





Aluminum Panel

OUSILONG® PVDF-coated aluminum panel involves alloy panel as base material, which is coated with primer and color finish paint after pretreatment and sprayed with PVDF on surface layer.

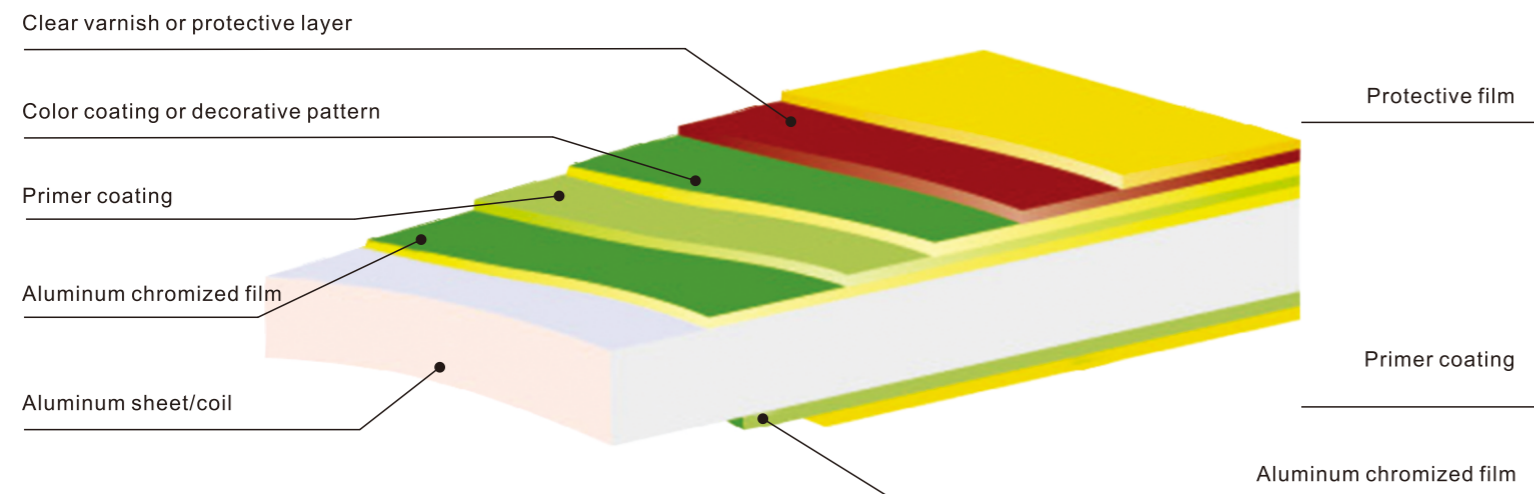
The product is fabricated by three-coating & one-baking of PVDF paint. Curing quality is the key for the product. Curing oven of air bridge-based design is adopted, which provides temperature of fluctuation within ±2°C. The temperature evenness brings performance of PVDF paint film up to optimal state.

The company successively introduced LFK numerical control sheet metal equipment, German MILLER argon arc welding machine and Japanese RANSBAG full-automatic coating equipment, all advanced in the world. Adopting high-quality alloy aluminum sheet, German HENKEL pretreatment agent, AKZO-NOBEL, PPG and Valspar PVDF coating, the company strictly observes requirements in ISO9001-2008 quality management system to bring product quality up to the internal control standard of AAMA2605-98.

Material	Product specification	Product characteristics:	
Base material: rustproof high-strength alloy aluminum sheet	Ordinary thicknesses: 2.0mm, 2.5mm, 3.0mm	 Free shape, aesthetics of personality Different geometric figures can be made by bending, punching and arc rolling subject to user demand, presenting designer's idea in full.	 Even coating , diverse colors Application of conversion coating and filming technology brings attachment between coating and metal to an optimal state, uniform shading and diversifies color. This provides larger space for user's selection and can manifest personality.
Surface coating: multi-layer PVDF coating involving international known paints e.g. PPG (USA), AKZO-NOBEL, Valspar as base materials	Subject to user demand Length: ≤6.0m Width: ≤1.8m	 Strong weather resistance, good self-cleaning performance The PVDF base materials Kynal 500 and Hylar 5000 (content: 70%) can effectively resist acid rain, air pollution and ultraviolet ray. Special molecular structure can prevent dust from attachment to surface thus provide good self-cleaning performance.	
Reinforcement, hanger	Color: subject to user demand	 Good fire prevention in accordance with fire fighting requirements Acting as ornaments of the product, high-strength aluminum alloy, PVDF paint and stone panel are non-flammable thus fire acceptance can be passed in full.	

Coating Diagram

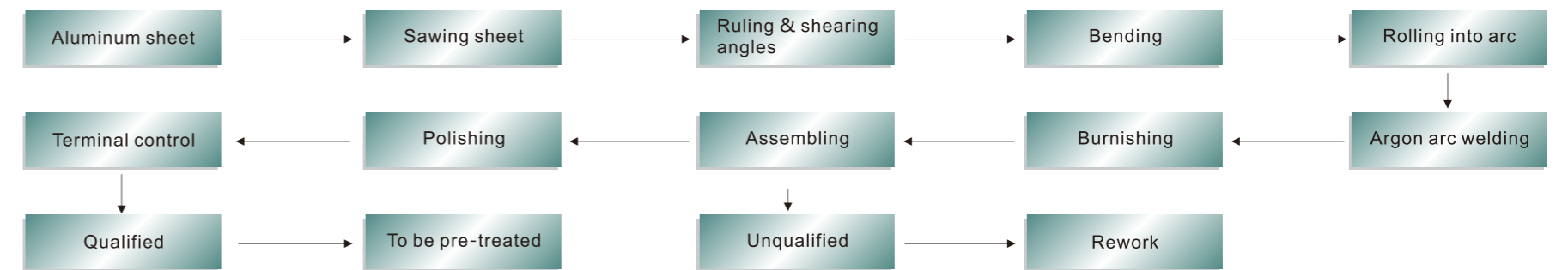
Aluminum Panel is based on aluminum sheet, with pre-treatment, primer coating, and top color PVDF spraying coating on the surface.



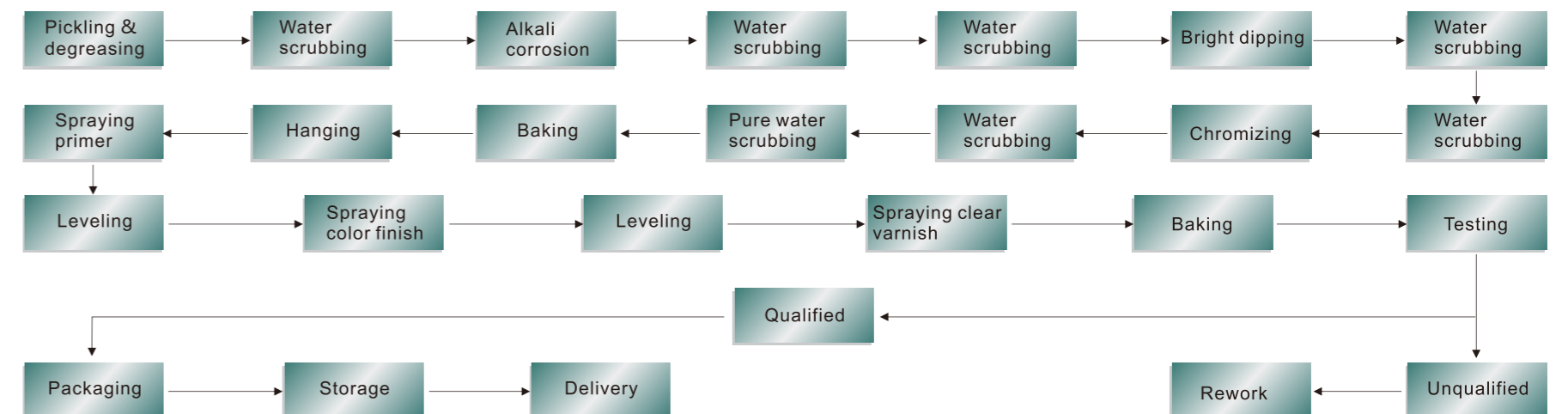
Parts Of Actual Models Of Aluminum Panel



Production Process



Spraying Coating Process



Aluminum Panel

Physical & Chemical Properties

Testing Items	AAMA26505 Standard	Result	Remarks
Glossiness (60)	Low standard: minimum 19, medium 20 ~ 79 High standard: minimum 80	25-35	ASTM D523 60% gloss meter
Hardness	Minimum value F	H	ASTM D3363 (Seagulls turquoise pencil)
Adhesive Force	No peeling off (100/100)	100/100	Cutting interval 1mm, wet or dry film
Boiling Water Resistance	No dropping (100/100)	100/100	Cutting interval 1mm for 20 minutes, at 99~100°C
Impact Resistance	No dropping	No dropping	Diameter 16mm, Gardner impact test, ASTM D968
Abrasion Resistance	Loss coefficient (V/T) 40 minutes	65 Minutes	ASTM D968
Acid Resistance	No bubble, no change	No bubble, no change	Dropping 10% Hydrochloric acid on the surface for 15 minutes, at 18-27°C
Mortar Resistance	No loss of paint film, no change	No loss of paint film, no change	Patting test for 24 hours
Nitric Acid Resistance	Chromatic aberration maximum: $\Delta 5E$ ASTM D2244	3 ΔE	70% Nitric acid, for 30 minutes
Washing Resistance	No bubble, no change ASTM 3359	No bubble, no change	Glass cleaner
Glass Cleaner Resistance	No bubble, no change	No bubble, no change	3% cleaning dose 38°C x 72 hours
Sweat Resistance	Rusting maximum NO.8 ASTM D714	No bubble	ASTM D2247 (100%RH, 100°F, 4000Hrs)
Salt-fog Test	Corrosion maximum 1/32" ASTM D1654	1/32"	ASTM B117 (5% Brine, 100°F, 4000Hrs)
Weather Resistance	Chromatic aberration maximum: $\Delta 5E$ ASTM D224 Exposure rate minimum: 50% (60) ASTM D523	3 ΔE 80%	Exposure test in South Florida, USA for 10 years, at 45°C
Artificial Ageing Test	Ageing rate maximum: NO.8 (any color except white) NO.6 (white) ASTM D659	Any color except white: NO. 8 White: NO. 6	
Corrosion Resistance	Loss rate maximum: 10%	5%	

AAMA: American Architectural Manufacturers Association
ASTM: American Society for Testing and Materials



Features Of PVDF:

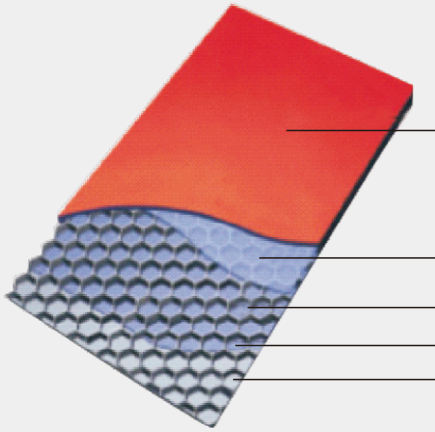
- ① High adhesion
- ② Fast solidifying at low temperature 70-90°C
- ③ Nice pigment wet ability, no static, non-flammable
- ④ Overlong weather resistance, anti-acid, alkali
- ⑤ resistance, anti-corrosion, 3 to 5 times chemical resistance to common resins.
- ⑥ Good self-cleaning, high gloss, abundant colors; Anti-pollution, easy to clean; Even coatings.

Application:

Building exterior wall, anti-corrosion of steel structures, oil platform, ships, chemical pipelines, airplane, bridges and etc.



We adopt advanced continuous thermal compounding technology from German Alhigerman, and use high-intensity heat plastic adhesion system, which changes the low production proficiency and high product random of traditional hand-made and single plate producing technique and overcomes the shortcomings of traditional techniques for crispness and hardness adhesion system. These shortcomings include: the adhesion is easy to crisp and volatilize; the adhesion power reduces quickly after compounding, and the product is poor for processing. OUSILONG™ aluminum honeycomb panel is fully made from aluminum, which is recyclable and good for environmental protection. Besides, the fusion point of aluminum is 660.4℃, so the panel is ultimately fireproof. Since it weighs much lighter but with high intensity, the panel can be widely used on curtain wall, carriage, ship hull and etc. Especially on buildings, it's capable to bear strong wind pressure so that it meets requirement for large lattices on the curtain wall of super big & high buildings. This product also has good flatness and it is easy to process.



Panel Structure

- Fluorine Carbon Coated Aluminum Front Sheet
- Special Highly Adhesive Film
- Aluminum Honeycomb Core
- Special Highly Adhesive Film
- Resin Coated Aluminum Backing Sheet

Panel Specifications;

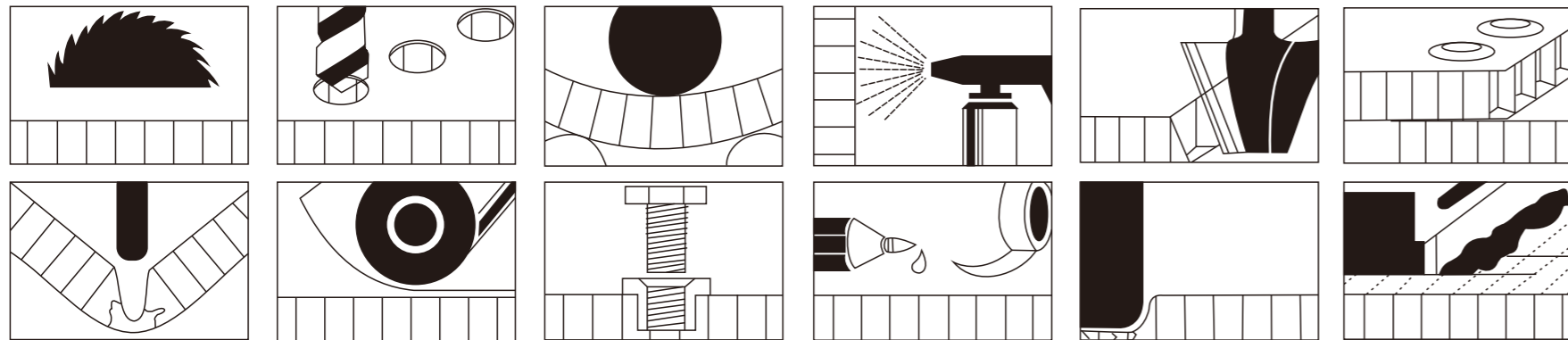
- Standard Thickness: 10, 12, 15, 18, 20, 25mm
- Available Thickness: 6 ~ 90mm
- Standard Width: 1220, 1250, 1500mm
- Available Width: ≤ 1500mm
- Available Length: ≤ 6000mm

Temperature Tolerance

The standard aluminum honeycomb panel can be used in temperature - 60℃ ~ +120℃, meeting building requirement.

Process

Cutting, Grooving, Bending, Rolling

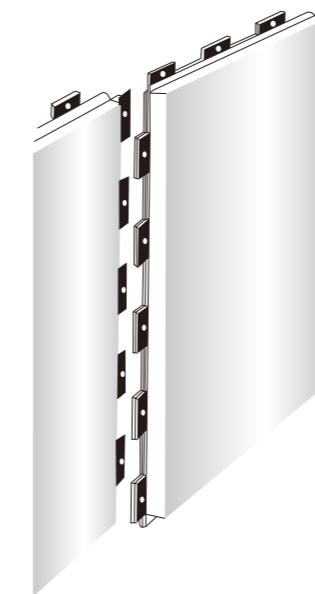


Water-proof Structure

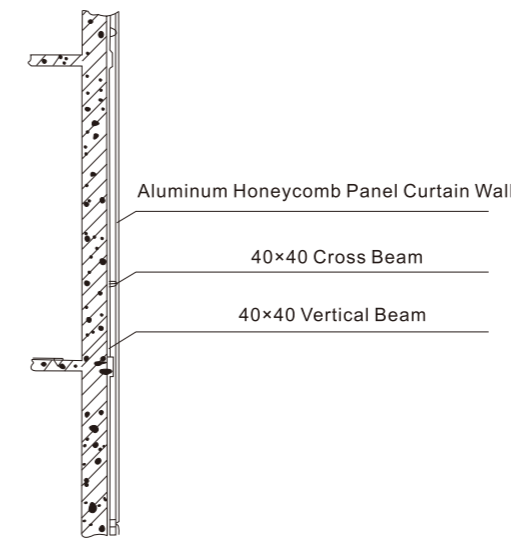
- Aluminum Honeycomb Panel bases on grade 3003 aluminum alloy sheet, and the aluminum sheet owns water-proof property. After PVDF coated on its surface, the whole panel has weather resistance, chemical preservation and etc.
- When in installation, panels are tightly connected with sealed aluminum profiles from four sides, so as to prevent rainwater from osmosis.
- To achieve the best water-proof effect, plug-in installation method & weather silicone sealant are applied.

Aluminum Honeycomb Panel

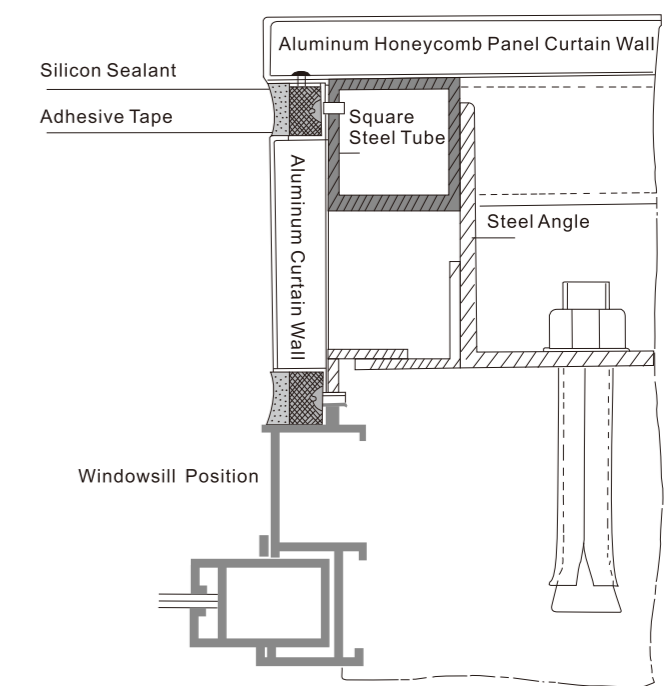
Installation Method 1 On Curtain Wall



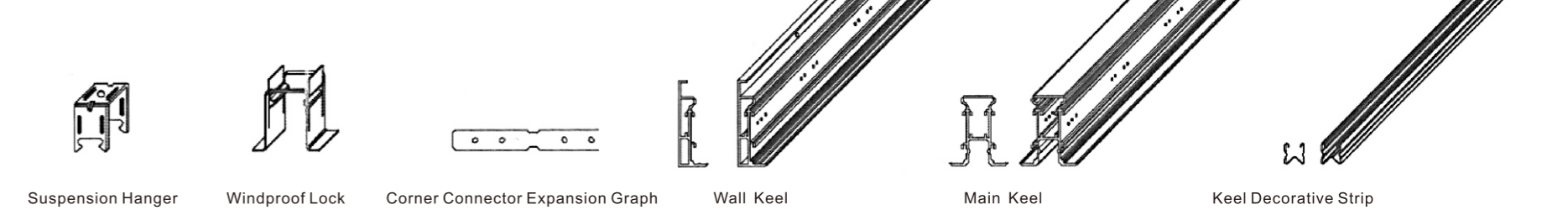
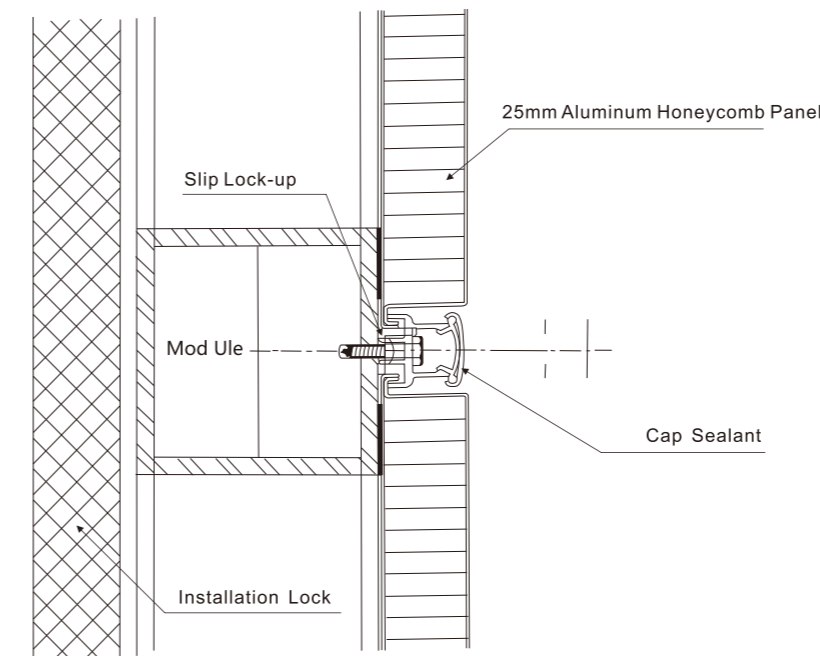
Lateral View On Honeycomb Panel Curtain Wall



Installation Method 2 On Curtain Wall



Curtain Wall Including Windowsill Installation Drawing



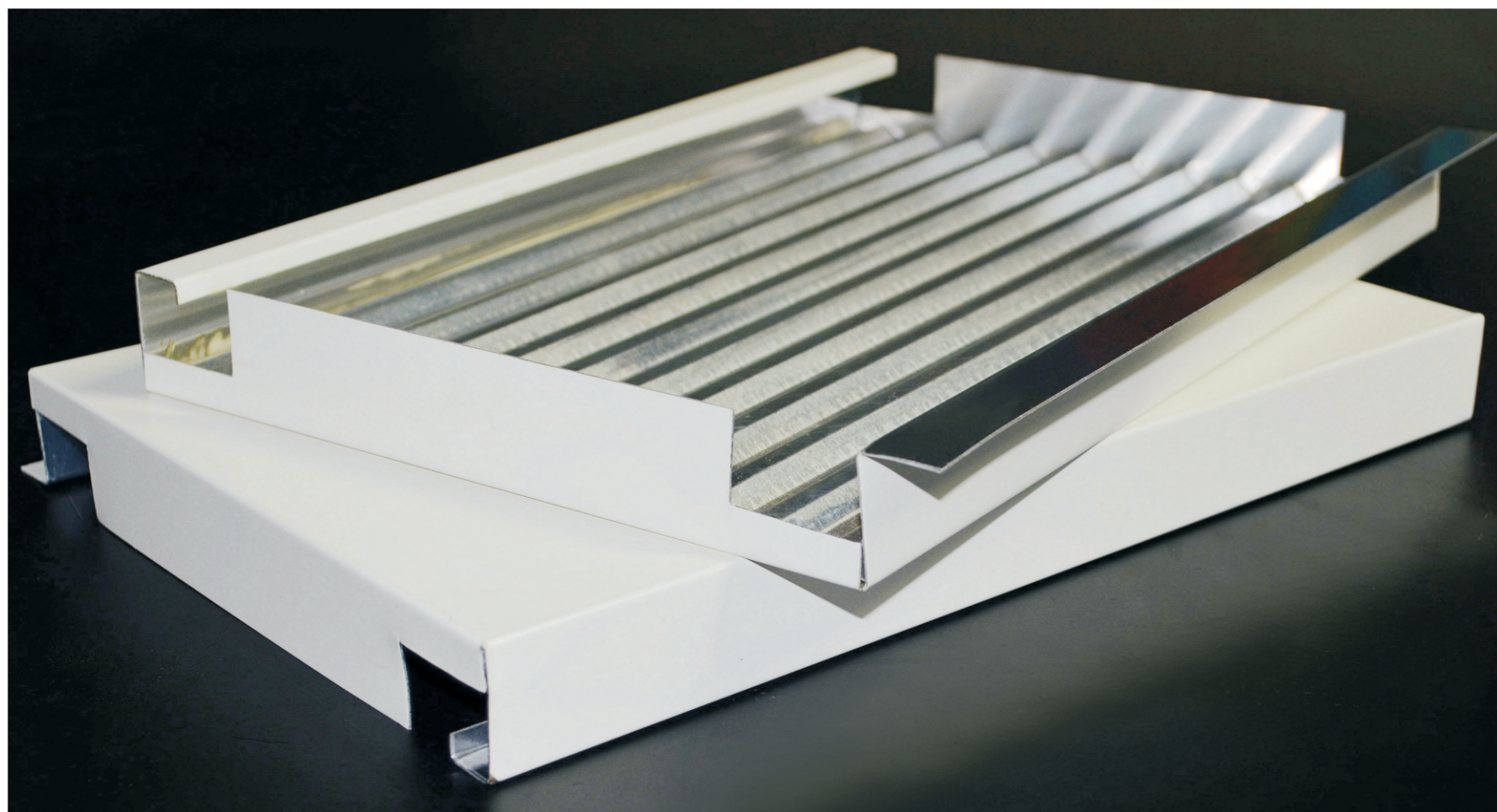
Application

Exterior wall panel, interior decorative panel, partition panel, ceiling, roof board, carriage, ship hull and etc;

Aluminum Corrugated Panel, with a variety of wave shapes, meets the requirements of all kinds of traditional or modern building design styles. It can fully reflect architects' creative designs so that it is always applied by them.

Characteristics:

- ◇ Various wave shapes are matched to all kinds of modern & creative building designs.
- ◇ Large panel with big length & width.
- ◇ Bended to arc naturally, with minimum radius of curvature in 12m.
- ◇ Beautiful appearance, and various colors for choice.
- ◇ Easy & fast to install
- ◇ A more cost efficient solution to roof & wall system



Aluminum Corrugated Panel

Aluminum(Metal) Corrugated Panel, is made from aluminum sheet(color coated steel plate, galvanized steel sheet and etc.), with rolling & cold pressing processes.

Application :

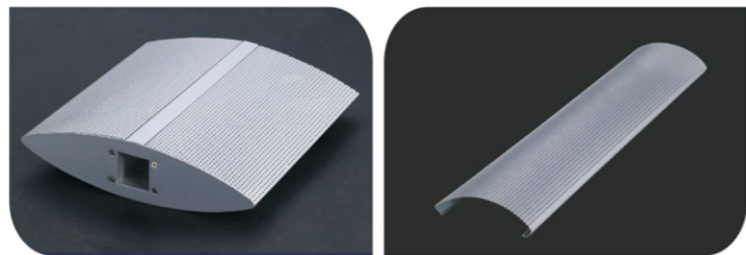
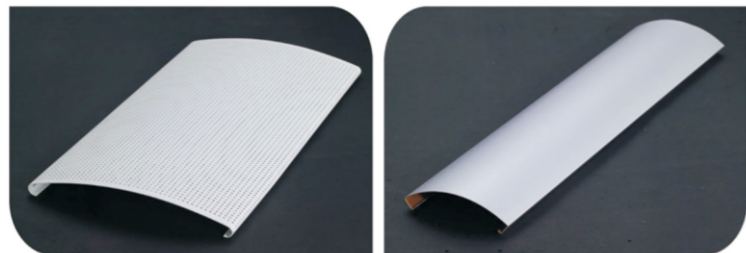
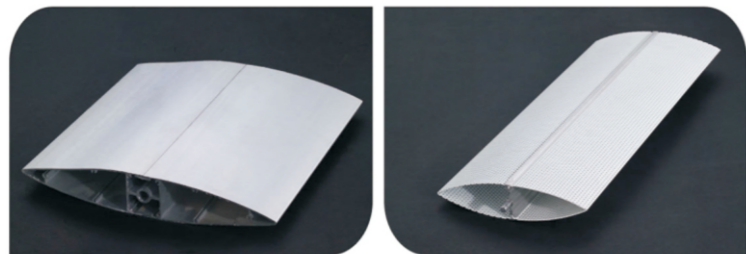
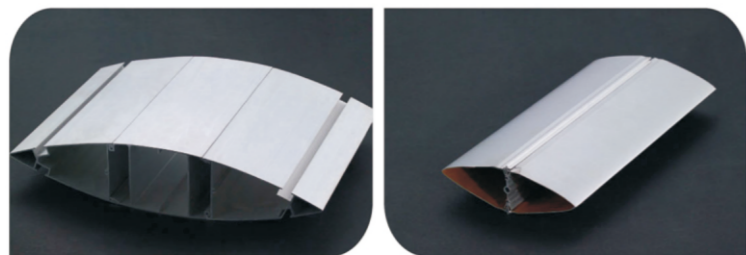
Industrial and civil buildings, warehouses, special buildings, large span steel structures, building roof, exterior & interior wall decoration, and etc.

Characteristics :

- ◇ Light weight, high strength.
- ◇ Good evenness: it changes the distortion & bending phenomenon on aluminum panel so that it can maintain its super evenness.
- ◇ Panel surface coated with superior weather resistance PVDF finish, and various colors for choice.
- ◇ Easy to cut, connect, bend, roll to arc and other processes.
- ◇ Fireproof, waterproof, 100% aluminum recyclable.

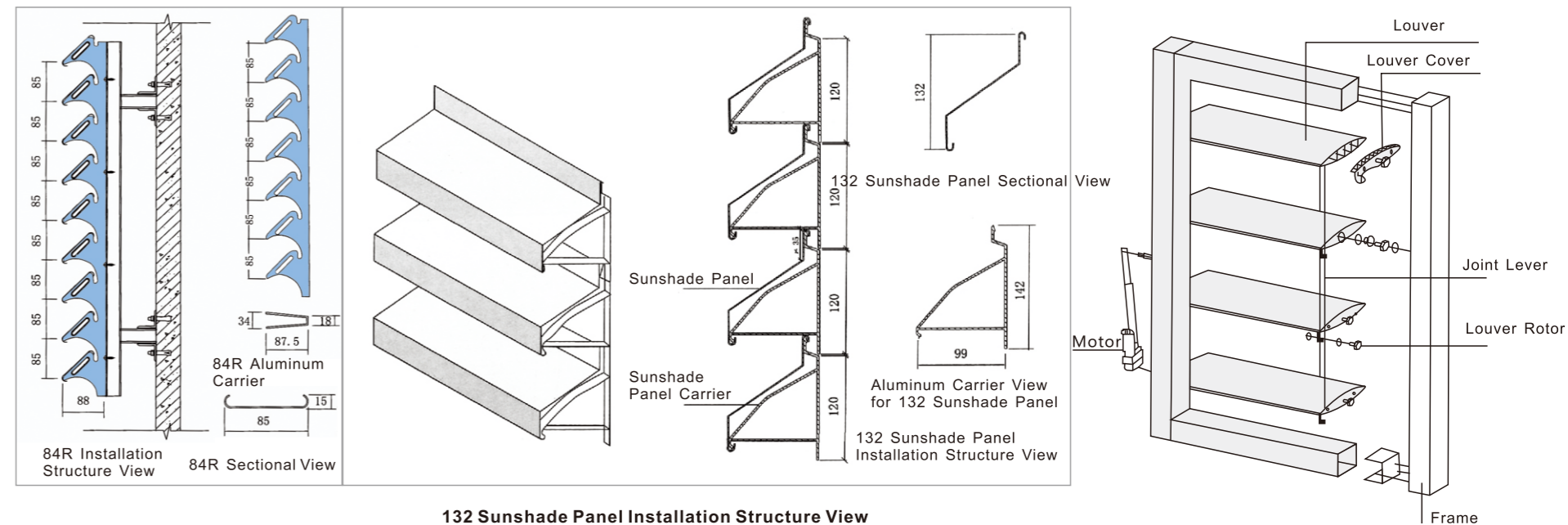






Sunshade Panel System

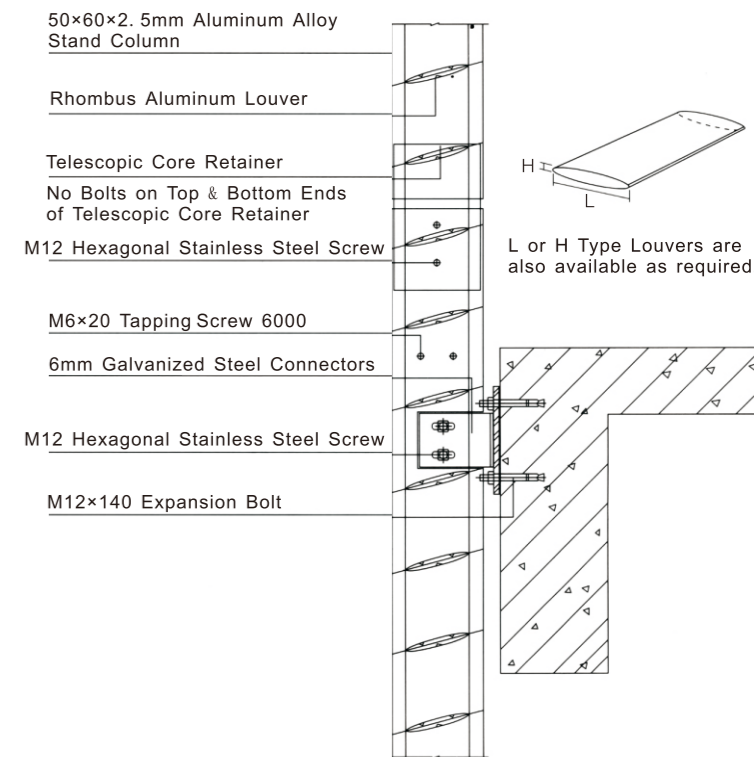
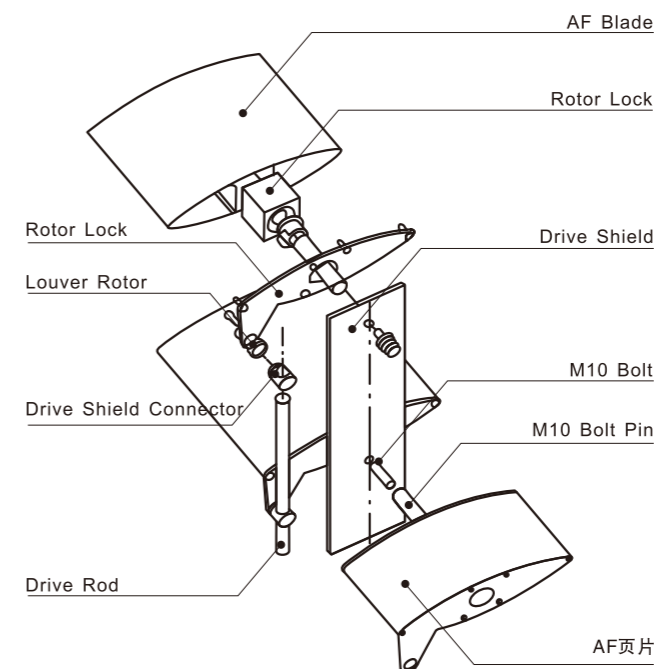
Sunshade panel consists of 0.6mm aluminum sheet and 0.8 or 1.0mm aluminum alloy carrier. It not only blocks sunlight to save energy, but also brings the monotonous exterior wall changeable beauty & fashion. It is widely used on facades of municipal buildings, exhibition halls, airports, stadiums and etc.



132 Sunshade Panel Installation Structure View



Installation View For Dynamoelectric Sunshade System



Rhombus Louver Node Diagram



Art Flowers Carved Exterior Wall Decoration Panel

After years of development, it becomes more and more competitive in Aluminum Panel industry. The company who wants to keep survival advantage must develop technical innovation constantly. With our advanced technology & innovation consciousness, OUSILONG broaden its technical development, and launch Art Flowers Carved Decoration Panel, various patterns of perforated Aluminum Ceilings, and etc. The maximum length of panel to perforate can be 6m. This series of panels & ceilings are commonly used for building exterior wall decoration, playing a part in sunshade, ventilation, beautifying building façade and adding life artistic effect.

