

PHENOLIC PRE INSULATED DUCT SYSTEM




UNIGULF[®]
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 AIR CONDITIONING INDUSTRIES L.L.C.

PHENOLIC PRE INSULATED DUCT SYSTEM

DESCRIPTION

EASY Phenolic Preinsulated panels are most advanced that provide optimum energy saving air distribution duct work system. It is CFC, HCFC free and environmentally friendly.

ODP = 0; GWP = Low

EASY Phenolic panels are asbestos and fiber free, have a high closed cell content and fine cell structure, resists fungus and mold growth.

PANEL CHARACTERISTICS

EASY Phenolic panels are manufactured by a process in which high performance rigid thermoset Phenolic foam forms an insulating core that is laminated on both sides with an embossed composite aluminium facing.

Foam Density	60 ± 5 kg/m ³
Composite Aluminum Facing	80 / 80 micron
	80 / 200 micron
Finish	Embossed / Embossed
Panel Thickness	20 & 30 mm
Dimension	3950 x 1200 mm

THERMAL PERFORMANCE & MOISTURE RESISTANCE

EASY Phenolic panels have over 95 % closed cell formation with factory applied composite aluminium facing; has zero water permeability, low thermal conductivity and prevents moisture penetration and absorption.

Thermal Conductivity @ 23°C	0.020 W/mK
Water vapor transmission	0.00 Perms
Water absorption by volume	0.42 %

UL 181 CLASS 1 AIR DUCT

Fabricated ducts made from EASY Phenolic UL 181 Panels are UL Listed as a Class 1 Air Duct, to Standard for Safety

UL 181 (Factory Made Air Ducts & Air Connectors). The ductwork shall be fabricated using the below components:

- 20 mm EASY Phenolic UL 181 panels
- UL 181 A-P Listed aluminium foil vapour barrier tape with minimum 2 ½ " / 63 mm width
- UL Listed Duct Sealant
- Invisible aluminum flanging system

EASY Phenolic UL 181 Class 1 Ducts have the following pressure and velocity ratings.

Rated Positive pressure	1000 Pa
Rated Negative pressure	750 Pa
Rated Velocity	15 m/s





AIR DUCT CLASS 1
NO. 175356646
 REF.NO.UG 2018
 Standard for Safety UL181:
 Factory Made Air Ducts & Air Connectors

Maximum Positive Pressure Rating	1.00 kPa (4.0 in.W.C)
Maximum Negative Pressure Rating	0.75 kPa (3.0 in.W.C)
Maximum Velocity	15 m/s
Maximum Side Dimension without reinforcement	800 mm
Minimum Side Dimension without reinforcement	200 mm
Surface Burning Characteristics (UL 723)	FSI < 25 / SDI < 50
Maximum Support Hanger Spacing	600mm

 PRE INSULATED DUCT SYSTEM www.easyducts.com




AIR DUCT CLASS 1
LOT NO. 0173147

UL file No.: MH62656 Ref No.: UG2018

Maximum Positive Pressure Rating.	1.0 kPa (4 in. W.C)
Maximum Negative Pressure Rating.	0.75 kPa (3 in. W.C)
Maximum Velocity.	15 meters/second
Maximum Side Dimension without reinforcement	800 mm
Minimum Side Dimension without reinforcement	203 mm
Maximum Support Hanger Spacing	3.96 m

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OPERATING TEMPERATURE

Fabricated ducts from Easy Phenolic panels can be used in applications with operating temperature ranging from -25°C to 110°C without affecting the thermal and physical properties of the panel.

Operating temperature	-25°C to +110°C
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FIRE & SMOKE PERFORMANCE

Fire performance of EASY Phenolic Preinsulated panels is exceptional. Tested as per ASTM E 84 (UL 723 and NFPA 255) (Surface Burning Characteristics of Building Materials).

Flame spread index	< 25	ASTM E 84 UL 723
Smoke developed index	< 50	

It is recommended for use in plenum applications, meets the requirements of NFPA 90A and NFPA 90B.

EASY Phenolic panels comply with British Standards.

Surface flame spread	Class 1	BS 476 Part 6 & 7
Fire propagation index	Class 0	

FLEXURAL & COMPRESSIVE STRENGTH

Fabricated ducts from Easy Phenolic panels have good durability and structural rigidity due to its high compressive and flexural strength.

Flexural strength	1200 kPa
Compressive strength	300 kPa

OTHER SALIENT FEATURES

- ❖ No release of particles due to factory laminated aluminium facing
- ❖ No additional vapor barrier or antifungal coatings needed
- ❖ Improved Air Quality
- ❖ Light weight & ease of installation when compared with traditional insulated duct systems
- ❖ Invisible flanging system ensures low level of air leaks when compared to conventional duct systems
- ❖ Space saving

RECOMMENDED USAGE

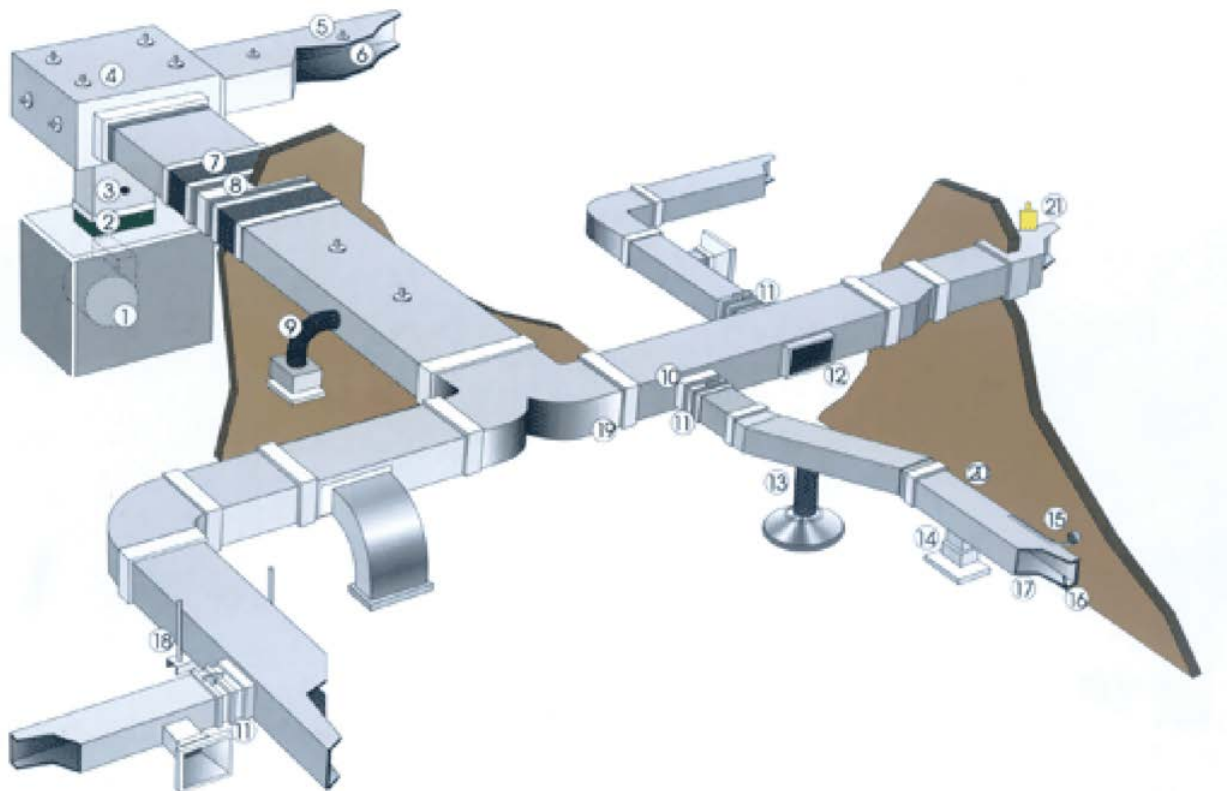
- ❖ EASY Phenolic Preinsulated duct systems are recommended for air distribution ductwork systems for supply, return, fresh air, and exhaust HVAC applications in residential and commercial buildings.
- ❖ EASY Phenolic Preinsulated duct systems are not recommended for use in Kitchen extract ducts, smoke extract duct systems or as an alternative to fire rated ducts, where operating temperature limits exceed.
- ❖ EASY Phenolic Preinsulated duct systems are specially designed for health care facility, food processing industries, schools, and clean room applications, where indoor air quality is a top priority.

THIRD PARTY COMPLIANCE

- ❖ UL 181 Class 1 Listed Air Duct
- ❖ DCD – UL 181 Class 1 air duct in accordance with 2018 UAE Fire & Life Safety code
- ❖ DCL – 2018 UAE Fire & Life Safety Code
- ❖ DCL – 2017 Al Safat Green Building Evaluation System



Accessories



Invisible flange joint and tee connector

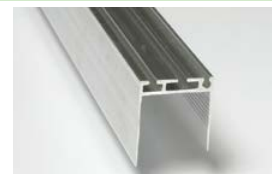
Invisible flange joint aluminum 20 mm

This special aluminium flange permits 20 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



Invisible flange joint aluminum 30 mm

This special aluminium flange permits 30 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



Invisible flange joint polymer 20 mm

This special aluminium flange permits 20 mm th. ducts to be joined with extremely low leakage. The bars are supplied in 4 meter lengths.



Tee connector flange joint 20/30 mm

This flange permits the flanging of one duct into the side of another take-offs as tap-in or plenum chamber. The bars are supplied in 4 meter length.



H polymer bayonet

Built in shock-resistant polymer, this piece permits "invisible flanges" to be connected. Supplied in 4 meter rods.



Covering angle 20/30 mm

- Grey polymer covering angle.
- Aluminium coaring angle



Zinc-coated steel angle bracket 20/30 mm

1.5 mm thick zinc-coated steel angle bracket.



"U" Section bar in aluminium 20/30 mm

Used for fastening of anti-vibration joints, grills and volume control dampers. Supplied in 4 meter rods.



AHU & Grilles connections

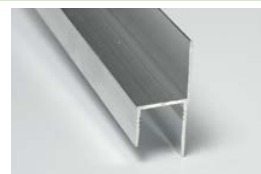
"F" section bar in aluminium - 20/30 mm

Permits all accessories with fastening frames higher than 20 mm to be fastened to the ducts. Supplied in 4 meter rods.



Chair section bar in aluminium - 20/30 mm

Used to fasten ducts to air handling units and in the assembly of linear diffusers. This section bar is supplied in 4 meter rods.



Reinforcement

Reinforcement section bar in aluminium

Special high stiffness aluminium alloy reinforcement section bar. Bars are supplied in 4 meters rods.



Aluminium shaped disk

Aluminium disk to distribute the pressure created at the centre over a wider surface to prevent damage to the panel. Disk diameter 100mm, hole diameter 10 mm.



Self threading screws

Hexagon head self-threading screws with washer. Used to fasten reinforcement section bars, wing-profile turning vanes and splitters in elbows, etc.



VCD (Volume Control Damper)

To maintain or control the air volume inside the duct. Specifically designed for low pressure duct system.



Glues, tapes and sealants

UL Glue

Special glue formulated to obtain perfect adhesion on easy panels foam. The product is supplied ready-to-use. Dilution is possible with special solvent



UL Aluminum tape

Self-adhesive aluminium tape to use in the construction of the ducts.



UL Duct sealant

Single component silicone sealant. 280 cc stick.



Profiles glue

Medium-viscosity adhesive for the gluing of aluminium and Polymer section bars. 500 gr pack.





Disclaimer

The product descriptions In this brochure are the latest available information at the time of publication. Unigulf Air conditioning Industries LLC reserves the right to add or withdraw product offerings and change the data and technical requirements without notice.



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Management
System
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ISO 14001:2015
ISO 45001:2018
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