1st duct™

[the art of delivering air]

PIR pre-insulated aluminium panel for air duct

FirstDuct™

TÜV NORD

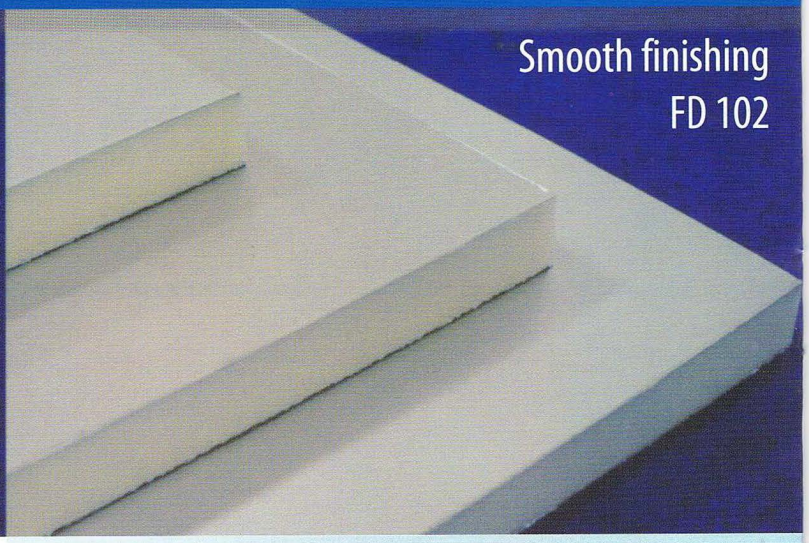
SNI

GREEN BUILDING COUNCIL

Our Products

1st duct™

Embossed finishing
FD 101



Smooth finishing
FD 102

Specifications

Panel dimensions (mm)	4000 x 1200 x 20
Density of polyisocyanurate(PIR)	53+/-2kg/m3
Aluminium foil thickness	80 micron
Fire retardant	class 0
Thermal conductivity	0.020 w/m.k
Friction losses	0.0135
Pressure in duct max	2000 pa
Working temperature	-60˚C - +80˚C
Air flow max	12 m/s
Weight	1.48 kg/m2

PIR (Poly Isocyanurate Rigid Form) is an improvement from PUR (Poly Urethane Rigid Form) with better fire retardancy, higher density and better R value.

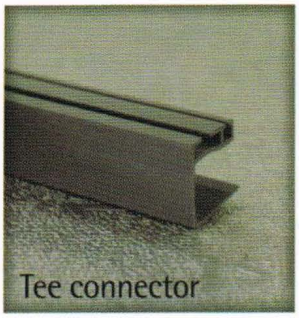
Advantages

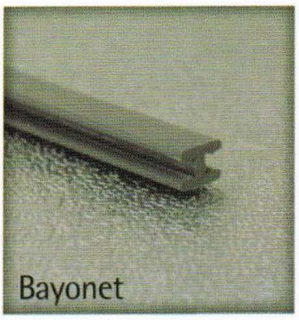
- Provide excellent insulation properties
- Proven fire risk reduction qualities (Class 0)
- Eco-friendly product (CFC-Free)
- Lightweight material with built-in PIR Core
- Longer life span, at least 20 years
- Reduce construction time and cost
- Create thermal comfort &t noise reduction
- Cleanable &t Hygienic
- Energy saving

Parts, Accessories and Installation

PVC

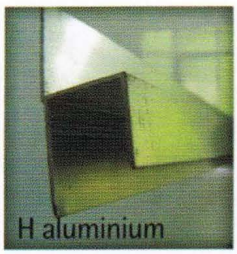

Invisible flange

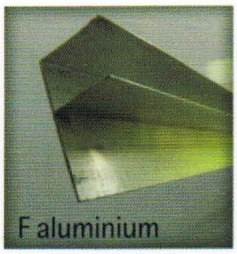

Tee connector


Bayonet

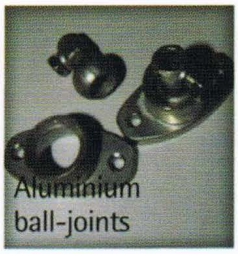

Cover angle

Aluminium


H aluminium


F aluminium


Reinforcement


Aluminium ball-joints


Shape disk


GI square (zinc coated)

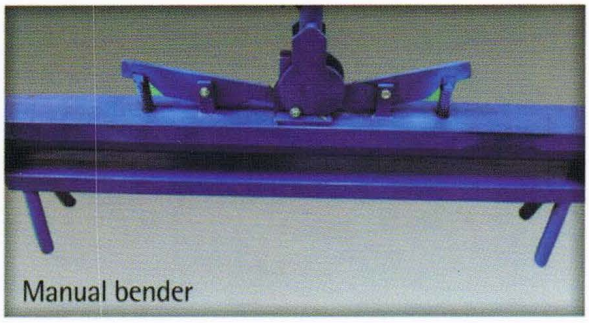
Special Sealant

Sealant

Glue

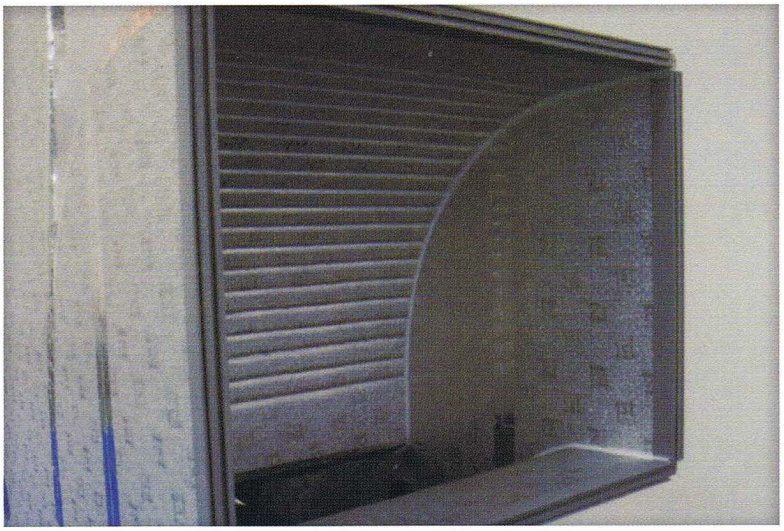
Tools


Cutter & reamer


Manual bender

Performance Comparison Graphs

On a scale of 1 to 5,with 5 being the most ideal solution 1st duct™ aluminium panel is the preferred choice

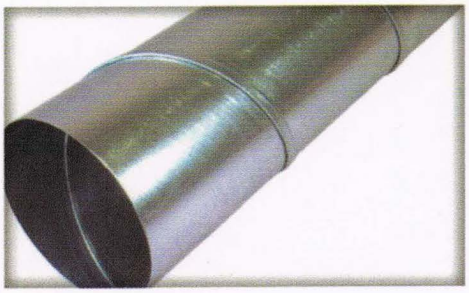


Performance of 1st duct™ panels, ideally the preferred choice

Thermal insulation	★★★★★
Air seal	★★★★★
Friction loss	★★★★☆
Acoustics	★★★☆☆
Air quality and hygiene	★★★★★
Lifespan	★★★★★
Safety	★★★★☆
Transport	★★★★★
Construction	★★★★☆
Installation	★★★★★
Availability	★★★★★
Easy estimation	★★★★★
Competitiveness	★★★★☆
Energy saving	★★★★★

Performance of flexible ducts

Thermal insulation	★★★☆☆
Air seal	★☆☆☆☆
Friction loss	★☆☆☆☆
Acoustic	★★★☆☆
Air quality and hygiene	★☆☆☆☆
Lifespan	★★☆☆☆
Safety	★★★☆☆
Transport	★★★★★
Construction	★☆☆☆☆
Installation	★★★★☆
Availability	★★★★★
Easy estimation	★★★★★
Competitiveness	★★★★★
Energy saving	★★☆☆☆

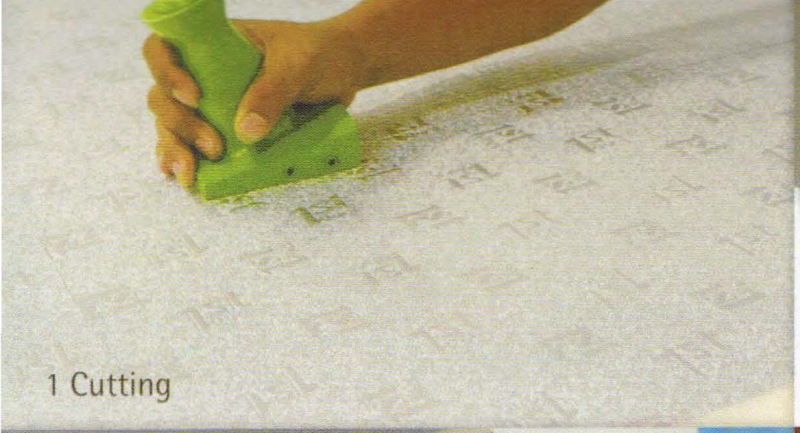


Performance of spiral-type sheet metal ducts

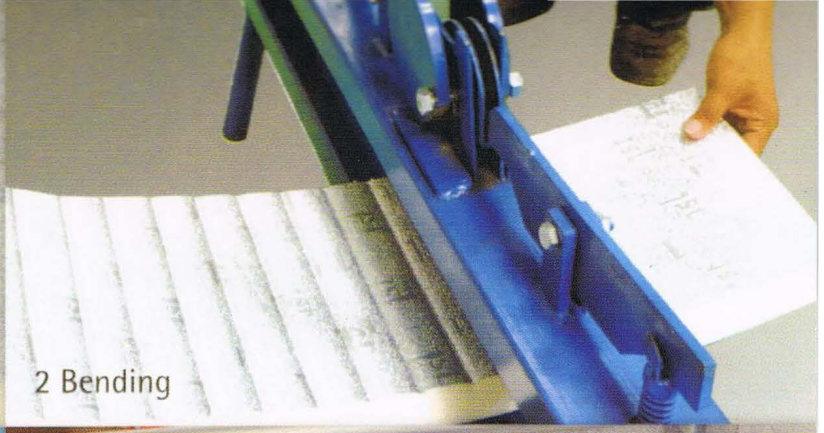
Thermal insulation	★★★☆☆
Air seal	★★★☆☆
Friction loss	★★★★★
Acoustic	★★★☆☆
Air quality and hygiene	★★★☆☆
Lifespan	★★★☆☆
Safety	★★★★☆
Transport	★☆☆☆☆
Construction	★★★☆☆
Installation	★★★☆☆
Availability	★★★★☆
Easy estimation	★★★★★
Competitiveness	★★☆☆☆
Energy saving	★★★☆☆

Performance of rectangular sheet metal ducts

Thermal insulation	★★☆☆☆
Air seal	★★☆☆☆
Friction loss	★★★★☆
Acoustic	★★★☆☆
Air quality and hygiene	★★☆☆☆
Lifespan	★★★☆☆
Safety	★★★★☆
Transport	★★★☆☆
Construction	★★★☆☆
Installation	★★☆☆☆
Availability	★★★★★
Easy estimation	★★★☆☆
Competitiveness	★★★★☆
Energy saving	★★★☆☆

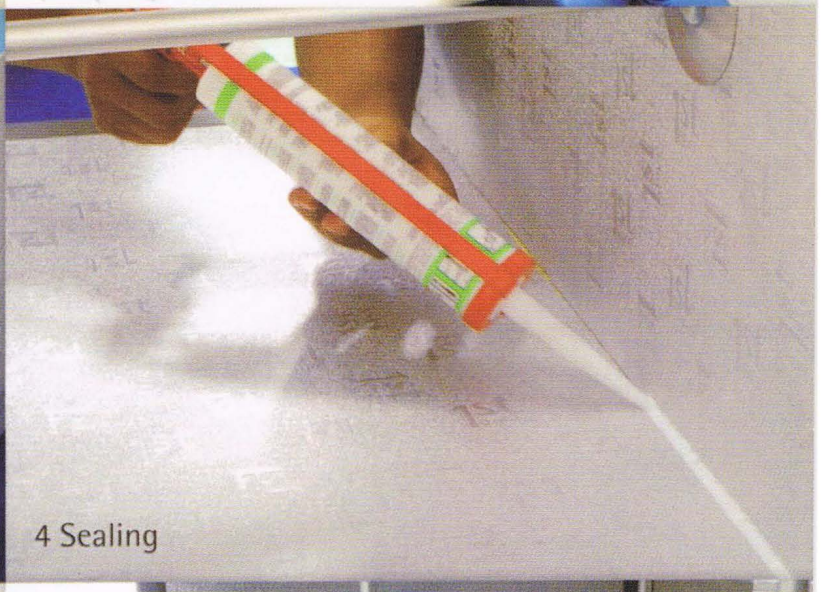


1 Cutting



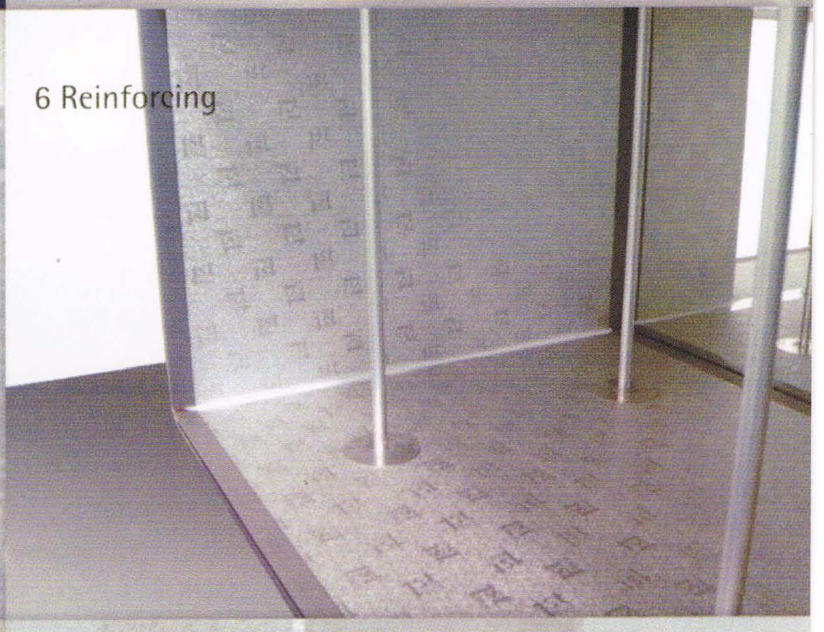
2 Bending

3 Assembling



4 Sealing

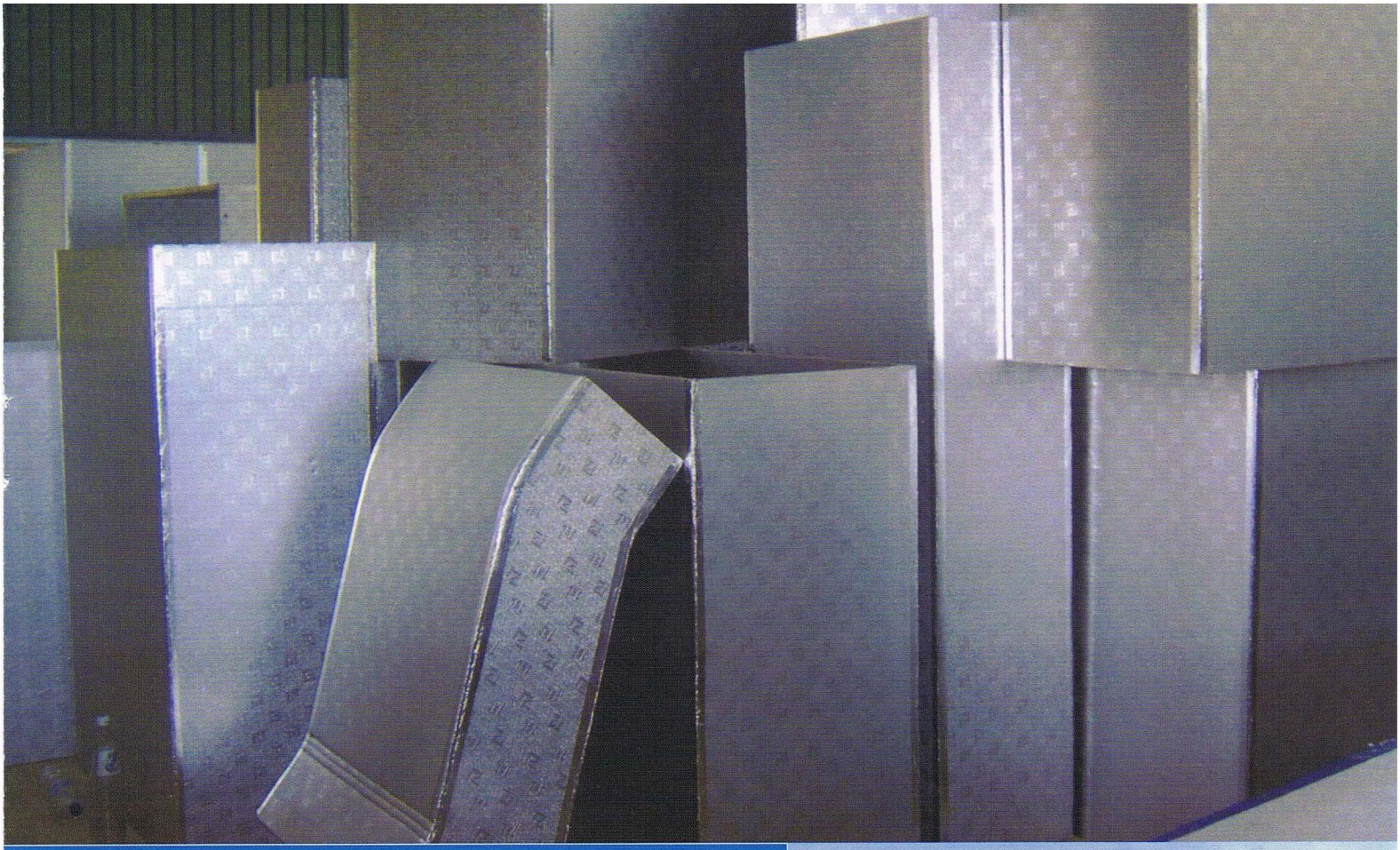
5 Connecting



6 Reinforcing

7 Covering

8 Finishing



Project Application

1st duct™ Pre-insulated aluminium panels are most suitable for use in all types of development projects, such as:

- Hospitals
- Airports
- Institutional buildings
- Food courts
- Restaurants
- Clean rooms for specific purposes
- Office Blocks
- Shopping Centers
- Banks
- Factories
- Hotels