



#### FASEC (Hangzhou) Window Wall Co., Ltd

We are a group company established since 2013. FASEC (Hangzhou) Window Wall Co., Ltd. specializes in the development, design and production of various glass windows, glass doors, glass partitions, glass balustrade and glass panels for glass curtain wall systems; and also different types of single aluminium veneer, perforated aluminium veneer, composite aluminium panel, honeycomb aluminium panel and aluminium ceiling panels for aluminium curtain walls systems .

Since our establishment, we have always adhered to the principles of good service and excellent quality, committed to providing customers with professional design solutions and high-quality, durable, and beautiful products.



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# Aluminium Curtain Wall Series

Single Aluminium Veneer Preforated Aluminium Panel Composite Aluminium Panel Honeycomb Aluminium Panel Aluminium Ceiling Panel

2

3

4

5





### Advantages of aluminium curtain wall panel

- Excellent rigidity and impact resistance.
- Super weather, corrosion, pollutant resistance.
- Even coating, various colors.
- Light weight, easy to install.
- Easy for clean and maintance.
- Long quality guarantee periods of 10-15 years.

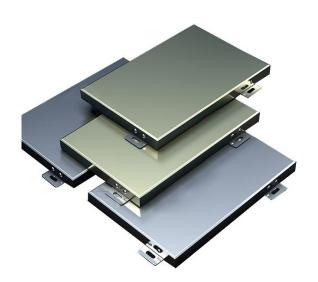


#### Applications

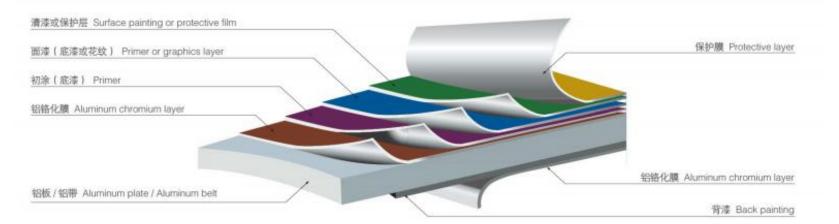
- Building exterior curtain walls.
- Decoration of interior walls, ceilings, bathrooms, kitchens and balconies.
- Shop door decorations.
- Decoration and renovation additions for old building.
- Advertisement board display platforms and signboards.
- Wallboard and ceiling for tunnels.



# 1 Single Aluminium Veneer



单层铝板结构图 Structure Diagram of Single-layer Aluminum Plate



- External curtain wall
- Interior curtain wall
- Aluminium clad column
- Hyperbolic aluminium veneer



• External curtain wall



Outerdoor aluminium curtain wall panel made from high-quality high-strength aluminum alloy sheet, composed of faceplate, stiffener, and hanging ear. The hanging ear could be bent or pressed into shape by facepanel, or it can be an independent accessory installed on the edge of the facepanel with rivets. The reinforcing ribs are connected to the welding screws on the back of the panel, making it a solid arrangement, greatly increasing the strength and rigidity of the aluminum wall panel.

室外幕墙采用高强度铝合金板材制作,由面板、加强筋、角码组合而成。角码可由面板折弯、 冲压成型,也可以是独立配件用铆钉装在面板边缘。加强筋与面板背面的电焊螺丝连接,使 之成为一个牢固的整理,极大增加了铝单板幕墙的强度和刚性,保证了长期使用中的平整度 和抗震能力。





• Interior curtain wall



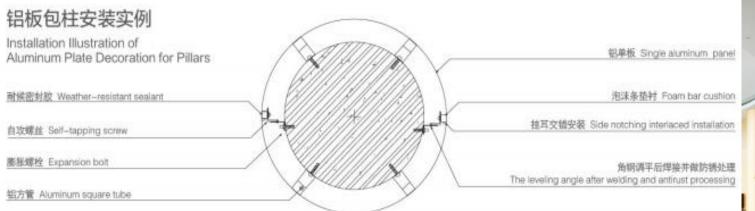




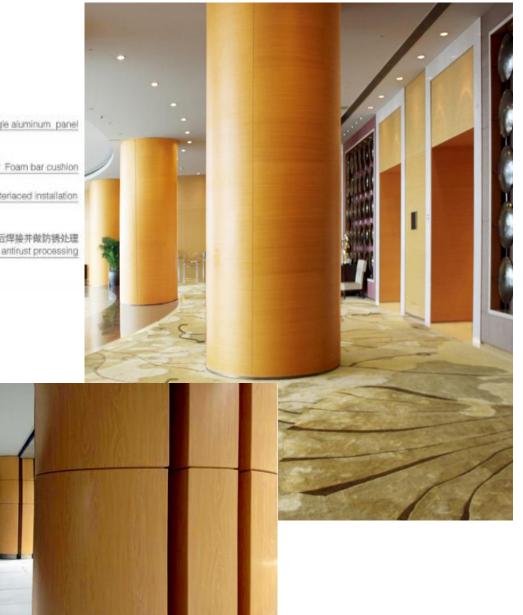
The indoor design board is made of high-quality galvanized iron or aluminum alloy plates, which have anti pollution, fire resistance, acid and alkali resistance, corrosion resistance, good processing performance, low maintenance cost, and are not afraid of insects and ants. It will not deform or sink when used for a long time, and has a long service life. It is the preferred material for indoor design. Science and technology machinery lines, shapes are bent, and the surface can be sprayed with various colors to form various patterns on the wall. It can also form unnecessary exterior shapes with glass curtain walls, making the building more noble and elegant in style.

室内造型板采用优质镀锌铁板或铝合金板材制作而成,具有防污染性、防火、耐酸碱、抗腐蚀性,加工性能好,维护费用低,不怕虫蚁蛀,长期适用也不会变形和下陷,使用寿命长,是室内造型的首选材料。科机械划线,版型折弯,表面可以喷涂多种颜色,在墙面形成各种图案,并且可以和玻璃幕墙等组成不用的外观形体,使建筑物更具高贵典雅的风格。

#### • Aluminium clad column









Aluminum wrapped column type is a customized product for indoor and outdoor column decoration. Its superior environmental performance and plasticity are irreplaceable by other materials. It can be processed into different specifications of wrapped column aluminum veneer products according to different design requirements, and can also be hollowed out into different plans on the surface of wrapped column aluminum veneer. The corresponding columns of the aluminum veneer with wrapped columns are circular, square, etc. The installation methods include leaving gaps and tight fitting.

铝包柱式为室内外柱子装饰定制的产品,其优越的环保性能及可塑性是其他材料不可代替的,可根据不同的设计要求加工成不同规格的包柱铝单板产品,也可以在 包柱铝单板表面镂空成不同的图案。包柱铝单板对应的柱子有圆形、方形等。安装方式有留缝、密拼。 • Hyperbolic aluminium veneer

The hyperbolic aluminum veneer has a good appearance display effect, which can create personalized buildings and be designed and processed according to various customer requirements, meeting the personalized construction requirements of the construction party. The hyperbolic aluminum veneer adopts internal structure waterproof and sealing treatment, which ensures its excellent waterproof performance to a greater extent. The surface of the hyperbolic aluminum veneer can also be sprayed with various colors of paint, To further enhance visual impact. The production of hyperbolic aluminum veneer is relatively difficult and requires high machine accuracy, so hyperbolic aluminum veneer has strong technical content. This series of products is mainly used in building lobbies, airports, stations, important public facilities, sports venues, and ethnic characteristic buildings.

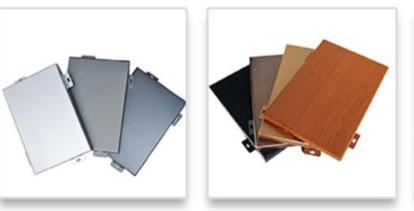
双曲铝单板具有良好的外观展示效果,它可以打造出个性化的建筑并且可以 按照客户的各种要求进行设计加工,满足施工方个性化的施工要求,双曲铝 单板采用内部结构防水,并且密封处理,从而更大程度的保障了其优秀的防 水性能,在双曲铝单板表面也可以喷涂各种颜色的漆,来进一步增强视觉冲 击力。双曲铝单板的制作难度比较大,对机器精确度要求高,所以双曲铝单 板具有较强的技术含量。该系列产品多用于楼宇大堂、机场、车站、重要公 共设施、体育场馆、名族特色建筑物等。

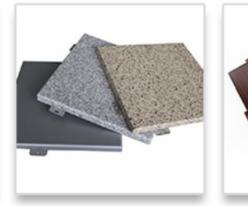




## Parameters of Single Aluminium Veneer

Material	Aluminium Alloy
Thickness	1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10mm 20mm
Width, Length	Width ≤2500mm, Length ≤8000mm Commonly used sizes: 600*600mm, 600*1200mm
Coating	Spraying, roller painting, fluorocarbon painting, heat transfer wooden grain, stone grain, wire drawing
Technics	Bending, welding, polishing, laser wire drawing, chromizing, polishing, drying, painting, baking, fluorocarbon spraying
Shape	Customerized
Color	Solid color, Metallic color, Marble Color, Wooden Grain, Glossy





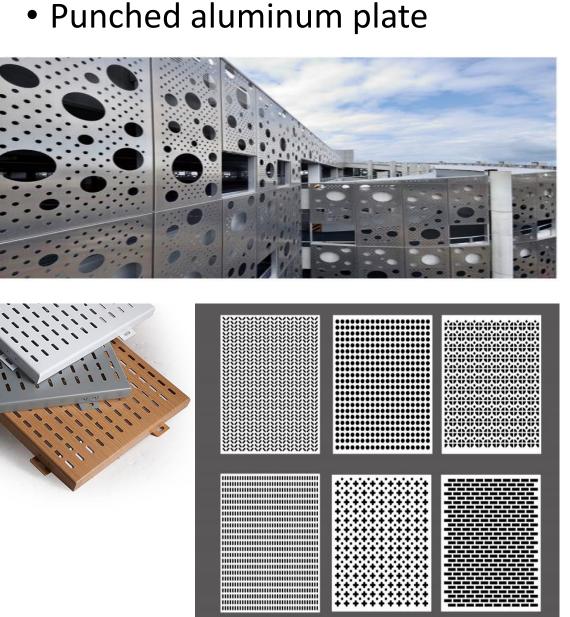


## 2 Perforated Aluminium Panel

- Punched aluminum plate
- Carved aluminum plate
- Mesh aluminum plate

Width usually not exceed 1850mm Thickness: 1mm,1.5mm,2mm,2.5mm,3mm,4mm,5mm **Design: Customerized** 







Punched aluminium plate use high-quality single-layer aluminum alloy as the substrate, and the surface coating is fluorocarbon spraying, powder spraying, or PVDF paint spraying. The thickness of punched aluminum plates mainly includes 1.5mm, 2.0mm, 2.5mm, 3.0mm, 4.0mm, etc. The maximum size of formed punched aluminum plates can reach 1500 \* 4000mm.

冲孔板一般采用优质单层铝合金为基材,表面涂层为氟碳喷涂,粉末喷涂, 聚酯漆喷涂。冲孔铝板厚度主要有1.5mm,2.0mm,2.5mm,3.0mm,4.0mm等, 成型冲孔铝板最大尺寸可达1500\*4000mm。

#### • Carved aluminum plate

Carved aluminium plate adopts advanced CNC punching machines and laser engraving equipment, selects high-quality aluminum alloy plates, and is formed through CNC bending and other technologies. Carved aluminum veneers give ordinary aluminum panels high ornamental value, allowing them to be hollowed out and carved into any desired shape. Common examples include carved aluminum veneers on exterior walls, door signs, column cladding, and curtain walls.

雕花铝单板采用先进的电脑数控冲床、激光雕刻设备,选用优质铝合金板材, 经过数 弯等技术成型。雕花铝单板使普通铝板具有极高的观赏价值, 可以镂空雕刻出任 要的造型,常见的有在外墙雕花铝单板,门头招牌雕花铝单板,包柱雕花铝单板 幕墙雕花铝单板等。































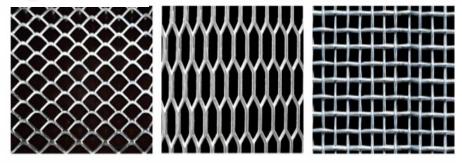
#### • Mesh aluminum plate

Mesh aluminum plate is made of aluminum plate or aluminum alloy plate using new technology through cutting, punching, shearing, stretching and expansion. There is no waste generated during the production process, and the mesh made has the characteristics of rust resistance and beautiful color. There are diamond shaped holes, hexagonal holes, circular holes, rectangular holes, triangular holes, and fish scale holes, with apertures of 0.5 \* 1mm, 1 \* 2mm, 1.25 \* 2.5mm, 15 \* 30mm, etc. The finished mesh board can be made with or without frames, with a white edge thickness of mostly 2.5mm-4mm, a width of 1220mm, and a length of 3000mm-9000mm.

拉网铝板由铝板或者铝镁合金板采用新科技经切割冲剪拉伸扩张而成,生产过程中不产生废料,制成的网具有不生锈,色泽美观的特点。有菱形孔、六角型、圆孔、矩形、三角型、鱼鳞孔,孔径有0.5\*1mm,1\*2mm,1.25\*2.5mm,15\*30mm等。成品网板可做有框也可做无框,有框的白边厚度多为2.5mm-4mm之间,宽度1220mm,长度3000mm-9000mm之间。



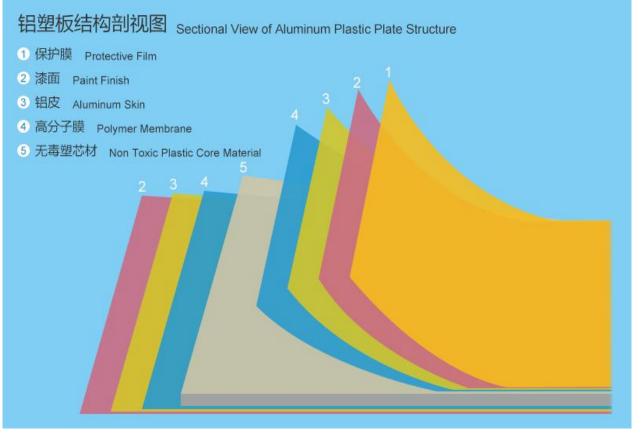






## 3 Composite Aluminium Panel





Aluminum plastic panel is composed of two materials with completely different properties (metal and non-metal). It not only retains the main characteristics of the original materials (metal aluminum and non-metallic polyethylene plastic), but also overcomes the shortcomings of the original materials, thus obtaining many excellent material properties, such as luxury, colorful decoration, weather resistance, corrosion resistance, impact resistance, fire prevention, moisture prevention, sound insulation, heat insulation, and seismic resistance; Lightweight, easy to process, easy to handle and install, and other characteristics. 铝塑板是由性质截然不同的两种材料(金属和非金属)组成,它既保留了原组成材料(金属铝、非金属聚乙烯塑料)的主要特性,又克服了原组材料的不足,进而获得了众多优异的材料性质,如豪华性、艳丽多彩的装饰性、耐候、耐蚀、耐创击、防火、防潮、隔音、隔热、抗震性;质轻、易加工成型、易搬运安装等特性.

## \* Special Property of Composite Aluminium Panel

- Easy to construct, aluminum plastic panels are easy to cut, cut, groove, bend into various shapes such as arcs and right angles. There are two ways to construct and shape sheet materials: one is to process and shape them in the factory with drawings, and the other is to construct and shape them on site with a simple slotting machine. Therefore, this type of board can also be stockpiled and sold in pieces.
- 易施工性,铝塑板易切割、剪裁、刨沟、弯曲成圆弧、直角等各种形状。 板材施工成型可以有两种方式,一种有图纸在工厂加工成型,另一种是 在工地配合简易开槽机现场施工成型。因此这种板材也可以成片囤积和 出售。



## \* Special Property of Composite Aluminium Panel

- The patterns are diverse, and customers can choose from various existing patterns in the factory, as well as choose from existing patterns in the factory, or choose aluminum plastic panels with a white background. Customers can take them and print them themselves. Contact free aluminum plastic plate printer, can print A4 printer type (210mm) × 290mm) A3 type (330mm × 600mm) A2 type (420mm × 850mm) A1 type (610mm × 2000mm) A0 type (1118mm × 2000mm) A+++type (1650mm × 2500mm).
- 图案多样化,可以选择工厂现有多种图案,也可以选用工厂现有图案, 也可以选用白底铝塑板,客户自己拿去打印。有无接触铝塑板打印机, 可以打印 A4型(210mm×290mm)A3型(330mm×600mm)A2型 (420mm×850mm)A1型(610mm×2000mm)A0型 (1118mm×2000mm)A+++型(1650mm×2500mm)。



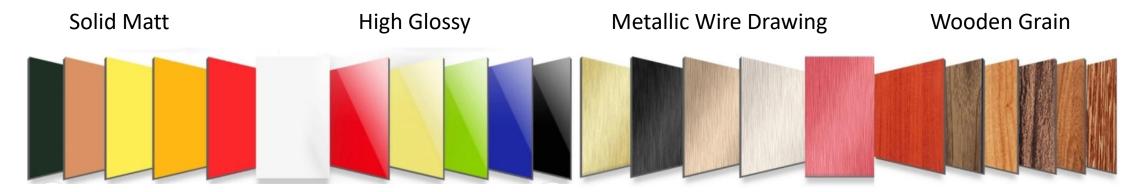


## Parameters & Color of Composite Aluminium Panel

Aluminium Layer	0.05mm, 0.1mm, 0.15mm, 0.2mm, 0.25mm, 0.3mm, 0.4mm, 0.5mm
Panel Thickness	2mm, 3mm, 4mm, 5mm, 6mm, 7mm
Panel Width	1000mm, 1220mm, 1250mm, 1550mm, 1570mm
Panel Length	2440mm, 3200mm, 4000mm, 5000mm, 6000mm
Surface	PE coating, PVDF coating, NANO, Brush surface, mirror surface
Inner Core	Normal non toxil PE core
Color	Solid Matt, High Glossy, Metallic color, Wooden Grain, Marble Grain
Packing & Qty	LCL packing: wooden pallet package, 100 sheets per pack 1*20' FT container: 1500 sheets for size 1220*2440mm panel

Marble Grain

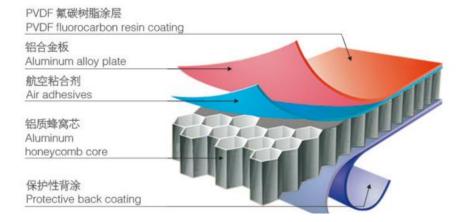




## 4 Honeycomb Aluminium Panels

Honeycomb Aluminium Panel is composed of a thick layer of honeycomb like core material firmly bonded to the panel and bottom plate, and also forms a honeycomb sandwich structure, which can be made into curved anisotropy. Good seismic performance, high strength, good adhesion and weather resistance, able to maintain the bright color of building exterior walls for a long time.

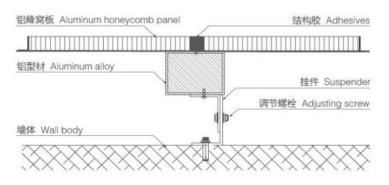
蜂窝板由面板与底板牢固粘结在一层较厚的蜂窝状芯材组建而成,也成蜂窝夹层结构,可做成弧 形异性。抗震性能好,强度高,具有良好的的附着力和耐候性,能长时间保持建筑物外墙颜色鲜 艳。



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#### 蜂窝板安装结构图 Structure Diagram of Honeycomb Panel



#### 加工 Processing

切割、开槽、压弯、辊弯。Cutting, notching, bending, roll bending.



铝蜂窝板

Aluminum honeycomb panel

铝型材 Aluminum alloy

墙体 Wall body

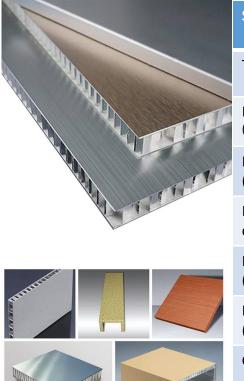
铝型材饰条

挂件 Suspender

Aluminum decorative piece

调节螺栓 Adjusting screw

#### Parameters of Honeycomb Aluminium Panel



Specific.   M25   M20   M15   M10   M06   Fedurance   E8   N/m²   S10   S26   279     Thickness (mm)   25   20   15   10   6   Bending rigidty   C393   X10 <sup>2</sup> 1.2   1.4   1.7     Face plate (mm)   1.0   1.0   0.6   Bending rigidty   C393   X10 <sup>2</sup> 8.03   1.54   3.84     Rear plate (mm)   0.8   0.8   0.7   0.7   Fermal index   D696   N/m²   0.24													
Specific.     M25     M20     M15     M10     M06     Stretching     E8     A.     A.     A.A     A.A     A.A       Thickness (mm)     25     20     15     10     6     Bending rigidty     C393     X10 <sup>2</sup> N.     8.03     15.4     38.44       Face plate (mm)     1.0     1.0     0.8     0.7     0.5     Bending rigidty     C393     X10 <sup>2</sup> N.     8.03     15.4     38.44       Rear plate (mm)     0.8     0.8     0.7     0.5     Thermal index     D696     1.0     0.24     0.								Tensile strength	E8	N/mm²	806	598	455
Thickness (mm)25201510610610 <td></td> <td>Specific.</td> <td>M25</td> <td>M20</td> <td>M15</td> <td>M10</td> <td>M06</td> <td>Endurance</td> <td>E8</td> <td>N/mm²</td> <td>531</td> <td>405</td> <td>279</td>		Specific.	M25	M20	M15	M10	M06	Endurance	E8	N/mm²	531	405	279
Face plate (mm)1.00.80.80.6Indext and the second		Thickness (mm)	25	20	15	10	6	Stretching	E8	%	1.2	1.4	1.7
Rear plate (mm)   0.8   0.8   0.8   0.7   0.5   Thermal index   D696    0.24   0		Face plate	1.0	1.0	0.8-	0.8	0.6	Bending rigidty	C393		8.03	15.4	38.44
(mm)   Image: Construct of the section modules   Image: Construc			0.8	0.8		0.7	0.5	Bending Elasticity		N/mm²	50000	40300	30800
corecore $1$ <th< td=""><td>(mm)</td><td>F 22</td><td></td><td></td><td></td><td></td><td>Thermal index</td><td>D696</td><td></td><td>0.24</td><td>0.24</td><td>0.24</td></th<>		(mm)	F 22					Thermal index	D696		0.24	0.24	0.24
Panel Width (mm)250-1500 mmHeat distortion temperatureD648°C200200200Panel Length (mm) $600-45 \cup$ mm $600-45 \cup$ mmAdhesive strengthC297N/mm²121212Gravity (kg/m²)7.87.47.05.34.9Flatness of panelMax deviation is 1 mmm/MVRigidity 		-	5-23 mm					Thermal conductivity	D976		0.23	0.19	0.15
(mm)C297N/mm²1212121212(mm)(mm)7.87.47.05.34.9Flatness of panelMax deviation is 1 mmm/MV(kg/m²)7.87.47.05.34.9Flatness of panelMax deviation is 1 mmm/MVRigidity (kNm/m²)22.1713.907.552.490.71Flame resistanceNon-combustible, in conformity with relevant fireproofing standardsSection molulus2419144.52.5Sound insulation0-3db. Depend on the installation angle of panel			250-1500 mm					Heat distortion temperature	D648		200	200	200
Rigidity (kNm/m <sup>2</sup> )   22.17   13.90   7.55   2.49   0.71   Flame resistance   Non-combustible, in conformity with relevant fireproofing standards     Section molulus   24   19   14   4.5   2.5   Sound insulation   0-3db. Depend on the installation angle of panel		•	600-4500 mm					Adhesive strength	C297	N/mm²	12	12	12
(kNm/m²) 14 4.5 2.5 Sound insulation 0-3db. Depend on the installation angle of panel		•	7.8	7.4	7.0	5.3	4.9	Flatness of panel	Max deviation is 1 mmm/M				
			22.17	13.90	7.55	2.49	0.71	Flame resistance					
			24	19	14	4.5	2.5	Sound insulation	0-3db, Depend on the installation angle of panel				of panel

Unit theoretical weight

ASTM

Unit

kg/m²

10 mm

5.4

15mm

5.6

20mm

5.75

# Color Chart & Project Case of Honeycomb Aluminium Panel





# 5 Aluminium Ceiling Panels

The design of indoor ceilings is increasingly concerned with human psychological factors and usage characteristics, and more and more attention is paid to the impact of the surrounding environment on people's attitudes and feelings. When designing ceilings in a space, the starting point is "style", from the past single and simple needs to today's "human" complex needs. 室内天花的设计越来越多的关注人的心理因素和使用特点,越来越多的重视周围环境对人们态度感受的影响,在对空间进行天花设计时,以"风格"为出发点考虑,由过去单一、简单需求到当今的"人性"复杂需求。

- Square frame ceiling
- Strip buckle ceiling

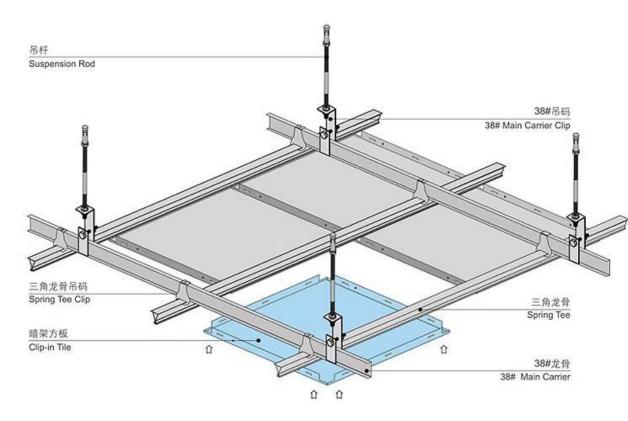




• Square frame ceiling

#### 安装示意图

Structure Diagram of Single-layer Aluminum Plate





## Parameters & Designs of Square Frame Ceiling

Shape	Retangular, Square
Material	Aluminum alloy
Producing technics	Molding
Plate thickness	0.8mm-1.2mm
Surface treatment	Akzo Nobel electrostatic powder spraying, coating thickness 0.06-0.1mm
Common size	300x300mm, 400x400mm, 500x500mm, 600x600mm, 800x800mm, 600x1200mm, 300x1200mm

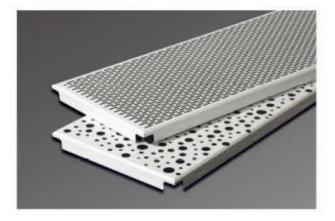


HY-压型扣板01 600x600mm



HY-压型扣板02 600x600mm







HY-压型扣板03 600x600mm



HY-压型扣板04 600x600mm



HY-压型扣板05 600x600mm



• Strip buckle ceiling 安装示意图 \_ Installation Diagram φ8mm螺杆 φ 8mm thread rod Main keel 主龙骨吊码 Main keel hanger 副龙骨 Vice keel 副龙骨吊码 Vice keel hanger S型防风条扣 Model S Strip 2

主龙骨

## Parameters & Designs of Strip buckle ceiling

Shape	Long bar shape		Mar		
Material	Aluminum alloy		and the second		
Producing technics	Molding or continuous mechanical rolling	50+50+50长城板(胡桃木)	18+12小长城(白橡木)		
Plate thickness	0.8mm-1.2mm				
Surface treatment	Akzo Nobel electrostatic powder spraying, coating thickness 0.06-0.1mm				
Туре	Special size, punching type, surface color, installation accessories can be customized according to needs	25+25+25长城板(红檀木)	50+50+35高 单长城(黄花梨)		
<b>V</b>		100+50单长城板(深橡木)	40+20长城板(桔栓木)		
(40X80mm) (30X100mm) (30X	(30X50mm) (50X100mm)		1 3 m		
		100+50+35单长城(黄檀木)	40+20双长城(啡橡木)		