



See rear cover for applicable countries

π PalTM Duct Phenolic System

PRODUCT CATALOGUE



Low Energy –
Low Carbon Buildings

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.



What is *Kingspan PalDuct* 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 duct system and estimate the material needed.
- Technical support.

Advantages of *Kingspan PalDuct* Technology

- Easy to clean and hygienic.
- Environmentally friendly: CFC-free.
- Clean air: fibre-free insulation core.
- Lightweight: only 15% of sheet metal ducting.
- Resistant to fungus growth.
- Space saving: flush fitting installation possible.
- Low leakage: fully sealing systems conform to DW 144 Class C (high-pressure) air-leakage limit.
- Low 'λ' value.
- Energy savings: up to 20% annually.
- Fast-track installation: rapid erection combined with single-fix installation.
- On-site fabrication capability.
- No limits to duct sizes.
- High-compressive strength.
- High rigidity / integrity.
- Base material is impermeable to moisture.



Kingspan PalDuct 115



Thickness (mm)	20 / 30
Density (kg/m ³)	60 - 65
Panel Dimensions (mm)	4000 x 1200
Thermal Conductivity (W/m·K)	0.0285
Aluminium Finish	Embossed / Embossed
Fire and Smoke Classification	Class O BS 476 Part 6 & 7 BS 6401 EN 13501 UL 181 NFPA 90A-

Kingspan PaIDuct Panel Accessories

ART AC 10

Polymer / Aluminium Invisible Profile / Aluminium Joint Profile



20 AC 10

Thickness	20 mm
Code	20 AC 10
Nominal Length	4 m



30 AC 10

Thickness	30 mm
Code	30 AC
Nominal Length	4 m

ART AC 11

H Bayonet in Polymer



20 AC 11

Thickness	20 / 30 mm
Code	20 AC 11 30 AC 11
Nominal Length	4 m



30 AC 11

ART AC 12

Corner Cover in Polymer



20 AC 12

Code	20 AC 12 30 AC 12
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30 AC 12

ART AC 13

Corner Plate for Invisible Profile



20 AC 13

Thickness	20 / 30 mm
Code	20 AC 13 30 AC 13



30 AC 13

ART AC 14

Aluminium U Profile



20 AC 14

Thickness	20 / 30 mm
Code	20 AC 14 30 AC 14
Nominal Length	4 m



30 AC 14

ART AC 15

Aluminium Chair Profile



20 AC 15

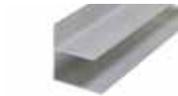
Thickness	20 / 30 mm
Code	20 AC 15 30 AC 15
Nominal Length	4 m



30 AC 15

ART AC 16

Aluminium F Profile



20 AC 16

Thickness	20 / 30 mm
Code	20 AC 16 30 AC 16
Nominal Length	4 m



30 AC 16

ART AC 18

Reinforcement Bar in Aluminium



AC 18

Thickness	14 mm
Code	AC 18
Nominal Length	4 m

ART AC 19AL / ART AC 19

Reinforcement Disc in Aluminium / Polymer



AC 19AL / AC 19

Code	AC 19AL AC 19
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Kingspan **PalDuct** Panel Accessories, Adhesive Material & Components

ART AC 19 A

Cross Fixing Device



AC 19 A

Code	AC 19 A
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ART M 26

Thermal Insulation Tape



M 26

Width	100 mm
Code	M 26

ART AC 20

Duct Support



AC 20

Code	AC 20
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ART P 23

Kingspan **PalDuct** Phenolic Adhesive



P 23

Capacity	15 kg / tin
Code	P 23

ART K 364

Tiger Clip



K 364

Code	K364
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ART M 30

Gasket Self Adhesive



M 30

Code	M 30
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DTCM 02

Screw for Stiffening Rod



DTCM 02

Code	DTCM 02
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ART PN VCD

Phenolic Pre-insulated Volume Control Damper



PN VCD

Thickness	20 / 30 mm
Code	PN VCD

ART M 24

Aluminium Tape



20 M 24

Width (in)	50 mm for 20 mm Panel 75 mm for 30 mm Panel
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Code	20 M 24 30 M 24
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30 M 24

ART PN AC

Phenolic Pre-insulated Access Door



PN AC

Thickness	20 / 30 mm
Code	PN AC

ART M 25

Kingspan **PalDuct** Sealant



M 25

Code	M 25
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Manual Fabrication Equipment

A complete set of professional hand tools and manual fabrication equipment has been specifically developed to enable 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.

ART EM 27

Portable Fabrication Table

	Size	4 x 1.2 m
	Code	EM 27

EM 27

ART/CUT/SET

Cutter Box

	Left Cutter	45°
	Right Cutter	45°
	Double Blade Cutter – 20 mm	45°
	Straight Cutter	90°

ART EM 24

Kingspan PalDuct 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 Silicon Gun	
	Measuring Tape	
	Rivet Machine	
	Rubber Hammer	
	Knife	
	Tape Maker	

ART EM 30 / ART EM 31

Square in Aluminium



EM 30

Size	1.2 m
Code	EM 30



EM 31

Size	700 mm
Code	EM 31

ART EM 32

Compass



EM 32

Code	EM 32
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ART EM 33

Manual Bending Machine



EM 33

Code	EM 33
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ART EM 28 / Art EM 29

Aluminium Clamping Ruler



EM 28

Nominal Length	4 m
Code	EM 28



EM 29

Nominal Length	1.2 m
Code	EM 29

ART EM 35

Pneumatic Glue Spreader



EM 35

Code	EM 35
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ART ST 65

Manual Extended Silicon Tool



ST 65

Code	ST65
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Manual Fabrication Equipment

ART ST 42

Double Blade Cutter



ST 42

Size	(20 / 30 mm) 45° Double Blade
Code	ST 42 (20 mm) ST 43 (30 mm)

ART ST 44 / ART ST 45 / ART ST 46

Single Blade Cutter



Code	(20 / 30 mm) ST 44 (90° Straight) ST 45 (45° Left) ST 46 (45° Right)
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ART ST 48

Stiff Spatula



ST 48

Code	ST 48
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ART ST 49

Glue Spreader Manual



ST 49

Code	ST 49
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ART ST 50

Tape Marker



ST 50

Code	ST 50
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DTCM 12

Rubber Hammer



DTCM 12

Code	DTCM 12
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Automated Fabrication Equipment

ART EA 40

Kingspan Ducting Supercut Machine



EA 40

Code	EA 40
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Features

- Gantry system CNC Machine.
- Tangential knife cutting head with full 360 rotational cutting capacity.
- Bakelite vacuum table.
- Air conditioning to control panel.
- Automatic lubrication system.
- Pop up stops (1 set of 3 units).
- Processing area of approximately 4040 x 1240 mm.
- 110 mm Z axis clearance.
- Rapid axis speed up to 35 mt/min.
- CNCOSAI full digital 4 axis controller.
- One head with automatic tool changer.
- 50 mm straight knife block.
- 50 mm 45 deg angle knife block.
- Double knife 50 mm V groove tool at 20 deg.
- Double knife 50 mm V groove tool at 10 deg.
- Pen Marker Tool.
- Vacuum pump x 1 (250mc/h for material hold down).
- Separate mobile console with PC and 17" LCD screen.
- Maintenance and instruction manuals (in English).
- Electric and pneumatic diagrams.
- With 12 months warranty.

General	Value
Panel Thickness	10 / 20 / 30 mm
Aluminium Thickness	Up to 200 micron
Max. Panel Width	1.2 m
Max. Panel Length	4 m
Weight of Machine (kg)	750
Nominal Size of Machine (m)	5.4 x 1.5 m
Power Supply	3 Phase 30MI + Neutral, + Earth

ART EA 40C

Kingspan CNC Machine



EA 40C

Code	EA 40C
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Features

The *Kingspan Ducting CNC Machine* has numerous features, which differentiates it from other automated CNC cutting machines. Features include, but are not limited to, the following:

- three controlled and interpolated axis all equipped with brushless motor;
- marking unit to number parts for easy sorting and identification;
- rolling table;
- ball-screw movement for Y axis;
- cutting unit for 45°;
- cutting unit for 90°;
- USB port;
- network file transmission (optional)
- maintenance and instruction manuals (in English); and
- electric and pneumatic diagrams.

General	Value
Panel Thickness	10 - 30 mm
Max. Panel Width (m)	1.2 (m)
Max. Panel Length (m)	Unlimited
Aluminium Thickness	Up to 200 micron
Weight of Machine (kg)	1200
Nominal Size of Machine (m)	8.4 x 2.4 x 1.75 h
Power Supply	3 Phase 400 volts HZ 50

Order Guide

20 mm Panel (Internal Use)

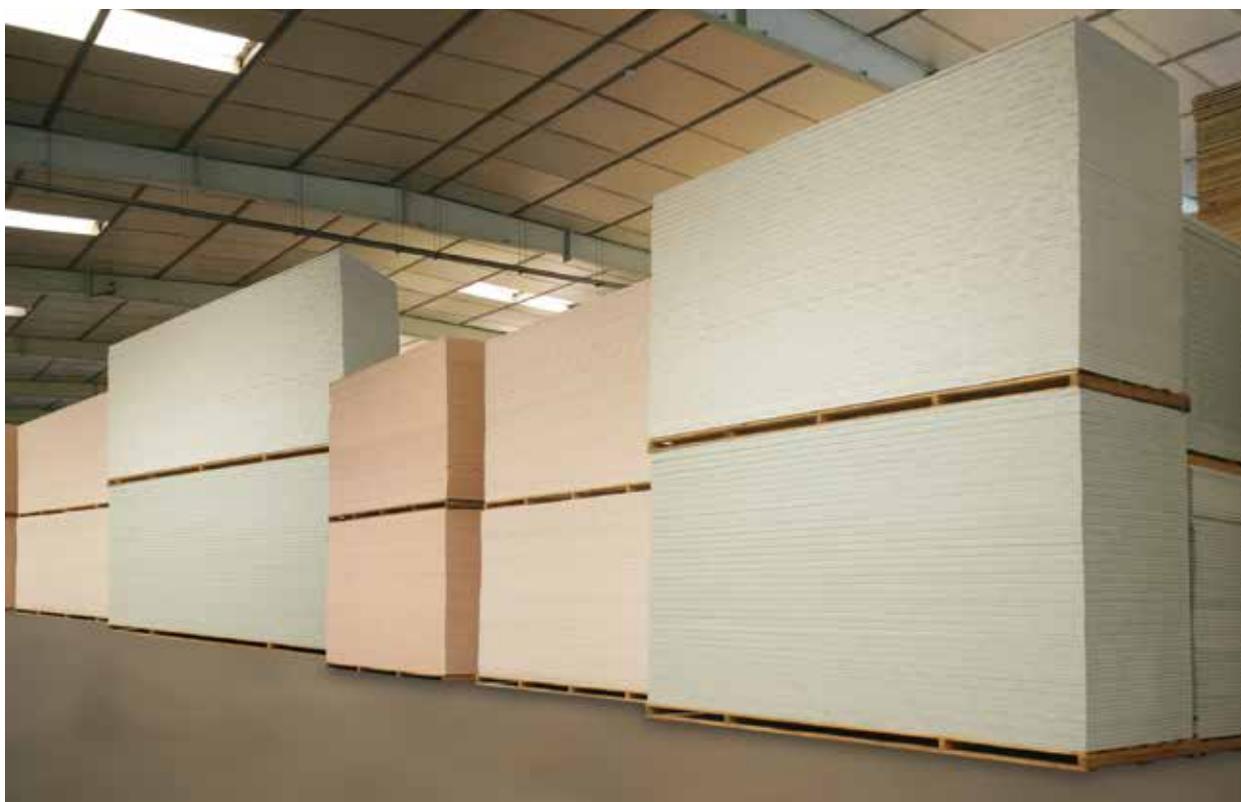
To produce 1,000 m² of The *Kingspan PalDuct* Phenolic System, the following is a list of material and accessories for a standard construction requirement:

Code	Description	UOM	Approx. Qty.
Pal 115	Panel 4000 x 1200 mm	m ²	1,000
20AC10	Aluminium Invisible Profile	m	760
20AC11	H Bayonet in Polymer	m	400
20AC12	Corner Cover in Polymer	pc	900
20AC13	Corner Plate for Invisible Profile	pc	1,200
20AC14	Aluminium U Profile	m	80
20AC15	Aluminium Chair Profile	m	80
20AC16	Aluminium F Profile	m	80
P23	<i>Kingspan PalDuct</i> Adhesive	kg	91
20M24	Aluminium Tape	roll	150
M25	<i>Kingspan PalDuct</i> Sealant	tube	90

30 mm Panel (External Use)

To produce 1,000 m² of The *Kingspan PalDuct* Phenolic System, the following is a list of material and accessories for a standard construction requirement:

Code	Description	UOM	Approx. Qty.
Pal 115 / 30	Panel 4000 x 1200 mm	m ²	1,000
30AC10	Aluminium Joint Profile	m	760
30AC11	Aluminium Channel	m	400
30AC12	Steel Corner	pc	1,500
30AC13	Corner Plate for Invisible Profile	pc	1,500
M30	Gasket	pc	400
30AC14	Aluminium U Profile	m	80
30AC15	Aluminium Chair Profile	m	80
30AC16	Aluminium F Profile	m	80
M23	<i>Kingspan PalDuct</i> Adhesive	kg	90
30M24	Aluminium Tape	roll	150
M25	<i>Kingspan PalDuct</i> Sealant	tube	90
AC18	Reinforcement Bar in Aluminium	m	120
AC19	Reinforcement Disc	pc	200



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Countries comprise: all of Africa; South and Central America except Mexico; the Caribbean; the Middle East and Asia as far north and east (and including) Turkey, Georgia, Azerbaijan, Kazakhstan, Kyrgyzstan, Afghanistan, Pakistan, India, Nepal, Bhutan and Bangladesh.

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