



GUANGDONG
KINGWINS

ALUMINUM NON-COMBUSTIBLE PANEL CREATOR

1993

KINGWINS set up

2012

Individual R&D

2019

National Standard Atlas

2020

4.0 Production Line

2021

CNC

CNC SUPPORT

With sophisticated processing production equipment, KINGWINS fabrication workshop can supply customized cladding plate with accessories, innovative installation mode with model sample according to customer needs.



GUANGDONG KINGWINS NEW MATERIALS TECHNOLOGY CO., LTD

Guangdong Kingwins New Material Technology Co., Ltd. was established in 1993, specialized in manufacturing KINGWINS brand Aluminum Composite Panel, Aluminum Solid Panel and Aluminum Non-combustible Panel etc. KINGWINS is located in Shunde, covering an area of 10,000 square meters. As a leading Hongkong-invested Hi-tech. enterprise in Guangdong province, the company has totally invested USD 5,000,000 to import an advanced full automatic production line; annual output reaches 1,500,000 square meters.

Nowadays, KINGWINS main product called A2 Fire-proof Aluminium Non-combustible Panel. KINGWINS offer a wide range of specifications, with thicknesses from 2mm to 6mm and widths from 1220mm to 1550mm. Coatings options include PVDF (Kynar500, Hylar5000), PE, and FEVE.

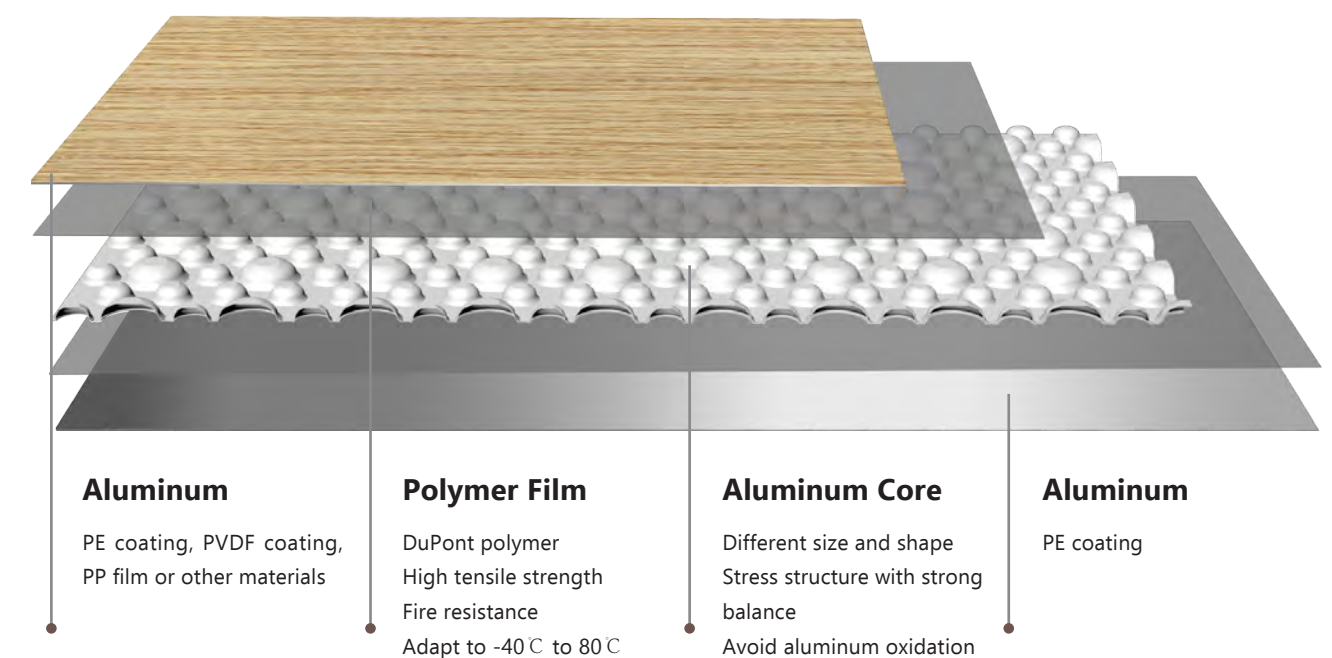
KINGWINS is committed to providing environmentally friendly building materials globally. Since 2005, we've held ISO9001 and ISO14001 certifications. Our ANP Panel has been tested by SGS U.S. Testing Company Inc., meeting American ASTM standards, and has passed Intertek tests aligned with BS standards. KINGWINS products enjoy a good reputation domestically and internationally, exported to Europe, Australia, South America, Africa, and beyond.



Aluminum Non-combustible Panel

ANP (aluminum non-combustible panel) is a 4mm Aluminium Core Panel that is fully non-combustible and suitable for external and internal applications where a non-combustible façade cladding solution is required. ANP panels are fully certified as a non-combustible building material under the Australian Standard, European Union, and United States Standard.

ANP is manufactured from high-grade aluminum. The skins are separated by an 'egg carton type' aluminum core. Unlike other non-combustible and fireproof panels, ANP uses no mineral core fillers to achieve fire resistance and is therefore lighter in weight as well as being equal or better in terms of structural strength.



ANP is prefinished on the front skin during manufacturing with a 3-coat PVDF coating in a wide range of standard colours. Customized and colour-matched finishes are also available.

A Grade Fire Proof

Passed A Grade Fireproof test and SGS test from professional organization at home and abroad.

Flatness

Good flatness, Light (1/3 of solid panel at the same thickness)

Windload Resistance

Refer to the mechanics principle of an arch bridge, high strength wind pressure, soundproofing and heat resistance.

Weather Resistance

Adapt to -40°C to 80°C nondiscolouring and no delamination up to 20 years.

Rich In Color

Uniform coating, colorful, can replace stone or wood.

Recyclable

Whole aluminum, 100% recyclable, Eco-Friendly, Zero-Formaldehyde.

PRODUCT SPECIFICATION

As acceptable evidence of applicability, this technical specification is written by KINGWINS. It consists of key test results certified by authoritative testing institutions.

ITEM	DESCRIPTION
Brand	KINGWINS Aluminum Non-combustible Panel (ANP)
Product Usage	Fully non-combustible and suitable for external and internal applications
Material	Aluminum alloy 5052, 3003, 1100 etc.
Overall Thickness	Regular thickness : 4.0 mm (2.5 - 6.0 mm available)
Weight	4.5kg/m ² (in 4.0 mm)
Non-Combustible Test	AS 1530.1 / BS467 / EN13501 / ASTM E84
Fire Behaviour	A2, EN 13501-1:2018
Wind Load	Serviceability Limit State -2500pa to +2500pa
Core Material	Profiled Aluminum
Standard Width	1250 mm / 1550 mm
Length	Max 6000 mm
Peel Strength	0.596kg/mm
Mean Coefficient of Linear Thermal Expansion	-40°C - 10°C: 3.6µm/(m°C) 10°C - 80°C: 90.7µm/(m°C)
Tensile Test	204 MPa
Antimicrobial Activity Test	1.0x10 [^] 6 (0 Grade)
Formaldehyde	ND
Compression Strength	2.53 MPa
Shear Strength	24.9 MPa
Coating	PVDF, PE, FEVE
Coating Warranty	15 to 20 years
Colour	Solid colour, wood colour, stone colour, brush (hairline), PP film and others smooth or texture surface CUSTOMIZED AVAILABLE
Installation	Refer to KINGWINS Installation Manual
Detail Specification	Refer to KINGWINS Product Catalogue

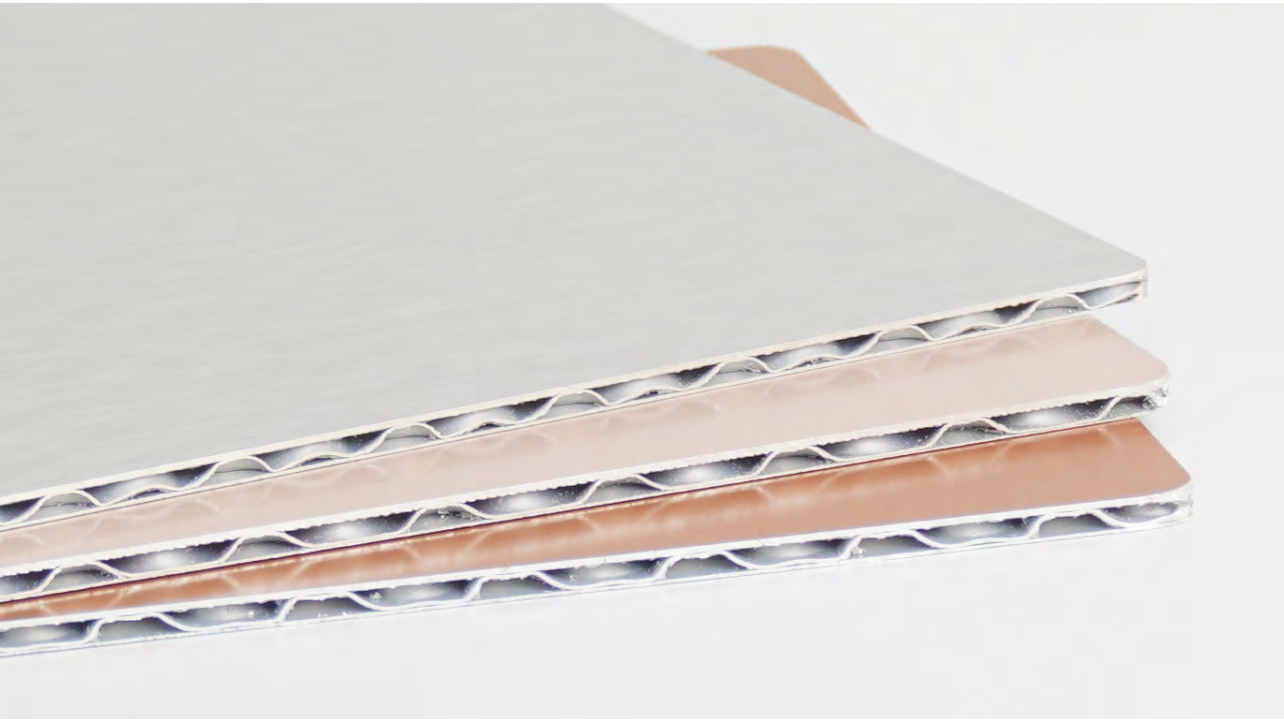
TEST DATA

Mechanical Properties of ANP

Sr. No	Description	ASTM & Standard	Unit	Specification
1	Flatwise Tensile Strength	ASTMC297 / C297M-16	MPa	1.13
2	Mean Coefficient of Linear Thermal Expansion	ASTME831-1410	µm (m°C)	-40°C - 10°C: 3.6µm/(m°C) 10°C - 80°C: 90.7µm/(m°C)
3	Flatwise Compressive Strength	ASTMC365 / C365M-16	MPa	2.53
4	Tensile Test	ASTM E8 / E8M-21	MPa	204
5	Hardness Test	ASTME384-16	-	HV0.1:46.5


Fire Resistance of ANP

Sr. No	Description	Standard	Result
1	Function of Fire-retardant	ASTM1530.1 & ASTM1530.3	Passed A2
2		ASTM E84	Passed A2
3		BS 476	Passed A2
4		EN 13501	Passed A2

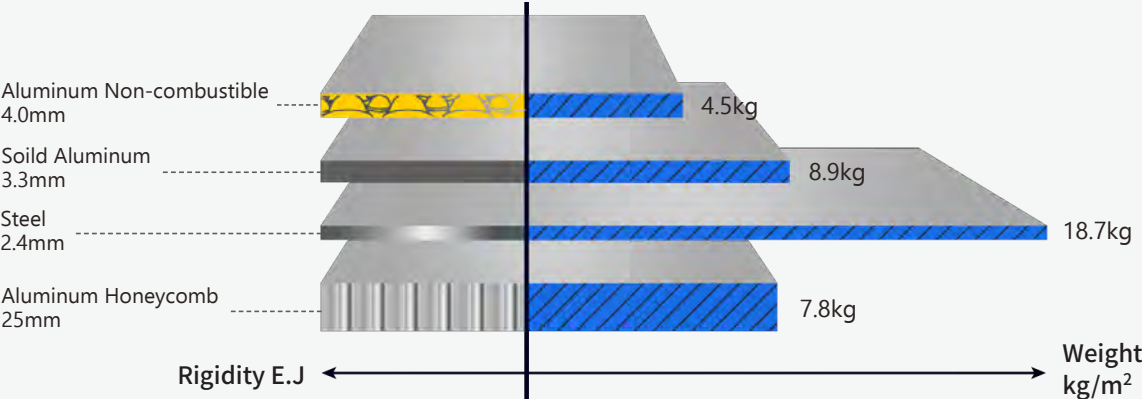


MATERIAL CONTRAST

Product's Major Differences


	Weight (kg/m ²)	Flatness	Price	Perform- -ance	Life Time	Environ- mental Protection
<div><div>KINGWINS[®]</div><div>Aluminum Non-Combustible Panel</div><div></div></div>	<div>✓</div> <div>4.5 (4mm)</div>	<div>✓</div> <div>high</div>	<div>✓</div> <div>cost-effective</div>	<div>✓</div> <div>excellence</div>	<div>✓</div> <div>15 yrs</div>	<div>✓</div> <div>high</div>
Soild Aluminum Panel	8.9 (3.3mm)	poor	high	poor	15 yrs	medium
Aluminum Honeycomb Panel	7.8 (25mm)	medium	moderate	moderate	10 yrs	medium
Aluminum Composite Panel	8.9 (3.3mm)	poor	high	poor	15 yrs	medium
Aluminum Corrugated Panel	4.3 (6mm)	poor	moderate	poor	10 yrs	medium

Weight & Thinckness's Differences with Same Rigidity



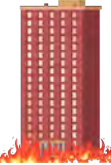
THE FIRE TRIO

The three key deadly trio for fire are fuel, oxygen, and heat. To effectively prevent a fire, we need to disrupt one of these elements. KINGWINS ANP does exactly that by removing the flammable PE core and replacing it with a non-combustible one. This crucial step helps us safeguard against the spread of fire, ensuring the safety of your building.



ORDINARY CLADDING

Fire spreads upwards and downwards due to flaming droplets
Fire breaks in and out through glass
Toxic smoke builds up leading to more casualties and disrupting the smooth evacuation process.



KINGWINS ANP

Fire spreads upwards is restricted due to fire Retardant Cladding that is non combustible
No droplets fall down avoiding further spread of fire
No toxic smoke
Safer evacuation saving more life and property

STRONG & LIGHT & FLATNESS

KINGWINS ANP Panel has a strong flatness with its core structure. It is composed of 3 layers of aluminum composited with polymer film. It has a nominal mass of 4.5kg/m² and a nominal thickness of 4 mm.

Each of the products three layers included the following:

- Layer 1 (The Top Aluminum) - aluminum sheet
- Layer 2 (The Aluminum Core) - "egg carton type" aluminum core
- Layer 3 (The Bottom Aluminum) - aluminum sheet

KINGWINS ANP Panel's aluminum core is used special egg carton type form —— based on 1 big water-drop surrounded by 6 small core (Figure 2) . It has good performance on windload resistance and flatness, since the egg-carton-type-form cores have arranged all angle of the surface.

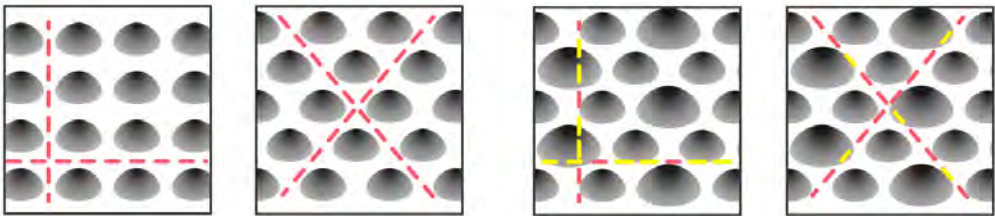


Figure 1: Other suppliers' Core Structure

Figure 2: KINGWINS ANP Core Structure

KINGWINS ANP's 3 actions



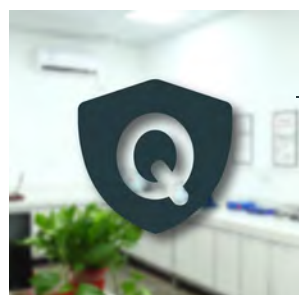
Lowering the deformation

Using metal panels with a projection area of more than 1m² in all pieces can enhance the visual appeal and aesthetics of the building outfit. However, many similar products suffer from flatness issues or high material costs. Thanks to the "egg carton type" aluminum core, KINGWINS ANP can restore resiliency under moderate gale (Grade 7). This aids in lowering deformation especially when the projection area of the panel is over 1m².



Reducing cost loss

In contrast with other similar products, KINGWINS ANP has a lighter weight and thinner thickness while maintaining the same rigidity. KINGWINS ANP can be processed on-site. Thanks to its unique flexibility, it can effectively reduce labor, transportation and material costs. Additionally, KINGWINS ANP is made entirely of aluminum, making it 100% recyclable and highly valuable. From multiple perspectives, KINGWINS ANP aids in cost reduction.



Product warranty

All KINGWINS products are an ideal choice for long term protection against global harsh environment with its superior PVDF coating systems supported by a 15-Year warranty, when installed by an approved installer. Standard terms and conditions apply.

GLOBAL partners

The quality of raw materials, as well as the reputation of supplier, is one of the important factors that determine the quality of metal curtain wall (roofing) products. Based on the four principles of technology-based, design-oriented, excellent quality and perfect service, KINGWINS evaluates each item with a harsh attitude. After repeated considerations, we carefully selected the highly acclaimed raw material suppliers in the industry for cooperation, aiming to create high-quality products in synchronization with European and American standards.



As a reliable brand producing building materials, KINGWINS maintains a good and active cooperative relationship with aluminum alloy suppliers. We consistently select high-quality aluminum alloy (mainly based on aluminum alloy **1100 / 3003 / 5052**) as raw material.

PRODUCTION BASE

High-energy production base advanced technology equipment

KINGWINS has a metal curtain wall product production base with an annual production capacity of more than 1.5 million square meters per year, and establishes a unified, scientific and manufacturing management system with a high-efficiency production model as its core, which is in line with international advanced management models, and emphasizes design optimization and continuous improvement.

KINGWINS has heavily invested in introducing complete set of Aluminum Non-combustible Panel (the continuous thermal compound line), the automatic continuous production for metal surface insulation designed by Hi-tech. Chinese state-owned enterprise, the advanced automatic CNC punching machine, and KINGWINS-independently-developed control system for refined production control, reducing production costs and improving product quality. At the same time, it adopts advanced production technology, implements a scientific, systematic and automated production process, and strives for excellence in every detail of production, making KINGWINS products leap into synchronized quality with global high-end metal curtain wall products.

Scientific testing, high standard quality control

KINGWINS introduced and long-term adhered to the implementation of ISO9001



international quality management system and 5S on-site management, guided by customer goals, equipped with complete product quality testing equipment to control every process of the entire production process from raw materials to factory, improve the performance indicators of the product to the limit.



CERTIFICATE

TEST NAME	COMBUSTIBILITY TEST FOR MATERIALS
ASSESSOR	SIRIM QAS INTERNATIONAL SDN. BHD.
STANDARD	BS 467

TEST NAME	COMBUSTIBILITY TEST FOR MATERIALS	
ASSESSOR	COMBUSTIBILITY TEST FOR MATERIALS	
STANDARD	AS 1530.1-1994	AS 1530.3-1999

TEST NAME	SGS TEST REPORT
ASSESSOR	COMBUSTIBILITY TEST FOR MATERIALS
STANDARD	EN 13501-1

TEST NAME	SGS TEST REPORT
ASSESSOR	COMBUSTIBILITY TEST FOR MATERIALS
STANDARD	ASTM E84

FABRICATION WORKSHOP

Advanced processing production equipment

Since 2021, KINGWINS has built up processing workshop and heavily invested in ANP processing machines. With an annual production capacity of more than 360 thousand square meters, we use large-scale CNC machine tools, rounding machines, and other world-class production equipment, processes, technology and strict manufacturing management, coupled with skilled technical workers, to maximize work efficiency and reduce errors to lay the foundation for the birth of high-quality products.



Skilled technical workers help construction documents design

We have an experienced team of Detailed Design Engineers who are proficient in CAD drawing techniques. They can accurately understand and translate customers' design requirements. Moreover, our Detailed Design Engineers are capable of precisely calculating the material loss rate based on drawings, assisting clients in effectively controlling material costs and enhancing project profitability.



How we **supply** Kingwins ANP panel?

Notes:

All product can use wooden package or simple package, which depend on the client's requirement.



Sheet

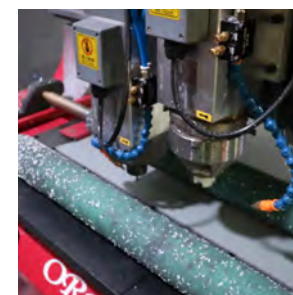
KINGWINS can produce 130,000m² per month. One container can carry more than 3,000m² ANP.



Rolling



Cutting



Semi-finished product

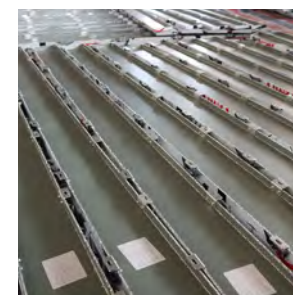
KINGWINS can produce 30,000 m² ANP semi-finished product per month. One container can carry more than 3,000m² ANP semi-finished product.



Routing



Drilling



Finished product

KINGWINS can produce 15,000 m² ANP finished product per month. Packing method would be determined by the shape of the finished product.



Folding



Tray Formation

INSTALLATION

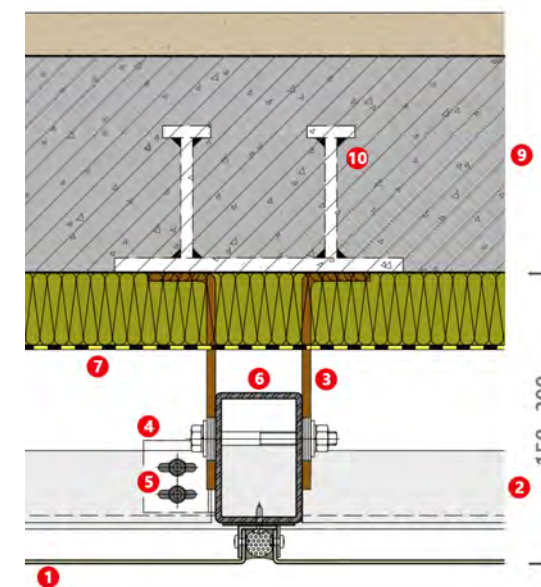
EXTERIOR INSTALLATION SYSTEM

Dry hanging system is a kind of mature installation mode used in exterior cladding. With a 15-20mm gap between each plate, the entire cladding system has adequate space to deal with expansion caused by heat and contraction caused by cold.

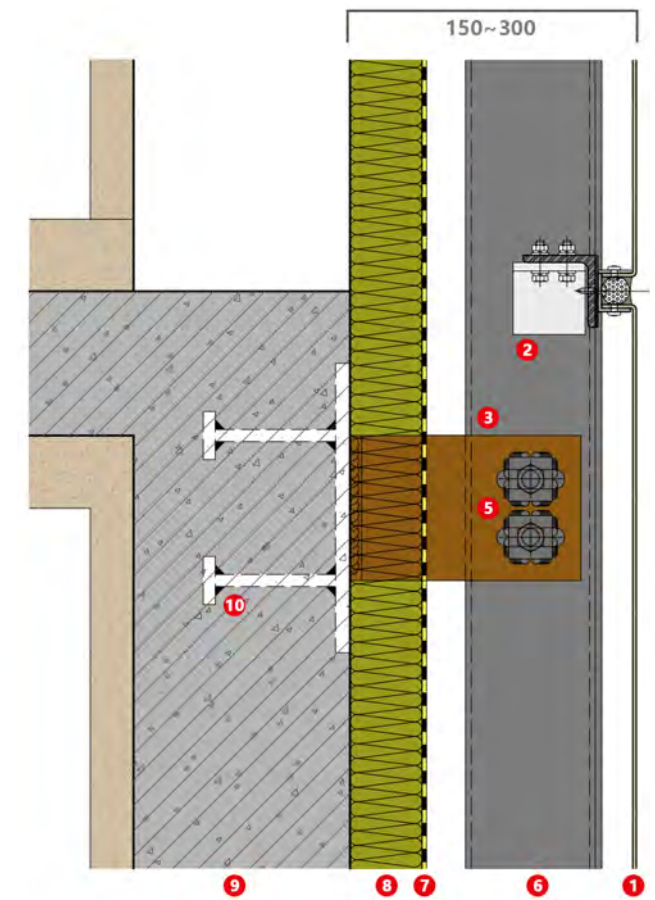


- 1 Aluminum Non-combustible Panel
- 2 Transverse Keel
- 3 Support Connector
- 4 Steel Bracket
- 5 Screw Bolt Assembly

- 6 Vertical Keel
- 7 Waterproof Layer
- 8 Thermal Insulation Layer
- 9 Reinforced Concrete Beam
- 10 Embedded Parts



Cross Section Node Diagram



Vertical Section Node Diagram



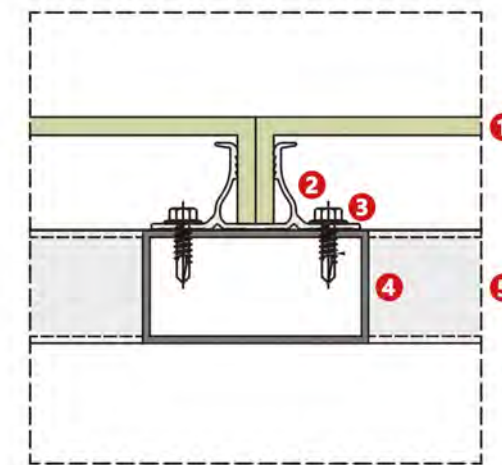
INSTALLATION

INTERIOR INSTALLATION SYSTEM

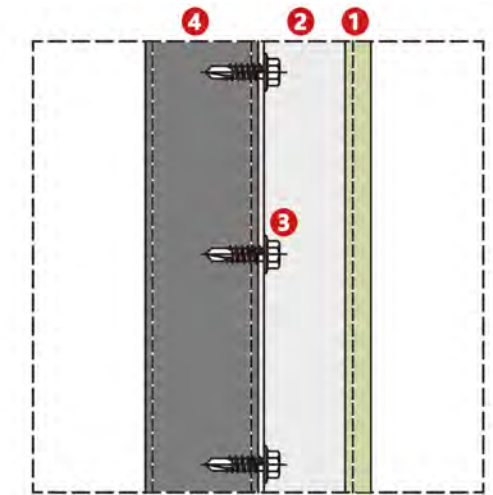
Dense splicing system is a kind of new installation mode used in interior cladding. It uses several kinds of dense splicing clip, which aid in visually decorating an no-gap wall or ceiling. To create natural arcs in both internal corners and external corners, KINGWINS has designed customized internal corner clips and external corner clips.



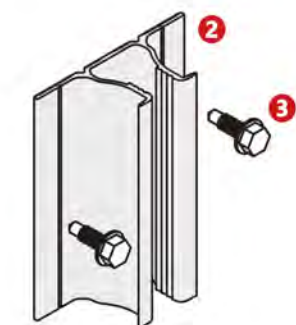
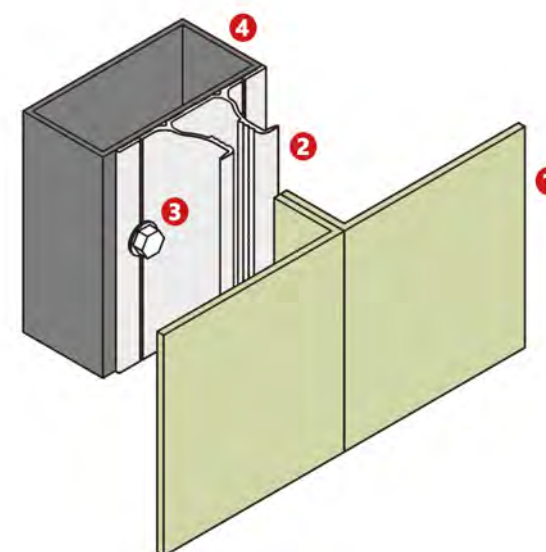
- ① Aluminum Non-combustible Panel
- ② Seamless Tight Clip
- ③ Hexagon Flange Self-Tapping Self-Drilling Screws
- ④ Longitudinal Keel
- ⑤ Transverse Keel



Transverse Section



Longitudinal Section



Accessories and Screws

APPLICATION



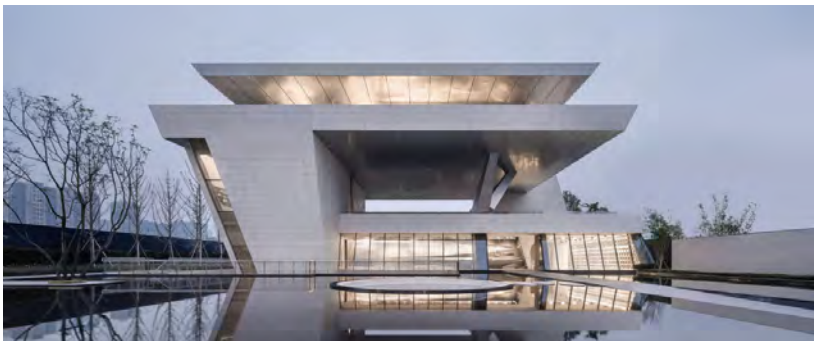
PUBLIC
BUILDING

EXHIBITION
CENTER



INTERNATIONAL
AIRPORT

SHOPPING
CENTER



COMMERCIAL
BUILDING

GENERAL
HOSPITAL



HOTEL

TEACHING
BUILDING



APPLICATION

ETHIOPIA Science and Technology Museum



CHINA
School of Humanities and Arts,
Tsinghua University



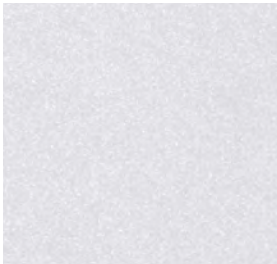
AUSTRALIA
DHL Network
Truganina



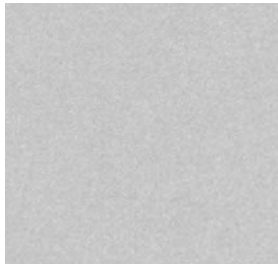
COLOUR CHART

- Notes:**
- 1. Colour samples in this brochure might be slightly different from the actual production due to paint application process.
 - 2. Colours between different batches might be slightly different so it is strongly recommended to order complete project requirements in one order to keep colour consistency.
 - 3. Except metallic serie, all the other series can add different texture. For example, 3D texture, anti-scratch ect.
 - 4. Customized colours are available. The MOQ for custom colour is 600m² per colour per panel width, please feel free to contact KINGWINS for more details.

METALLIC



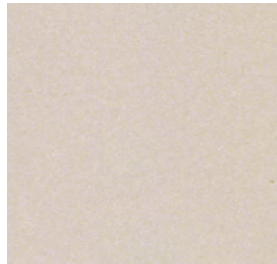
SHINING SILVER



SMOKE SILVER
METALLIC



BRUSHED SILVER



CHAMPAGNE



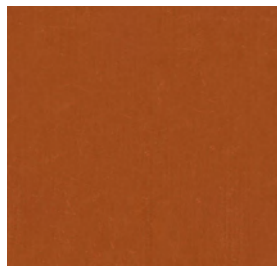
GOLD METALLIC



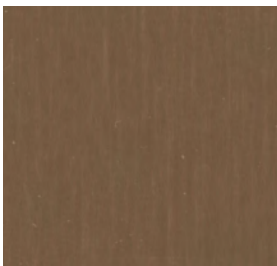
MEDIUM BRONZE



COPPER



BRUSHED COPPER



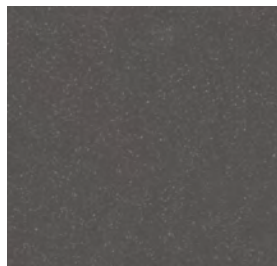
NATURAL ZINE



ANODISED SATIN
BROWN

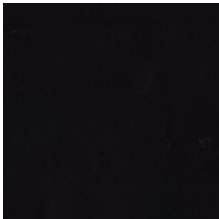


MOUSE GREY
METALLIC

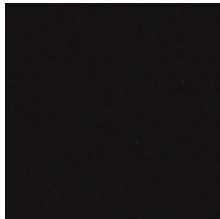


DARK GREY METALLIC

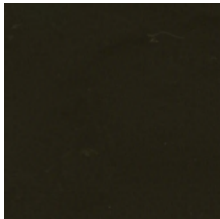
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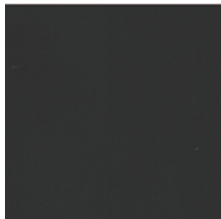
BLACK



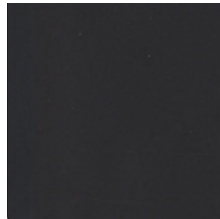
SATIN BLACK



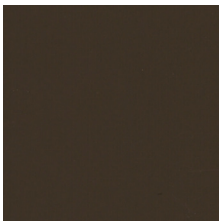
MONUMENT
MATT



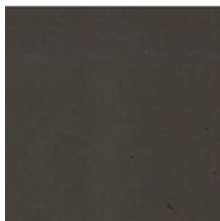
DARK GREY



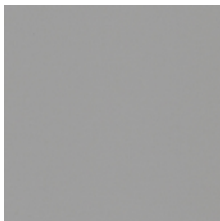
TANK GREY



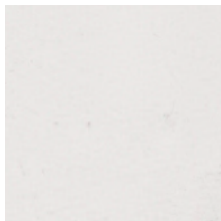
CHARCOAL GREY



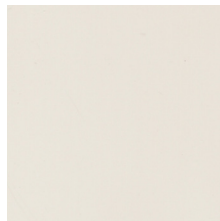
KHAKI GREY



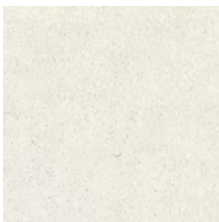
SIGNAL GREY



FLAT WHITE



CREAM



PEARL WHITE



TRAFFIC WHITE



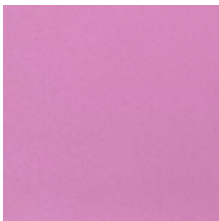
OFF WHITE



YELLOW



ORANGE



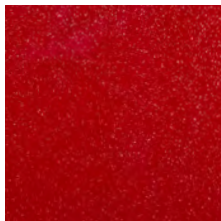
PINK



DEEP RED



ORIENT RED



SHIMMER RED



LINFOX RED



LIME GREEN



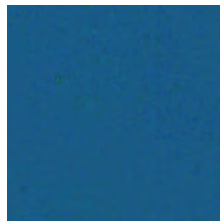
ECO GREEN



MOSS GREEN



DEEP BLUE



PROCESS BLUE

STONE



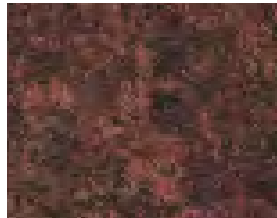
LIGHT RED RAIN
STONE



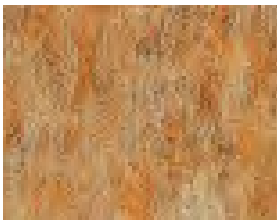
HIBISCUS STONE



FOSSIL TREE



Red Rock



BEEIGE STONE



CORAL RED

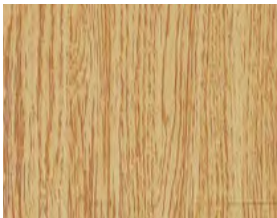


CEMENT GRAY

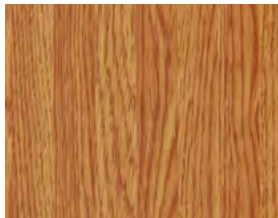


BLACK PATTERNED
GRANITE

TIMBER



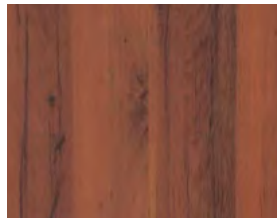
LIGHT TEAK



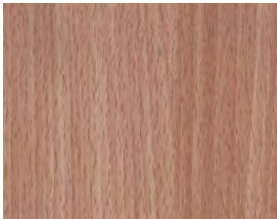
OAK



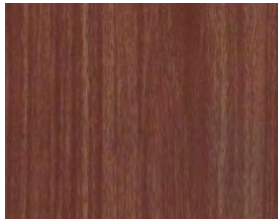
THREE-DIMENSIONAL
CAMPHOR WOOD



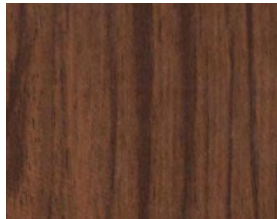
CRIMSON CAMPHOR
WOOD



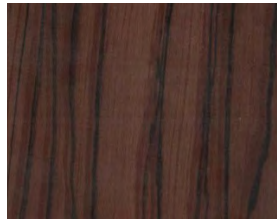
BEECH



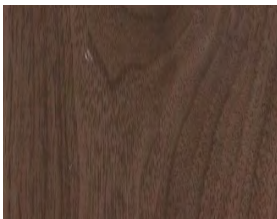
TEAK



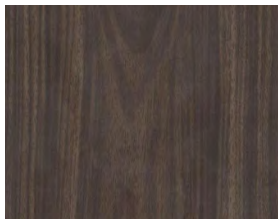
OUT TEAK



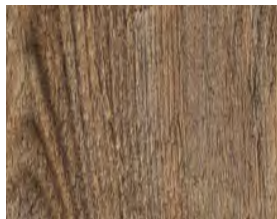
NEW ZEBRA WOOD



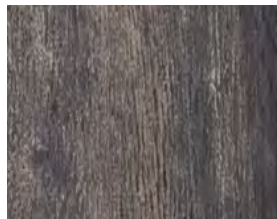
WALNUT



BLACK WALNUT



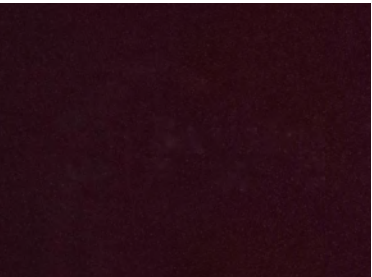
ANTIQUÉ LANDSCAPE
PINE



Antique Oak

SPECIAL FINISHES

KINGWINS ANP Panel composited with special finishes can do benefit to the some kinds of design, based on the function of its special coating.



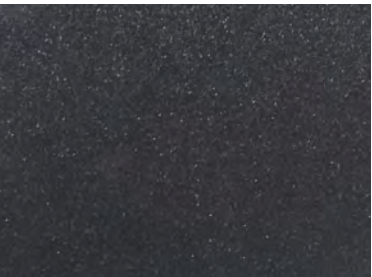
SPECTRUM SERIES



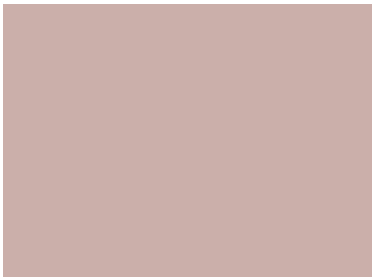
CLOTH SERIES(PE)



ANTISTATIC SERIES



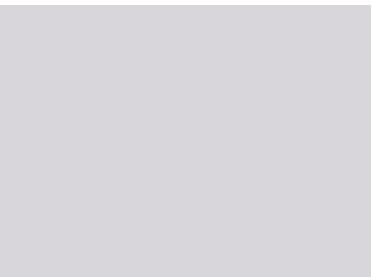
NANO SERIES(SELF-CLEANING)



PINK(SMOOTH)



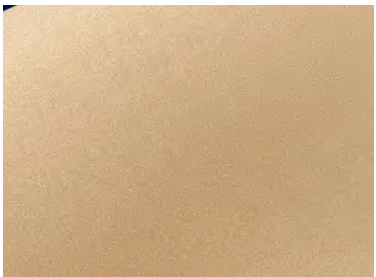
GREEN(SMOOTH)



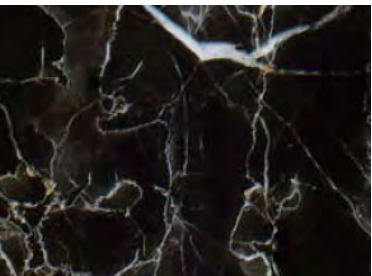
DIFFUSE WHITE



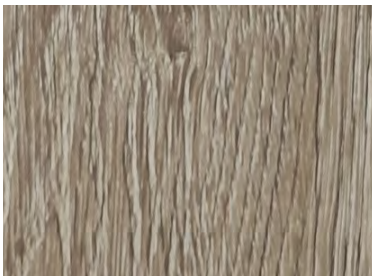
ANODIZING BRUSHED GOLD



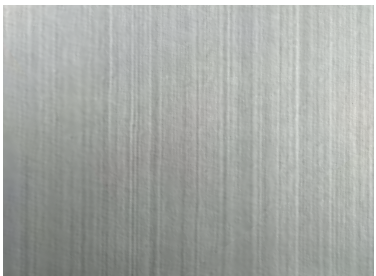
ANODIZING GOLD



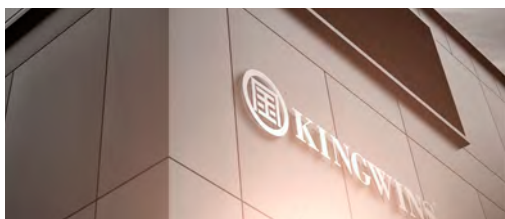
3D STONE SERIES



3D TIMBER SERIES



ANODIZING BRUSHED GREY



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