheet metal ductwork. It was invented by Claudio Ferraro of Bologna, Italy in 1965. In 2016 the manufacturing site of PalDuct was established in Iran by the Kingspan Group and then the name changed to iPDuct

Insulation Pars has proven the value of its products and iPDuct has been used in some of the most prestigious projects around the world, due to its known advantages over the traditional galvanised sheet metal ductwork.



Insulation Pars has commissioned state of the art manufacturing plants, established workshops in different regions worldwide and also provided specialised and comprehensive training courses conducted by service oriented and experienced trainers well-equipped with the latest technologies, all to ensure quality HVAC ductwork fabrications and installations. This is closely supervised by the representatives from subsidiary companies and sales offices worldwide.

Introduction

What is iPDuct Technology? ■ Complete line of components and accessories.

- Professional hand tools and automated machinery.
- Specialised training courses for ductwork fabricators.
- “Duct Design Software” to size the ductwork and estimate the material needed.
- Technical Support.



Advantages of iPDuct Technology

- Easy to clean and hygienic.
- CFC/HCFC-free: helping to minimise the effects of Ozone Depletion and Global Warming
- Clean air: fibre-free insulation core.
- Lightweight: only 15% of the weight of sheet metal ductwork.
- Resistance to fungus growth.
- Space saving: flush-fitting installation possible.
- Low leakage: fully sealed systems conform to the air-leakage limit of DW 144 Class C-high pressure.
- Low λ value.
- Energy-saving: up to 20% annually.
- Fast-track installation: rapid erection combined with single-x installation.
- On-site fabrication capability.
- No limits to duct sizes.
- High-compressive strength.
- High rigidity/integrity.
- Base material is impermeable to moisture.



Insulation Pars also provides technical support to appointed distributors and clients in order to ensure the consistent quality of HVAC ductwork fabrication and installations.

Compliance

Insulation Pars complies with Management System standards: ISO 9001: 2015 (Quality management systems. Requirements), ISO 14001: 2015 (Environmental Management Systems. Requirements) and ISO 45001: 2018 (Health and Safety Management Systems. Requirements). iPDuct PIR has been tested in accordance with the requirements of EN 13403:2013 (Ventilation for buildings non-metallic ducts. Ductwork made from insulation duct boards.)

Specialised Training & Technical Support

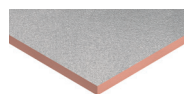
Insulation Pars provides specialised and comprehensive training courses to appointed distributors and clients in order to ensure that fabricators carry out the fabrication of iPDuct Systems for any project directly on-site, assuring fast and more accurate execution of duct installation requirements.

Insulation Pars iPDuct PIR Panels

Polyisocyanurate Insulation Panel

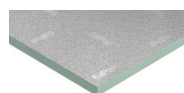
iPDuct PIR Panels comprise a fibre-free high performance rigid thermoset polyisocyanurate (PIR) insulation core, faced on both sides with an embossed aluminium foil. The aluminium foil is lacquered with corrosion-resistant polymer varnish.

iPDuct PIR Panel (Internal Use)



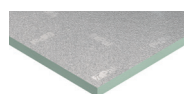
1010

Thickness (mm)	20/30
Min. Density (kg/m ³)	45
Panel Dimensions (mm)	4000 x 1200
Thermal Conductivity (W/m.K)	0.020
Aluminium Foil Finish	Embossed / Embossed



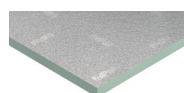
1100

iPDuct PIR Panel (External Use)



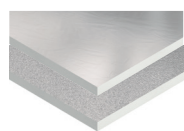
1075

Thickness (mm)	20/30
Min. Density (kg/m ³)	50
Panel Dimensions (mm)	4000 x 1200
Thermal Conductivity (W/m.K)	0.020
Aluminium Foil Finish	Embossed / Embossed
Aluminium Foil Thickness (External Side)	200 microns



1150

iPDuct PIR Panel (Smooth Facing)



1075

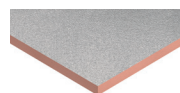
Thickness (mm)	20
Min. Density (kg/m ³)	50
Panel Dimensions (mm)	4000 x 1200
Thermal Conductivity (W/m.K)	0.020
Aluminium Foil Finish	Smooth / Embossed
Aluminium Foil Thickness (External Side)	200 microns

CFC/HCFC-free Insulation Panel

People, nowadays, are becoming even more conscious of their impact on the environment. iPDuct PIR Panel complies to the concern for the increasing Ozone Depletion and Global Warming.

The system uses panels which comprise a polyisocyanurate (PIR) insulation core, that is manufactured with a CFC/HCFC-free blowing agent. The blowing agent used has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

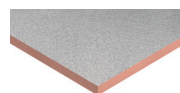
iPDuct PIR Panel (Internal Use)



1009

Thickness (mm)	20
Min. Density (kg/m ³)	50
Panel Dimensions (mm)	4000 x 1200
Thermal Conductivity (W/m.K)	0.020
Facer Finish	Embossed / Embossed

iPDuct PIR Panel (Internal Use)

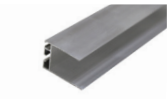


1000

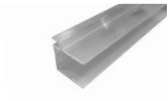
Thickness (mm)	10
Min. Density (kg/m ³)	50
Panel Dimensions (mm)	4000 x 1200
Thermal Conductivity (W/m.K)	0.0272
Facer Finish	Embossed / Embossed

iPDuct Panel Accessories

Polymer/Aluminium Invisible Profile/ Aluminium Joint Profile

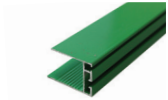


Thickness	20 mm
Code	4010 (Aluminium Invisible Profile) 4100 (Polymer)



Nominal Length	4 m
Thickness	30 mm
Code	4040 (Aluminium Joint Profile) 4041 (Aluminium Invisible Profile)
Nominal Length	4 m

iPDuct Eco System Green Colour Polymer/ Aluminium Invisible Profile



Thickness	20 mm
Code	4063 (Aluminium) 4110 (Polymer)
Nominal Length	4 m

H Bayonet in Polymer



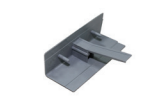
Thickness	20 mm
Code	4105
Nominal Length	4 m

Aluminium Channel

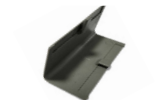


Thickness	30 mm
Code	4080
Nominal Length	4 m

Corner Cover in Polymer



Thickness	20 mm
Code	4350



Thickness	30 mm
Code	4390

Corner Plate for Invisible Profile



Thickness	20 mm
Code	4360



Thickness	30 mm
Code	4400

Steel Corner

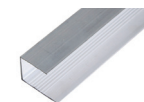


Code	4380
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Aluminium U Profile

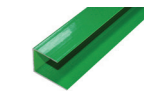


Thickness	20 mm
Code	4013
Nominal Length	4 m

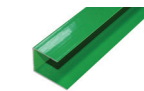


Thickness	30 mm
Code	4042
Nominal Length	4 m

iPDuct Eco System Green Aluminium U Profile

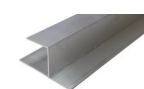


Thickness	20 mm
Code	4065
Nominal Length	4 m

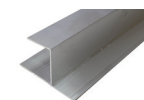


Thickness	30 mm
Code	4082
Nominal Length	4 m

Aluminium Chair Profile



Thickness	20 mm
Code	4015
Nominal Length	4 m



Thickness	30 mm
Code	4043
Nominal Length	4 m

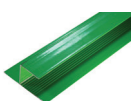
iPDuct Panel Accessories

iPDuct Eco System Green Colour Cover in Polymer

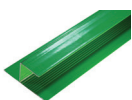


Code	4355
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iPDuct Eco System Green Aluminium Chair Profile

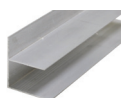


Thickness	20 mm
Code	4067
Nominal Length	4 m

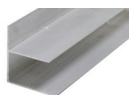


Thickness	30 mm
Code	4083
Nominal Length	4 m

Aluminium F Profile

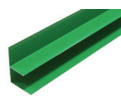


Thickness	20 mm
Code	4017
Nominal Length	4 m

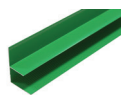


Thickness	30 mm
Code	4044
Nominal Length	4 m

iPDuct Eco System Green Aluminium F Profile



Thickness	20 mm
Code	4069
Nominal Length	4 m



Thickness	30 mm
Code	4084
Nominal Length	4 m

Reinforcement Bar in Aluminium



Thickness	14 mm
Code	4450
Nominal Length	4 m

Reinforcement Disc in Aluminium



Code	4454
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Reinforcement Disc in Polymer



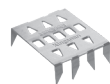
Code	4452
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Duct Support



Code	4455
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Tiger Clip



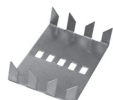
Code	3034
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Tiger Connector



Code	4465
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Tiger Closure



Code	4456
------	------

Cross Fixing Device



Code	4453
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iPDuct Panel Accessories

Sealant



Code	4250
------	------

Adhesive



Capacity	15 kg/tin
Code	4200

Gasket Self Adhesive

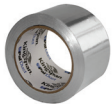


Code	4461
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Aluminium Tape



Width	50 mm
Code	4300



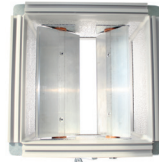
Width	75 mm
Code	4310

Screw for Stiffening Rod



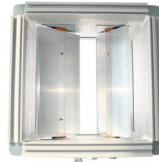
Code	4458
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PIR Pre-insulated Volume Control Damper



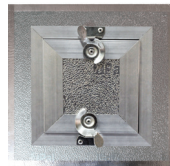
Thickness	20/30 mm
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Phenolic Pre-insulated Volume Control Damper



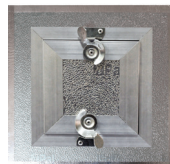
Thickness	20/30 mm
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PIR Pre-insulated Access Door



Thickness	20/30 mm
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Phenolic Pre-insulated Access Door



Thickness	20/30 mm
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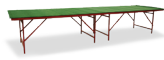
Manual Fabrication Equipment

Manual

A complete set of professional hand tools and manual fabrication equipment has been specifically developed to enable the efficient and economical fabrication of ductwork. Ease of portability provides the option for on-site fabrication.

A full line of automated machinery is also available for high volume ductwork requirements.

Portable Fabrication Table



Length (m)	4 x 1.2
Code	5054

Compass



Code	8008
------	------

Aluminium Clamping Ruler



Length (m)	4
Code	5055



Length (m)	1.2
Code	5056



Manual Fabrication Equipment

iPDuct Manual Fabrication Tool Kit



Left Cutter	45°
Right Cutter	45°
Double Blade Cutter	90°
Double Blade Cutter - 20 mm	45°
Compass	
Glue Spreading	Manual
Stiff Spatula	Aluminium
Manual Silicone Gun	
Measuring Tape	
Rivet Gun	
Rubber Hammer	
Knife	
Tape Marker	
Code	5053

Square in Aluminium



Size (mm)	1200
Code	5057



Size (mm)	700
Code	5058

Cutter Box



Left Cutter	45°
Right Cutter	45°
Double Blade Cutter 20 mm	45°
Straight Cutter	90°
Code	5082

Manual Bending Machine



Code	5059
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Pneumatic Glue Spreader



Code	5060
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Manual Extended Silicon Tool



Code	5063
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Double Blade Cutter



Size (mm)	20/30 45° Double Blade
Code	5069 (20 mm) 5070 (30 mm)

Single Blade Cutter



Size (mm)	20/30 90° Straight 45° Left 45° Right
Code	(20/30 mm) 5072 (90° Straight) 5068 (45° Left) 5071 (45° Right)

Stiff Spatula



Code	5075
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Glue Spreader Manual



Code	5081
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Tape Marker



Code	5077
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Rubber Hammer



Code	8040
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iPDuct Systems Order Guide

20 mm Panel (Internal Use)

To produce 1,000 m² of The iPDuct PIR System, the following is a list of material and accessories for a standard construction requirement:

Code	Description	UOM	Approx. Qty.
1010	Panel 4000 x 1200 mm	m ²	1,000
4010	Aluminium Invisible Profile	m	760
4105	H Bayonet in Polymer	m	400
4350	Corner Cover in Polymer	pc	900
4360	Corner Plate for Invisible Profile	pc	1,200
4013	Aluminium U Profile	m	80
4015	Aluminium Chair Profile	m	80
4017	Aluminium F Profile	m	80
4200	Kingspan PalDuct Adhesive	kg	91
4300	Aluminium Tape	roll	150
4250	Kingspan PalDuct Sealant	tube	90

30 mm Panel (External Use)

To produce 1,000 m² of The iPDuct PIR System, the following is a list of material and accessories for a standard construction requirement:

Code	Description	UOM	Approx. Qty.
1150	Panel 4000 x 1200 mm	m ²	1,000
4040	Aluminium Invisible Profile	m	760
4080	Aluminium Channel	m	400
4380	Steel Corner	pc	1,500
4400	Corner Plate for Invisible Profile	pc	1,500
4461	Gasket	pc	400
4042	Aluminium U Profile	m	80
4043	Aluminium Chair Profile	m	80
4044	Aluminium F Profile	m	80
4200	Kingspan PalDuct Adhesive	kg	90
4310	Aluminium Tape	roll	150
4250	Kingspan PalDuct Sealant	tube	90
4450	Reinforcement Bar in Aluminium	m	120
4454	Reinforcement Disc	pc	200



