



  
**HyCOMB<sup>®</sup>**

CATALOG

2 0 1 9

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ABOUT   
**HyCOMB**<sup>®</sup>





HyCOMB™ products have been introduced to the market since 2000. Well regarded as lightweight, strong and fire-safe, our superior products are backed by projects from the construction industry, the automotive industry, the marine industry, and the lighting industry.



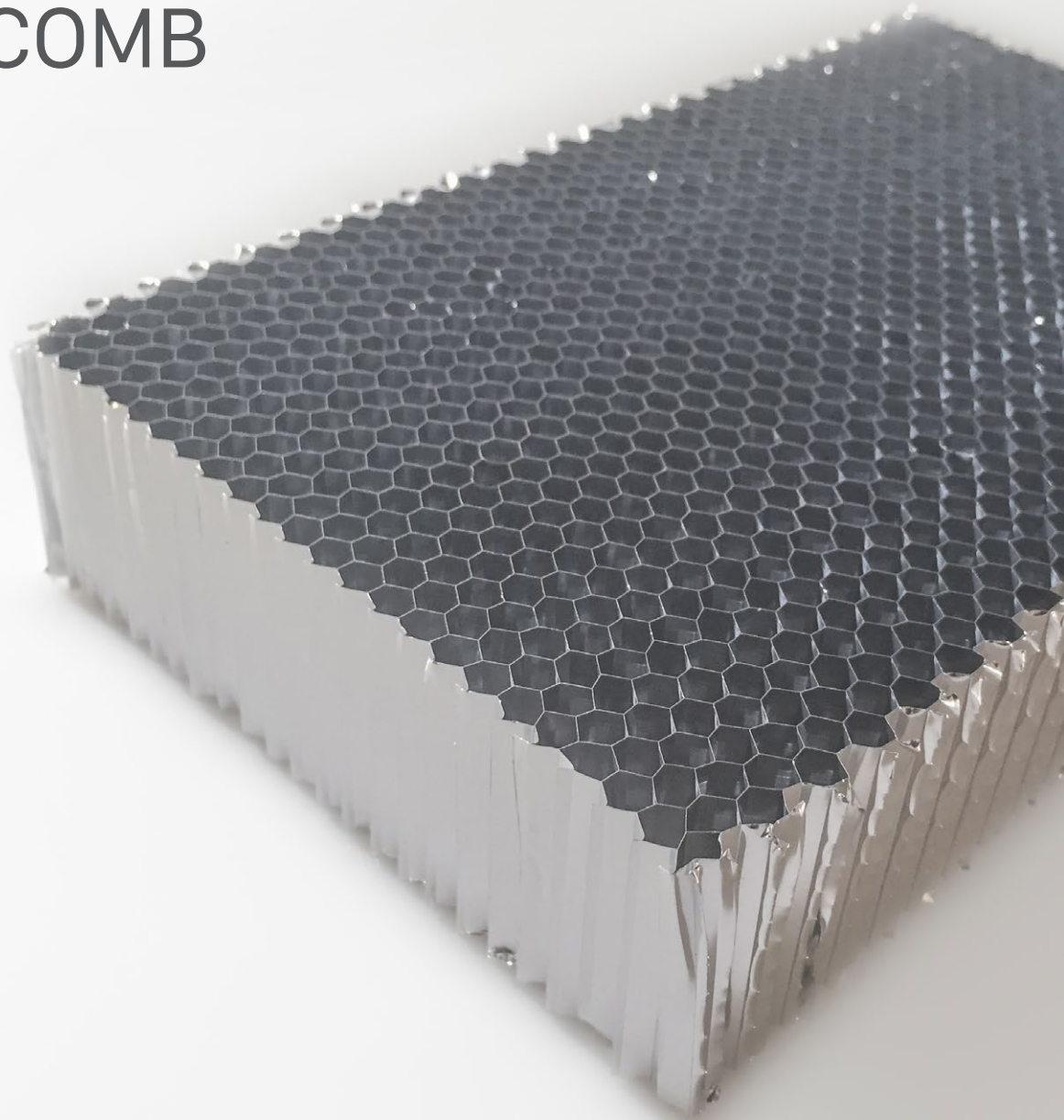
We are a leading supplier and industry innovator with more than 40 honeycomb-related patents. We manufacture from Aluminum Honeycomb Core to Stone Honeycomb Panels, all of which in our state of the art facility, with unparalleled Quality Assurance. Additionally, HyCOMB panels and their patented installation systems incorporate into a single solution package to fulfill customer requirements without extra concerns.

HyCOMB™ has delivered to the global markets for more than 16 years. Our primary markets are the USA, UK, Spain, Russia, Singapore, Indonesia, South Korea, and Japan. Our panels excel from exterior claddings in extreme weather zones, complex-shaped interior marble fittings to luxurious and lightweight marble honeycomb tabletops.





ALUMINUM  
HONEYCOMB  
CORE





## Definition

The Aluminum Honeycomb Core is formed by fully expanding a stack of heat-bonded aluminum foil. Our aluminum honeycomb core has very clear apertures and sharp edges, especially suitable for high-grade panels and other purposes. At HyCOMB®, our most popular honeycomb core products are micro-aperture honeycomb core and general-purpose aluminum honeycomb core.

(Patent No. ZL 2015 2 0231186.9)

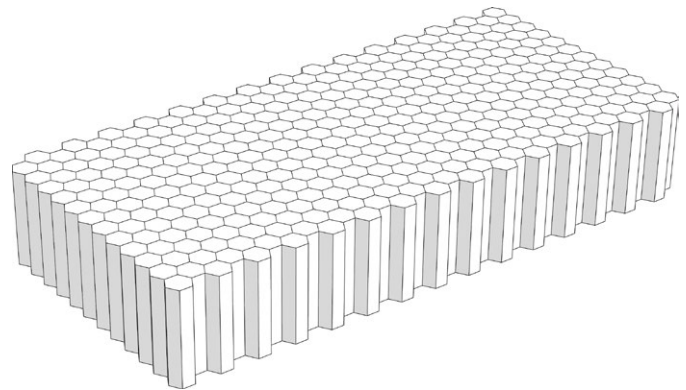
(Patent No. ZL 2015 2 0152169.9)

## Description

Materials: Alloy 3003 and 5052

Aluminum Honeycomb product range:

- expanded or unexpanded
- Full blocks or cut slices
- Perforated or unperforated.



## Performance Test

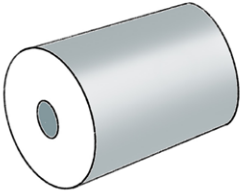
We run engineering tests for honeycomb core in HyCOMB Lab.

### Manufacturing Process

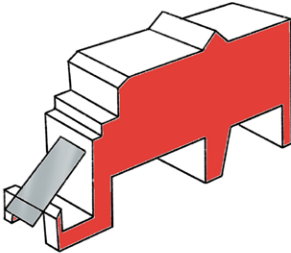
- 1. HyCOMB® Aluminum Honeycomb Core begins life as a roll of aluminum foil.
- 2. Foil goes through the printer, where adhesive lines with the desired width would be precisely printed. This process determines the honeycomb aperture size.

- 3. The smart cutter cuts the printed foils into size and then stack them into a neat pile. This process determines the consistency of the honeycomb shape as well as the length of the honeycomb core.
- 4. After this, the stacked aluminum sheets are heat-pressed to cure and bond the adhesive, together forming a block ready for further processing.
- 5. The block is then tailor-made into different thicknesses.

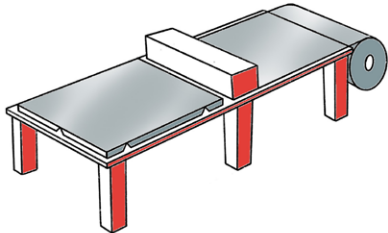
1.



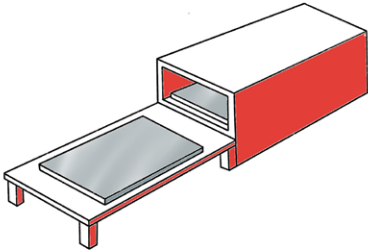
2.



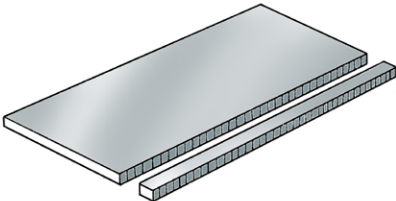
3.



4.

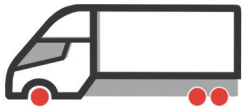


5.

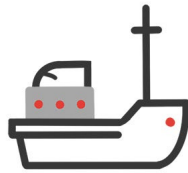


MANUFACTURING  
PROCESS OF  
HONEYCOMB CORE

## Aluminum Honeycomb Core Applications



1. Automotive



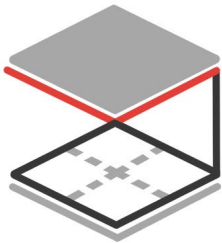
2. Marine



3. Wind Turbine



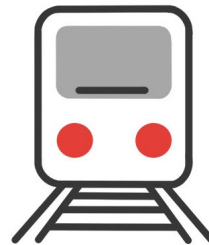
4. Quick Build House



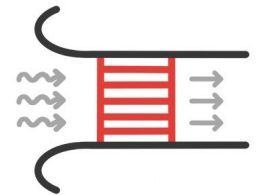
5. Machine Platform



6. Door



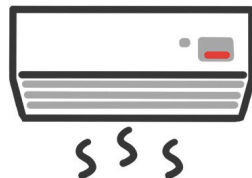
7. Rail



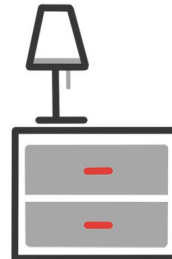
8. Wind Tunnel Inlet



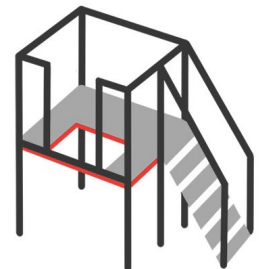
9. Lighting



10. Air Conditioning



11. Furniture



12. Ceiling and Flooring Panels

**Small Aperture Aluminum Honeycomb Core Specifications**

<b>Side Length of Grid</b>	a=0.6	a=1.0	a=1.5	a=1.83	a=2	a=2.5	a=3
<b>Cell Size (inch)</b>	1/25	1/16	1/10	1/8	1/8	1/6	1/5
<b>Launch Max Dimension (Length * Width)</b>	300*500	1000*1000	1200*1500	1600*2000	1600*1600	1600*2200	1600*2400
<b>Model of Aluminum Foil Thickness</b>	3003 0.02	3003 0.04, 0.03	3003 0.04, 0.03	3003 0.04, 0.06	3003 0.04, 0.03	3003 0.04, 0.03	3003 0.04, 0.06

**Standard Aluminum Honeycomb Core Specifications**

<b>Side Length of Grid</b>	a=4	a=5	a=6	a=7.5	a=10	a=12	a=15	a=20	a=30
<b>Cell Size (inch)</b>	1/4	1/3	3/8	1/2	3/4	4/5	1	11/8	2
<b>Launch Max Dimension (Length * Width)</b>	1600*3100	1600*4000	1600*4600	1600*6000	1600*7500	1600*9000	1600*12000	1600*15000	1600*20000
<b>Model of Aluminum Foil Thickness</b>	3003 0.04, 0.06	3003 0.04, 0.06	3003 0.04, 0.06	3003 0.04 - 0.06	3003 0.04 - 0.06	3003 0.04 - 0.06	3003 0.04 - 0.06	3003 0.04 - 0.06	3003 0.04 - 0.08



# ALUMINUM HONEYCOMB PANEL



## Definition

Aluminum Honeycomb Panel has initially been an advanced composite material in the Aerospace Industry. Due to its lightweight and durable properties, it has seen increased usage in modern architecture in recent years.

The top and bottom surfaces of the sandwich honeycomb panel are made of two sheets of aluminum alloy, while the center part of the sandwich panel is Aluminum Honeycomb Core. The honeycomb geometry gives the structure lightweight, rigidity and strength, perfect for building facades.

(Patent No. ZL 2015 2 1002816.4)

(Patent No. ZL 2011 2 0264657.0)

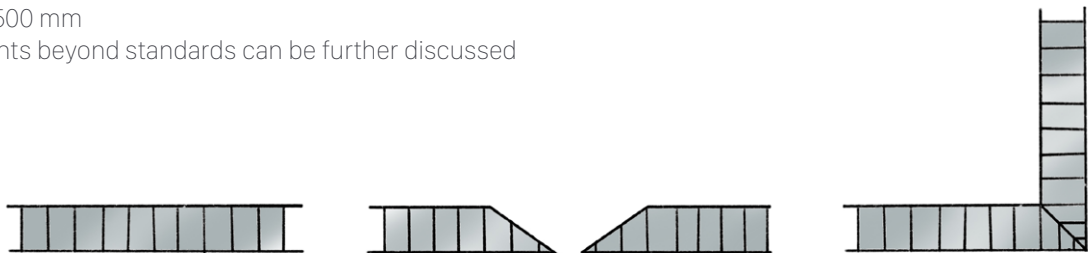
## Characteristics

- Lightweight
- Strong
- Fire-proof
- Flat and Large Profile
- High Impact Resistance
- High Compressive Strength
- High Wind Loading Strength
- Sustainable and recyclable
- Sound-insulation and Heat-insulation

## Technical Specifications

- Length: within 10000 mm
- Width: within 2000 mm
- Thickness: within 500 mm
- Special requirements beyond standards can be further discussed

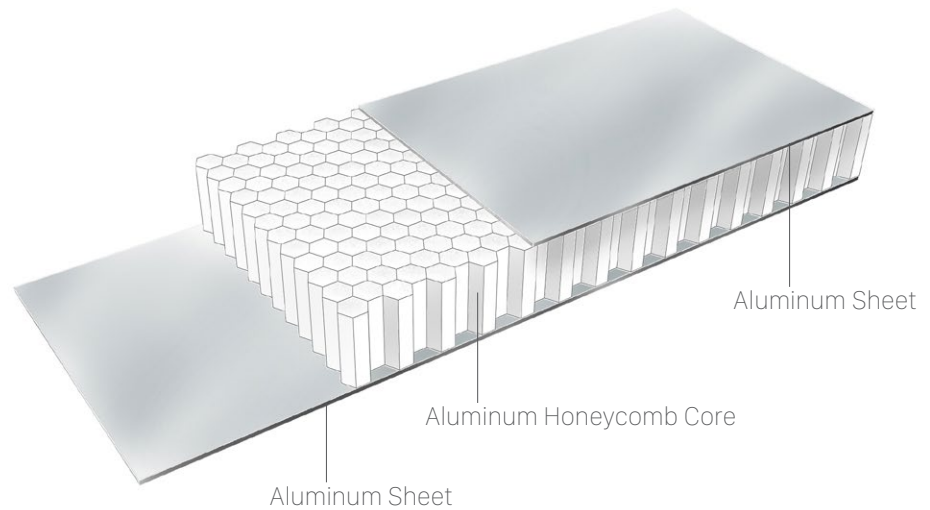
## Folding Types

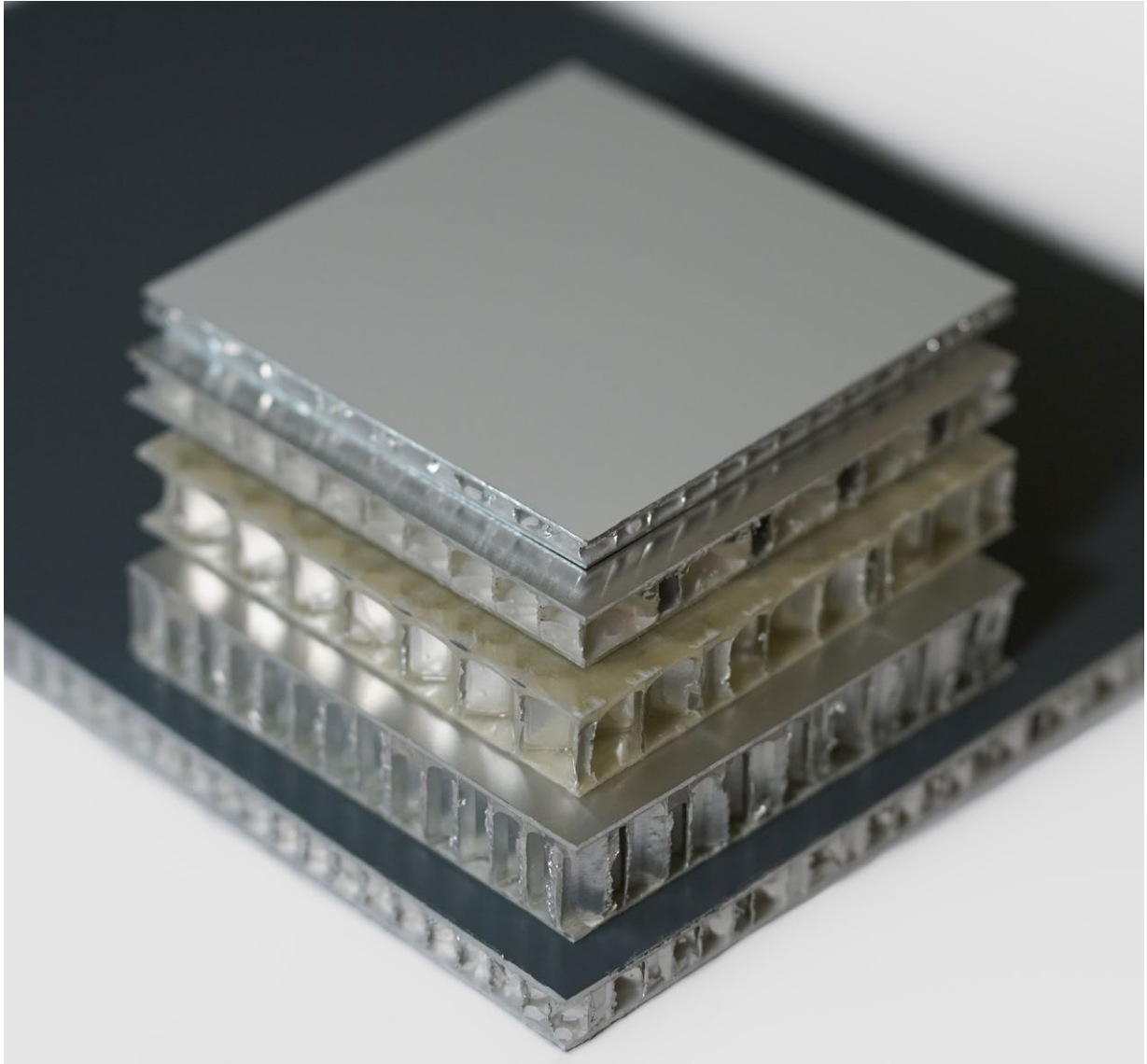


## Description

Combined with fire-resistant adhesive formulas, HyCOMB® Aluminum Honeycomb Panels has met strict fire ratings. After years of Industry-University Collaborations, they have gained quite a few certificates and patents, matching the trend of rising building fire regulations around the world.

We could provide a coating to the surface skin of panels, for protection, decoration and weather resistance. HyCOMB® panels have withstood all kinds of extreme weather conditions. From extreme cold in Russia to excessive heat in Qatar, and also the recent massive hurricanes in Florida (see our Certificate: NOA Miami-Dade wind loading test).



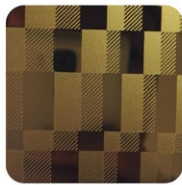




## Surface Choices

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### Stainless Steel



Mirror Etch Gold  
LM-85501



Satin Black Gold  
LM-85502



Sand Blast Bronze  
LM-85503



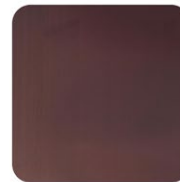
Hairline Green Bronze Gold  
LM-85507



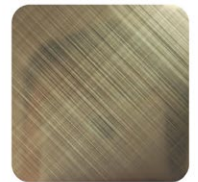
Hairline Red Bronze Gold  
LM-85504



Satin Rose Gold  
LM-85505

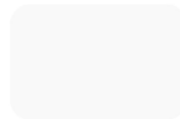


Hairline Coffee Gold  
LM-85506

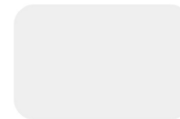


Cross-Grain Champagne Gold  
LM-85508

Solid Colors



Pure White  
LM-35101



Milk White  
LM-35102



Ivory White  
LM-35103



Red  
LM-35104



China Red  
LM-35105



Knight Orange  
LM-35106

New Colors



Hammer Brown  
LM-55301



Black Brushed  
LM-55302



Chameleon Blue  
LM-55303

Wood and Stone Colors



Light Teak  
LM-55401



Teak  
LM-55402



Cherry Plus  
LM-55403



White Travertine  
LM-55407



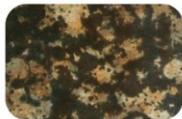
Yellow Travertine  
LM-55408



Ariston White  
LM-55409



G682 Granite  
LM-55404



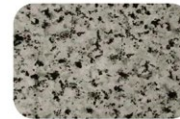
Black Spot Granite  
LM-55405



Grey Crystal  
LM-55406



Tree Branch Vein  
LM-55410



G603 Granite  
LM-55411



Black Crystal  
LM-55412

Metallic Colors



Silver Metallic  
LM-35201



Champagne Silver Metallic  
LM-35202



Deep Gray Silver  
LM-35203



Deep Gray  
LM-35204



Black Galaxy  
LM-35205



Sparkling Yellow  
LM-35206

## Aluminum Honeycomb Panel Data Sheet

Items	Test Results	Tested By	Report Number
ASTM C297/C297M-04 (2010) Accelerated aging resistant tes	After 60 cycles of -40-C-8092, the flatwise tensile strength is 2.36MPa	SGS	GZMR120718180
ASTM C67-11 / ASTM C297-10 Freeze/thaw resistance	After 100cycles of freezing and thawing, the flatwise tensile strength mean value is 2.5MPa	SGS	GZCCM130500366-03
ASTM C880/C880M-09 Flexural strength	Dry condition Standard deviation 22.7MPa. Wet condition standard deviation 18.9MPa	SGS	GZCCM130600366-01
ASTM B117- II Salt spray test	Visible discoloring, but no other visual change	SGS	GZCCM130600366-07
SO 10545-8 : 1994 Coefficient of linear thermal expansion	Aluminum: $\alpha_1 = 19.5 \times 10^{-6}C$ , $\alpha_2 = 20.9 \times 10^{-6}C$ Composites: $\alpha_1 = 12.9 \times 10^{-6}C$ , $\alpha_2 = 11.1 \times 10^{-6}C$	SGS	GZCCM130603366-05
ASTM E84-12 standard test method for surface burning characteristics of building materials	Class A	SGS	GZCCM1306C0439-01

More ASTM test reports available upon requests

## Main Specification of Our Aluminum Honeycomb Panel

Production Name	Specifications	Application
Aluminum Honeycomb Curtain Wall Panel	10mm, 15mm, 20mm, 25mm In common use thickness	Applicable as direct installation on interior and exterior wall body
Aluminum Honeycomb Panel	Standard 1200*2440, 1000*2000	Applicable as single and double side composite slab, ceramic and furniture plate
Aluminum Fiber Glass Honeycomb Panel	Big expenditure	Applicable as single and double side composite slab, ceramic and furniture plate
Stone Emulation Honeycomb Panel	Standard 1200*2440, 1000*2000 Thickness 6mm/10mm, 15mm/20mm	Applicable as partition panels in the interior and exterior decoration of a building

Items	Test Results	Tested By	Report Number
Flatwise tensile strength	Average value:2.73MPa Minimum value:2.56MPa	CTC	20131102031
Flatwise compressive	2.44MPa	CTC	20131102031
Flatwise compressive elastic modulus	122.4MPa	CTC	20131102031
Flatwise shear strength	1.16MPa	CTC	20131102031
Flatwise shear compressive	8.03MPa	CTC	20131102031
Flexural strength	138.5MPa	CTC	20131102031
Flexural rigidity	$1.27 \times 10^9 \text{N} \cdot \text{m}^2$	CTC	20131102031
Shearing rigidity	$3.08 \times 10^5 \text{N}$	CTC	20131102031
Climbing drum peel strength	Average value: 106N·mm/mm Minimum value: 93N·mm/mm	CTC	20131102031
Bearing capacity of fittings	3.6kN	CTC	20131102031
Anti-freezing	Appearance: no abnormalities average decrease percentage of flatwise adhesive strength : 12%	CTC	20131102031
Temperature difference resistance	Appearance: no abnormalities average decrease percentage of flexural rigidity : 16%	CTC	20131102031
Hot water resistance	Appearance: no abnormalities average decrease percentage of flatwise adhesive strength 11%	CTC	20131102031

### Industry Standards of Aluminum Honeycomb Panel

NO.	National Industry standard	Standard No.	Issue Date
1	Stone honeycomb panel for Building Decoration	JG/T 328-2011	2011-12-1
2	Aluminum honeycomb panel for Façade Wall	JG/T 334-2012	2013-1-1
3	Aluminum honeycomb panel for General Decoration	JC/T 2113-2012	2013-6-1
4	Aluminum corrugated panel	JC/T 2187-2013	2013-9-1



STONE  
HONEYCOMB  
PANEL



## Definition

Stone Honeycomb Panel is a type of advanced stone veneer cladding. It consists of a natural stone surface and a honeycomb backing panel to reduce weight, and to improve physical properties.

## System Composition

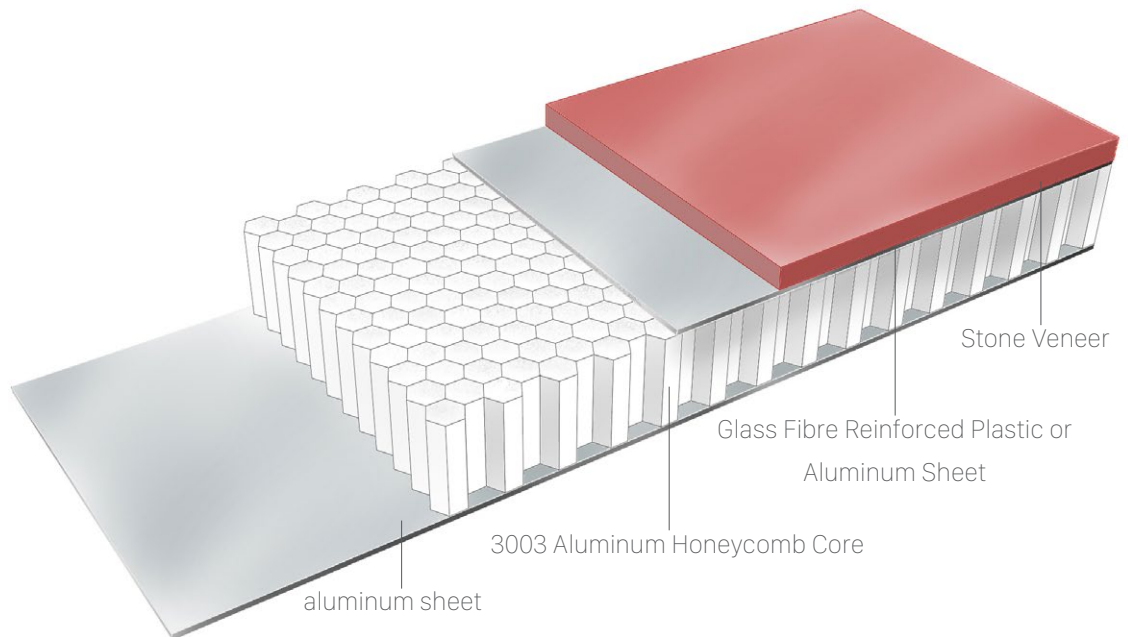
- Surface: 1-10 mm stone veneer.
- Backing panel: 5-20 mm Aluminum Honeycomb Panel.
- Total Thickness: 6 - 30 mm.
- Max panel size: 1600\*3200 mm (limited by stone size).
- Adhesives: custom-made Aerospace Grade Epoxy Resin - excellent performance under Freeze-and-Thaw Test and Aging Test
- Anchoring Bracket: aluminum or stainless steel

## Advantages

Lightweight, high strength, impact-resistant, flat, and extra-large profile, HyCOMB™ Stone Honeycomb Panel possesses a few significant advantages over conventional stone slab claddings.

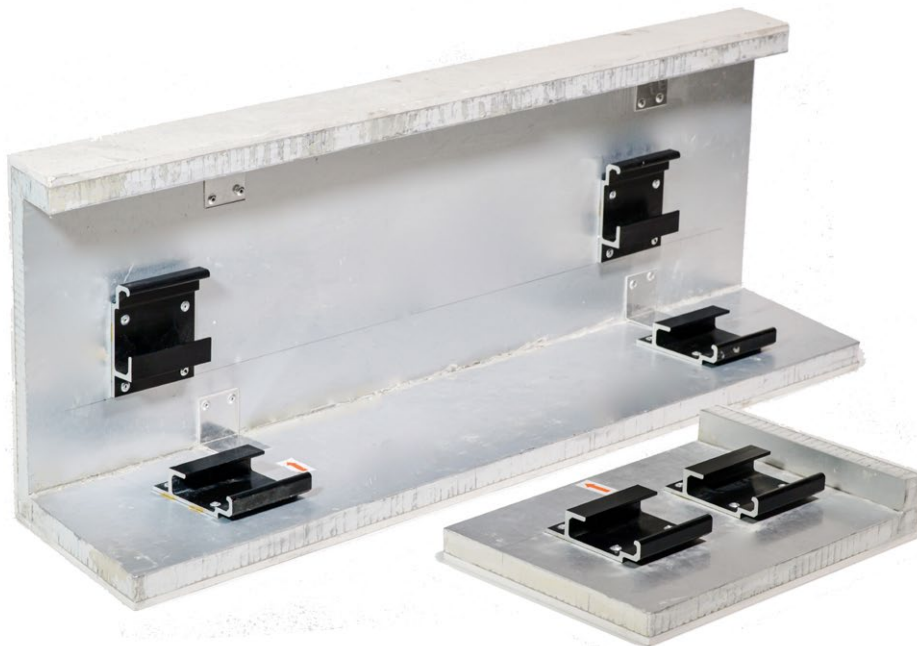
The honeycomb backing allows it to be also fire-resistant, anti-corrosion, anti-aging, and easy-to-install. Together with our patented quick-install anchoring system, HyCOMB™ Stone Honeycomb Panel cuts down quite a proportion of the project time and costs. Perfect for modern interior and exterior building facade, as well as ceiling and flooring.

By using a thin natural stone surface, Stone Honeycomb Panel reduces the cost of using expensive marbles and granite. It allows higher surface flatness, larger panel size, and also higher color consistency. Excellent for architectural designs.



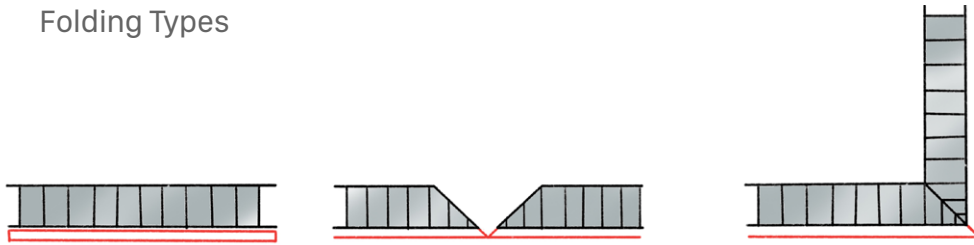
## Comparison of Stone Honeycomb Panels with Traditional Stone Slabs

	Stone Honeycomb Panels	Traditional Stone Slabs
Weight Comparison	30mm Totalthickness 75kg/ m <sup>2</sup> Weight	20mm Totalthickness 15kg/ m <sup>2</sup> Weight
Performance Comparison	Unable to bend	Bendable (pressing 30mm bent not crack)
Installation	Big expenditure	Small expenditure (<100yuan/ m <sup>2</sup> )
Safety Performance	Cracking in impact-resistant test	Only with punctate cracking
Material Availability	Useful material output from one cubic	80-100 m <sup>2</sup>
Maximum Size	≤600*600	Able to reach 1600*3200





## Folding Types



## Curved Stone Honeycomb Panel

Our patented Ultra-Thin Natural Stone Honeycomb Panel has a huge potential for both interior and exterior applications. Only limited by imagination. Curvature inwards or outwards with a minimum curvature radius of 600 mm, for the majority of stones. Some stones have larger minimum curvature radius up to 1000 mm.

(Patent No. ZL 2010 2 0110829.4)

(Patent No. ZL 2010 1 0108100.8)





STONE HONEYCOMB PANEL

## Surface Choices

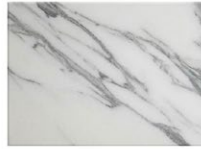
Hundreds of choices of marble, granite, limestone, and faux stone.

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Calacatta White  
LM-S5801



Arabescato White  
LM-S5802



Ariston White  
LM-S5803



Volakas White  
LM-S5804



Aran White  
LM-S5805



Crema Marfil  
LM-S5806



Sunny Beige  
LM-S5807



Ivory White  
LM-S5808



White Travertine  
LM-S5809



Yellow Travertine  
LM-S5810



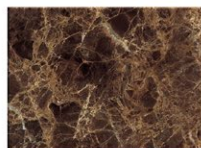
Portor Gold  
LM-S5811



Yellow Wood Grain  
LM-S5812



Light Emperador  
LM-S5813



Dark Emperador  
LM-S5814



Dora Cloud Grey  
LM-S5815



Nero Marquina  
LM-S5816



Shandong Sesame white  
LM-S5817



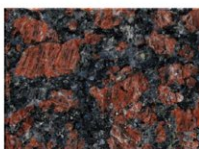
Bethel White  
LM-S5818



Baltic Brown  
LM-S5819



Giallo California  
LM-S5820



Tan Brown  
LM-S5821



Blue Pearl  
LM-S5822



Black Galaxy  
LM-S5823



Shanxi Black  
LM-S5824

## Stone Honeycomb Panel Data Sheet

Items	Test Results	Tested By	Report Number
Flatwise tensile strength	Average value:2.73MPa Minimum value:2.56MPa	CTC	20131102031
Flatwise compressive	2.44MPa	CTC	20131102031
Flatwise compressive elastic modulus	122.4MPa	CTC	20131102031
Flatwise shear strength	1.16MPa	CTC	20131102031
Flatwise shear compressive	8.03MPa	CTC	20131102031
Flexural strength	138.5MPa	CTC	20131102031
Flexural rigidity	$1.27 \times 10^9 \text{N}\cdot\text{m}\cdot\text{m}^2$	CTC	20131102031
Shearing rigidity	$3.08 \times 10^5 \text{N}$	CTC	20131102031
Climbing drum peel strength	Average value: 106N·mm/mm Minimum value: 93N·mm/mm	CTC	20131102031
Bearing capacity of fittings	3.6kN	CTC	20131102031
Anti-freezing	Appearance: no abnormalities average decrease percentage of flatwise adhesive strength : 12%	CTC	20131102031
Temperature difference resistance	Appearance: no abnormalities average decrease percentage of flexural rigidity : 16%	CTC	20131102031
Hot water resistance	Appearance: no abnormalities average decrease percentage of flatwise adhesive strength 11%	CTC	20131102031

Items	Test Results	Tested By	Report Number
ASTM C297/C297M-04 (2010) Accelerated aging resistant tes	After 60 cycles of -40-C-8092, the flatwise tensile strength is 2.36MPa	SGS	GZMR120718180
ASTM C67-11 / ASTM C297-10 Freeze/thaw resistance	After 100cycles of freezing and thawing, the flatwise tensile strength mean value is 2.5MPa	SGS	GZCCM130500366-03
ASTM C880/C880M-09 Flexural strength	Dry condition Standard deviation 22.7MPa. Wet condition standard deviation 18.9MPa	SGS	GZCCM130600366-01
ASTM B117- I I Salt spray test	Visible discoloring, but no other visual change	SGS	GZCCM130600366-07
SO 10545-8 : 1994 Coefficient of linear thermal expansion	Aluminum: $\alpha_1 = 19.5 \times 10^{-6}C$ , $\alpha_2 = 20.9 \times 10^{-6}C$ Composites: $\alpha_1 = 12.9 \times 10^{-6}C$ , $\alpha_2 = 11.1 \times 10^{-6}C$	SGS	GZCCM130603366-05
ASTM E84-12 standard test method for surface burning characteristics of building materials	Class A	SGS	GZCCM1306C0439-01



**PORCELAIN**  
**HONEYCOMB**  
**PANEL**





## Definition

Porcelain Honeycomb Panel is a type of tailor-made solution for super-large format and ultra-thin porcelain cladding. It consists of a super-thin porcelain surface and a durable honeycomb backing panel to allow absolute flatness, reduce weight, and to improve physical properties.

(Patent No. ZL 2015 2 0555437.1)

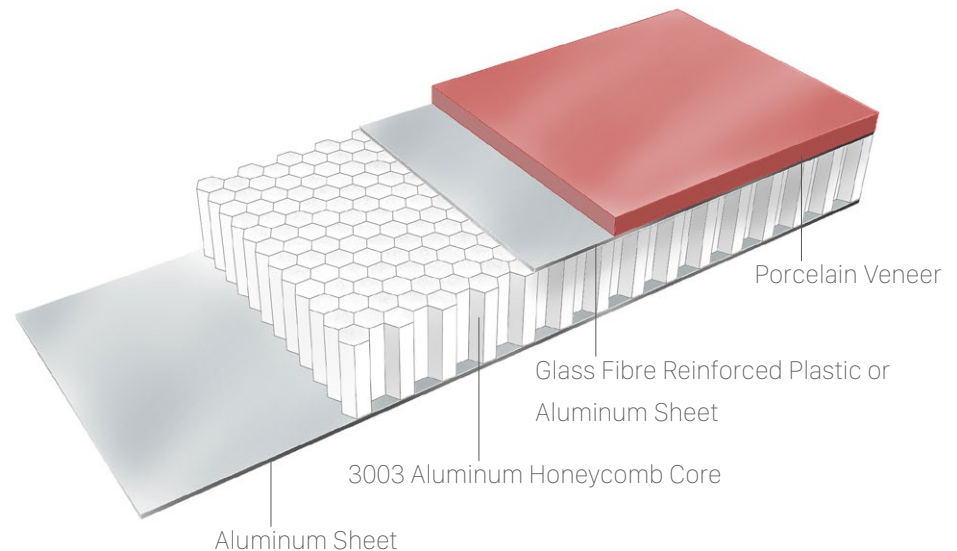
## Description

Lightweight, high strength, impact-resistant, flat, and extra-large format. HyCOMB™ Porcelain Honeycomb Panel together with a patented dry-fix anchoring system, could cut down the installation costs and project time significantly. Perfect for exterior applications.

The aluminum honeycomb backing allows it to be also fire-resistant, anti-corrosion, and anti-aging — an excellent choice for modern interior and exterior building facade, as well as ceiling and flooring.

## System Composition

- Surface: 3-9 mm Porcelain.
- Backing panel: 5-21 mm Aluminum Honeycomb Panel.
- Total Thickness: 8 - 30 mm.
- Maximum panel size: 1500\*3000 mm.
- Adhesives: custom-made Aerospace Grade Epoxy Resin (maintains excellent performance under Freeze-and-Thaw Test and Aging Test).
- Anchoring System: aluminum or stainless steel.



Surface Choices

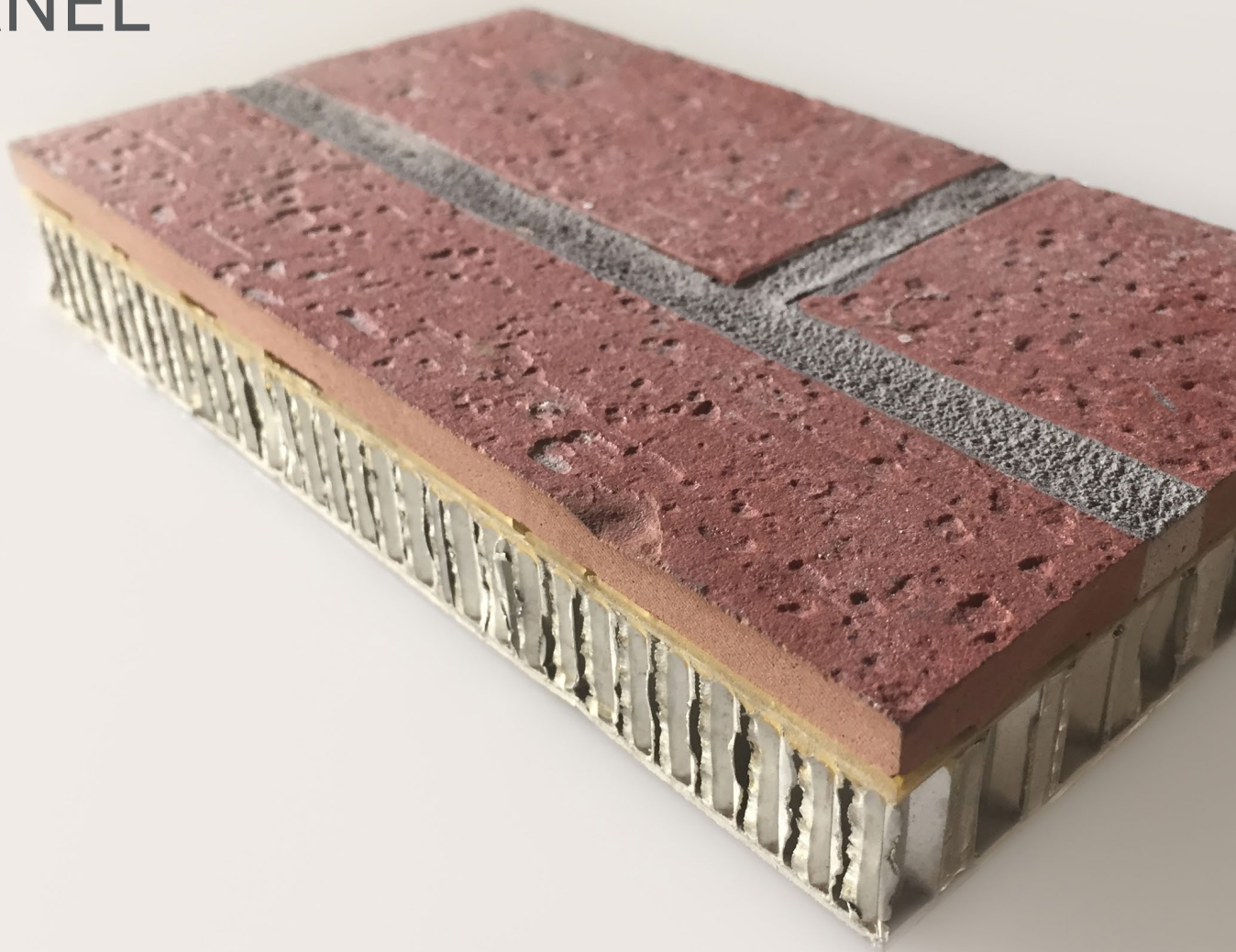




BRICK

HONEYCOMB

PANEL



## Definition

In addition to natural stone, HyCOMB® also offers several innovative products. Introduce our newest product— Lightweight Brick Honeycomb Panels.

Designed specifically for the modern environment, Brick Honeycomb Panels need much less raw material to produce, they could help reduce the environmental impact of wall cladding. These patented lightweight panels still give you the same beautiful look of real bricks, but with a much simpler installation process, without all the headaches.

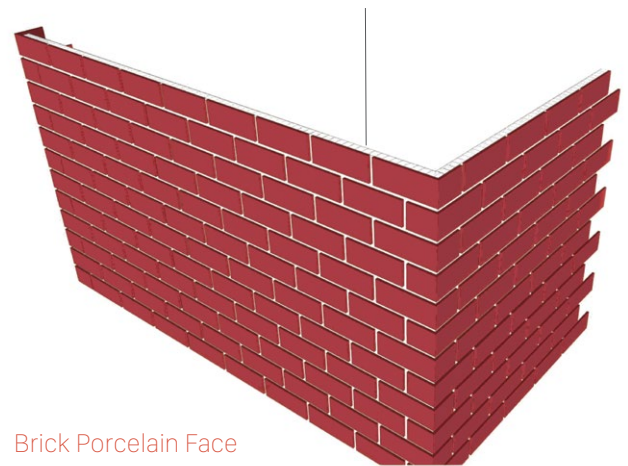
(Patent No.: ZL 2015 2 0555437.1)

## Applications

You can use HyCOMB® 's lightweight brick honeycomb panels anywhere to achieve the stylish look of actual bricks: exterior cladding, interior walls, and even quick-installation houses.

- Color resistant to fading, staining or being damaged by the sun/weather - ideal for exterior cladding
- Weigh only a fraction of real bricks - flexible structural demand for both interior or exterior applications
- Impact-resistant and high wind-loading allows them to be used in extreme climate zones
- Lightweight, easy to install system requires no additional reinforcement of the existing structure
- Waterproof, fire-resistant (A2) and heatproof
- Looks just like real brick

Honeycomb Panel Backing +  
Installation Systems



Brick Porcelain Face

## Benefits Over Traditional Bricks

Compared to the time it takes to install an ordinary brick, our lightweight brick honeycomb panels offer superior speed and convenience. Not only that, they also help reduce installation costs, while still providing excellent strength. Other benefits over traditional brick include:

- 60 times greater impact strength than 3 cm granite slab
- Unique option for corner piece
- Easy installation - fewer men more panels shorter time
- Reduced weight - less expensive to transport
- High resistance to humidity
- Excellent thermal insulation
- High resistance to corrosion
- Non-combustible
- Sound absorption
- Fully tested for acid and freeze / thaw
- High flexural strength - ideal for seismic areas
- high wind load capacities
- Help to gain green certifications - LEED/GREEN/Energy Star

## Specification

BRICK HONEYCOMB PANEL

Surface: 6 mm brick porcelain

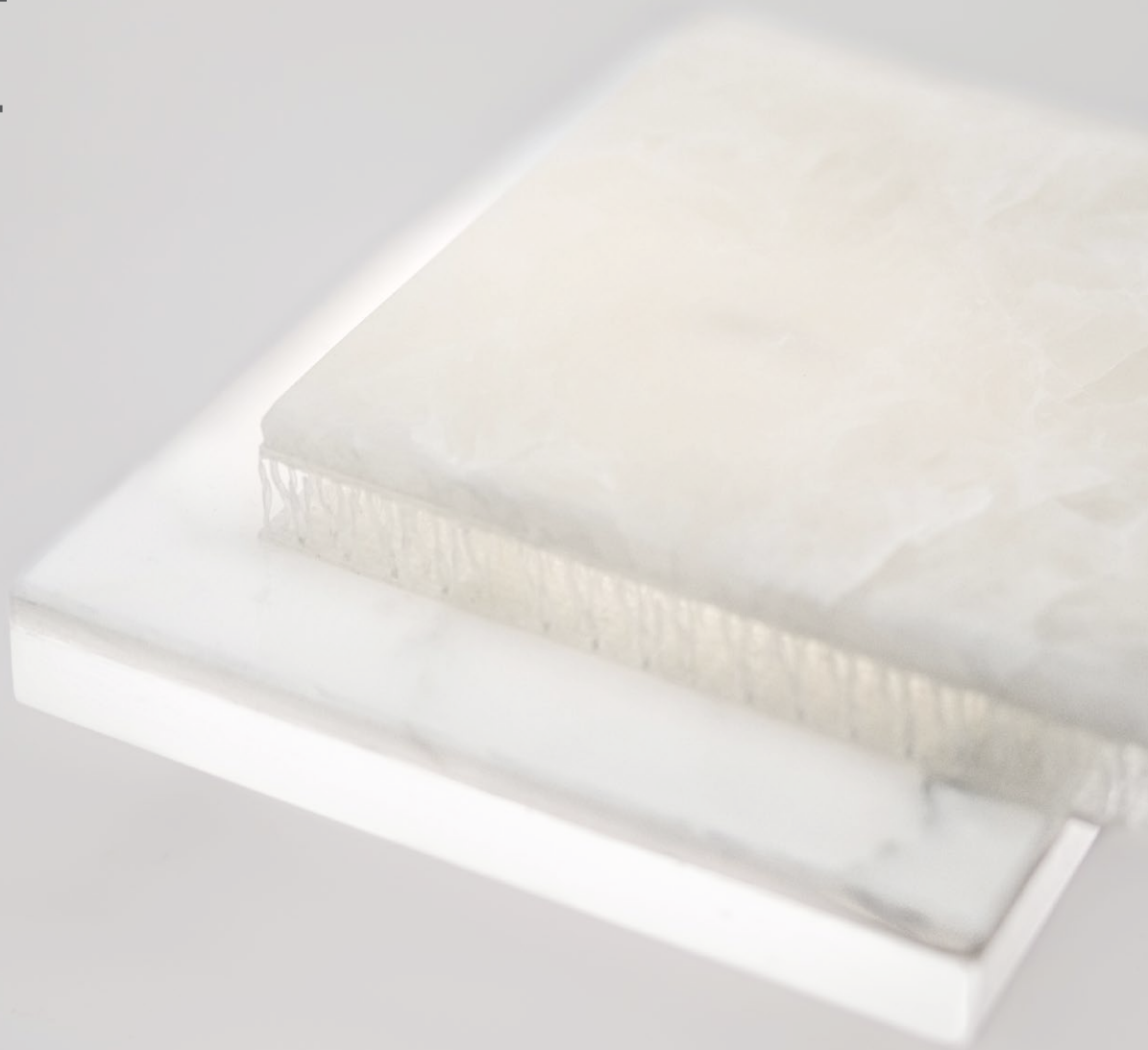
Backing: 10-30 mm honeycomb panel

Sizes up to 1200 mm \* 2400 mm





TRANSLUCENT  
STONE  
PANEL





## Definition

HyCOMB™ Translucent Stone Panel provides a unique look for backlit designs. By laminating a thin natural stone veneer with a piece of high-transmittance backing panel, our translucent stone panels are also very durable and easy to use. Combining with an arsenal of stone colors and finishes, they allow versatile applications.

## Applications

HyCOMB™ translucent natural stone panels are suitable for a significant number of applications. Whether it is interior or exterior, or whether it is flooring or ceiling.

They are particularly popular for bar claddings, bathrooms and reception tables, and many more. They give a stunning impression from a distance and impressive details of natural stone up close.

## Backing Choices

- Lightweight 3D Fiber
- Aston Glass

## Stone Choices

HyCOMB™ offers translucent panels with customizable surface finishes to a large variety of stones:

- Marble
- Agate
- Onyx
- Granite

## Benefits

Comparing to solid stone, the use of 3D fiber or glass backing allows backlit light to permeate more evenly and intensely through the natural patterns and colors of natural stones. It creates a more impressive viewing experience.

Moreover, both backing options make the panel more durable, easier to install, and more robust. It is significantly more lightweight in the case of 3D fiber backing.

Stronger, lighter, and easy-to-install translucent stone panel can save you time and cost on structural reinforcement and project installation.





**STONE**

**HONEYCOMB**

**TABLETOP**



## Definition

HyCOMB™ Stone Honeycomb Tabletop is the combination of our industry-leading Stone Honeycomb Panel with craftsmanship. It is an innovative alternative to the average stone tabletop, with 70% reduction in weight, 60 times increase in impact resistance, it is also bendable with 600 mm min curvature (check Curved Stone Honeycomb Panel).

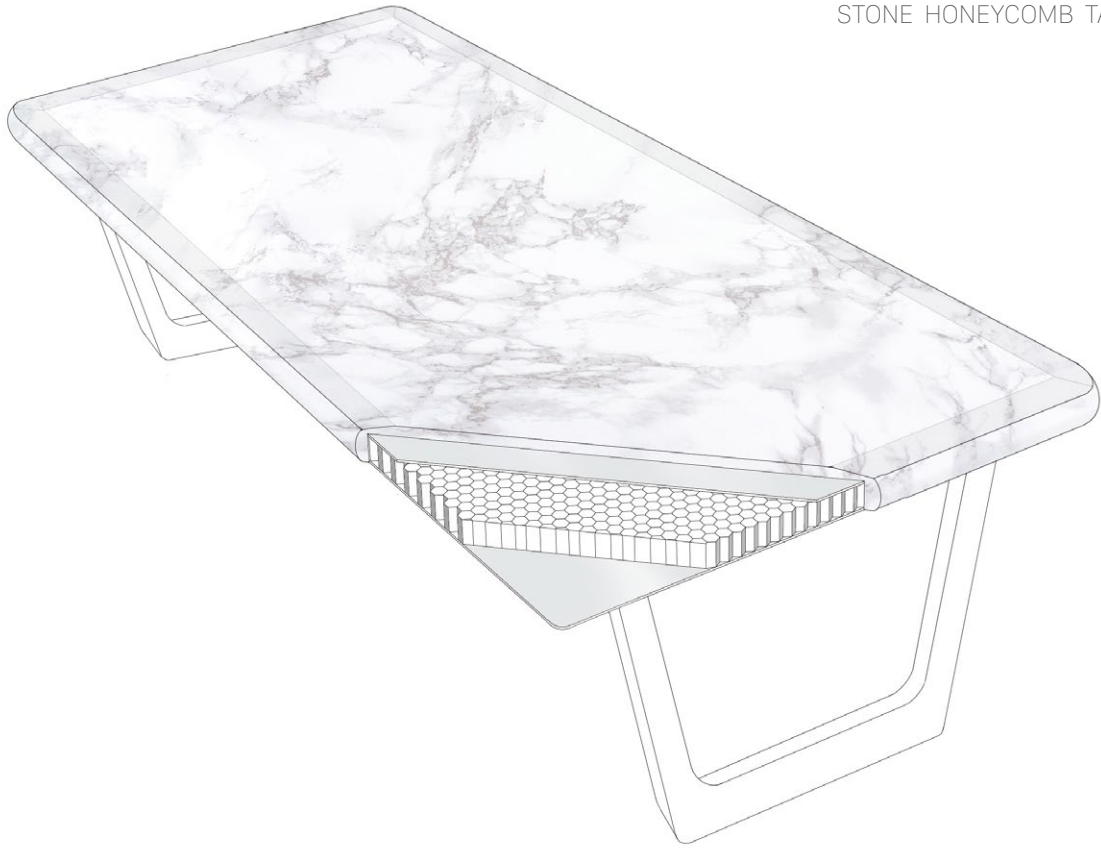
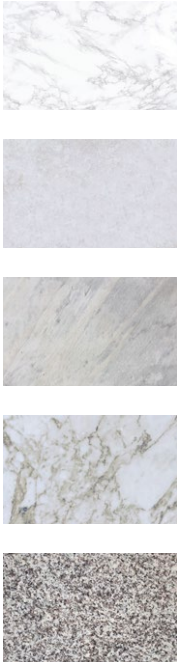
## Description

This method combines the look and touch of natural stone with lightweight and strong properties of Aluminum Honeycomb Panels, first pioneered by the aerospace industry.

The honeycomb structure is one of the most efficient geometries that exist in nature, achieving very high specific strength with minimal weight and minimal material cost (Wikipedia).

HyCOMB™ Stone Honeycomb Tabletop achieves an extraordinary flatness, an ideal property for furniture and related designs.





## Benefits

- Low weight
- Excellent strength
- Cost-efficient due to less raw materials
- hence also environmentally friendly!
- 60 times impact resistance
- High resistance to corrosion
- Large size (max 2000 mm\* 6000 mm one piece)
- Non-combustible (A2 class)
- Sound Insulation
- Bendable (exclusive at HyCOMB®)



TESTINGS  
CERTIFICATIONS  
and  
INSTALLATION





## Summary

At HyCOMB® we follow a strict set of quality control protocols, to ensure quality production independent of the quantity and the complexity of the project.

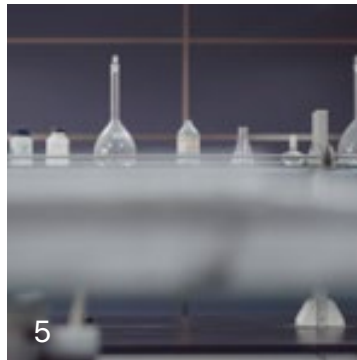
Over the years, HyCOMB® has kept on track with numerous international standards, gained a dozen of international certifications, and over 40 patents. HyCOMB® panels have excelled major construction-related tests:

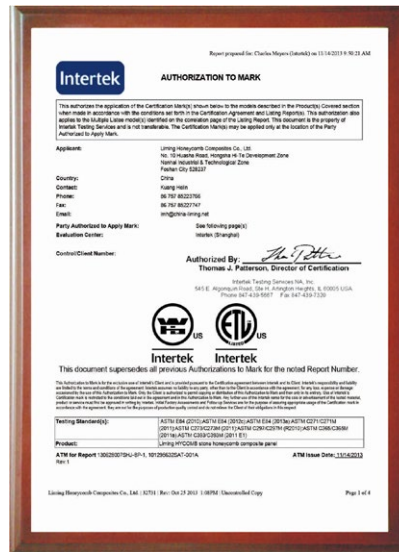
- Wind Loading Test - NOA Miami Dade County
- Fire Safety Tests - BS476, WH
- Accelerated Aging Test - Warnock Hersey (WH) Certificate
- Freeze and Thaw Test - ATSM C67-11
- Various domestic tests and standards

## Quality Control

Every HyCOMB® panel is manufactured under ISO 9001:2015 quality management system. Our QC can be explained briefly as:

1. Inspection of raw materials  
Color-match and prevent material errors
2. Quality control in production  
Correct or discard production errors
3. Final check before delivery  
Last pass to eliminate human errors
4. Quality control team  
Consistent knowledge learning
5. HyCOMB® Lab  
Random samples benchmark

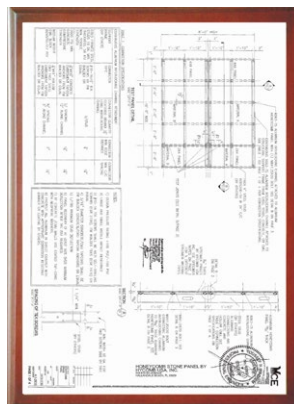
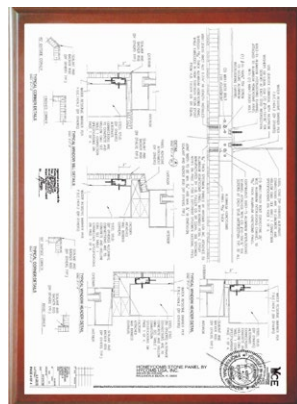
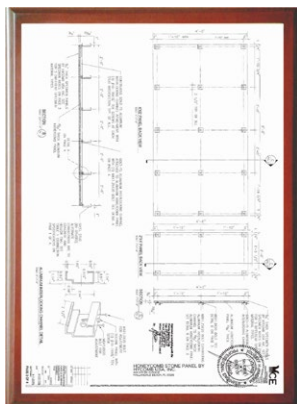
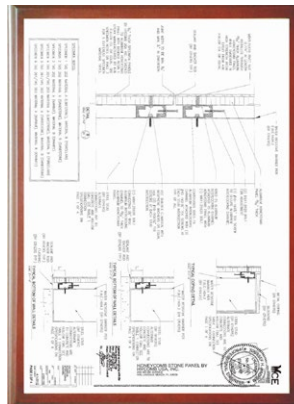
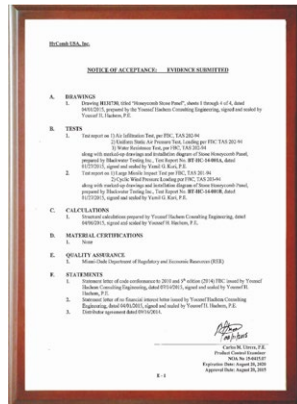
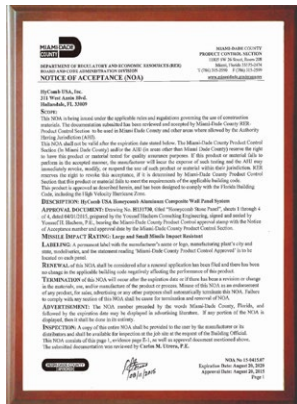




Miami Dade County, Florida.

NOA No. 15-0415.07

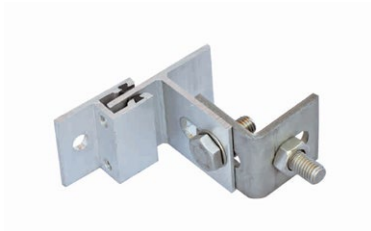
A certificate for the approval of HyCOMB® Panels Systems in High Velocity Hurricane Zone (HVHZ). It is one of the most stringent code to meet for exterior cladding, covering Large Missile Impact Resistance, system's resistance to hurricane wind loading, and various other



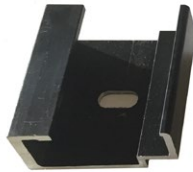
## Installation Systems

HyCOMB® Panels Systems has three major Anchoring Systems:

1. H Anchoring System - Interior Fit-out (Patent No. ZL 2009 2 0269945.8)
2. G Anchoring System - Exterior Cladding (Patent No. ZL 2015 3 0501825.7)
3. C Anchoring System - Exterior Cladding (Patent No. ZL 2017 2 1204109.2)
4. Z Anchoring System - Bathroom / Liftcar Walling



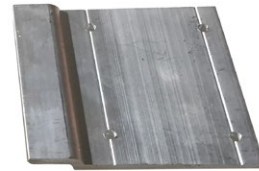
H



G



C



Z



H Clip - Optimal to Achieve Very Flat Surface



G Clip - Robust Exterior Cladding US



C Clip - Robust Exterior Cladding UK



Z Clip - Perfect for Tight Spaces






# HyCOMB<sup>®</sup>

## PROJECTS

St Edward

A low-angle photograph of a modern building's exterior. The facade is composed of light-colored, rectangular limestone honeycomb panels arranged in a grid pattern. Large, dark-framed windows are interspersed within the grid. A street lamp is visible in the lower-left foreground. The sky is a pale, overcast blue.

Project: Kensington Row Phase 1

Location: London, UK

Featured Product: Limestone Honeycomb Panels

Composition: 6 mm Portuguese Beige Limestone Honed with 19mm  
Aluminum Honeycomb Panel Backing

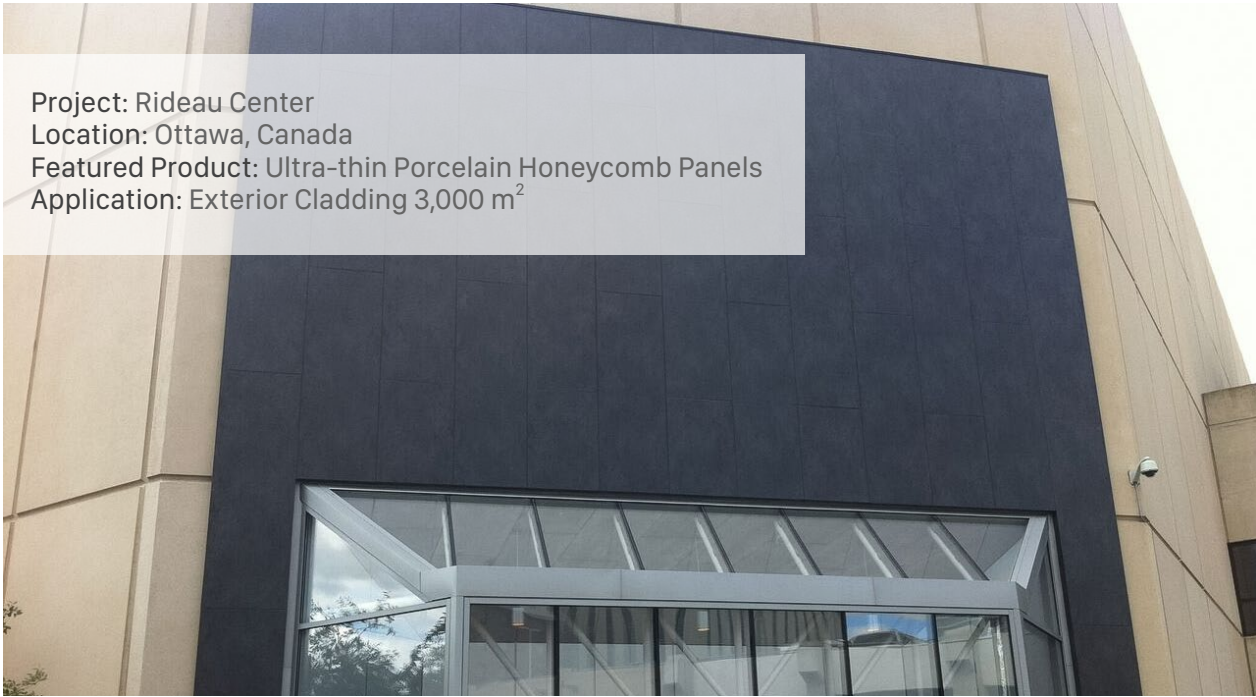
Application: Exterior Cladding 15,000 m<sup>2</sup>

Anchoring System: C-shape





Project: Rideau Center  
Location: Ottawa, Canada  
Featured Product: Ultra-thin Porcelain Honeycomb Panels  
Application: Exterior Cladding 3,000 m<sup>2</sup>



Project: World Med  
Location: Louisville, KY, US  
Featured Product: Stone Honeycomb Panels  
Application: Exterior Cladding 4,000 m<sup>2</sup>



Project: 1401 Elm Street  
Location: Dallas, US  
Featured Product: Marble Honeycomb Panels  
Composition: 6 mm Pentelikon Honed with 19 mm  
Aluminum Honeycomb Panel Backing  
Application: Exterior Cladding 13,000 m<sup>2</sup>  
Anchoring System: G-shape





Project: OZ Mall  
Location: Krasnodar, Russia  
Featured Product:  
Aluminum Honeycomb Panels with  
Stone Powder coating



Project: Mercat dels Encants  
Location: Barcelona, Spain  
Featured Product: Aluminum Honeycomb Panels



Project: Telefonica  
Location: Madrid, Spain  
Featured Product: Aluminum Honeycomb Panels with PVDF coating  
Application: Exterior Cladding 5,400 m<sup>2</sup>





Project: Al Noor Tower  
Location: Doha, Qatar  
Featured Product: Stone Honeycomb Panels  
Composition: 6 mm Cherry Red Marble with 19 mm  
Aluminum Honeycomb Panel Backing  
Application: Exterior Cladding  
Anchoring System: G-shape

Project: Marina Bay Sands  
Location: Singapore  
Featured Product: Stone Honeycomb Panels  
Composition: 5 mm Giallo Atlantide with 15 mm  
Aluminum Honeycomb Panel Backing  
Application: Bathroom Walling and Flooring -  
16,000 m<sup>2</sup>





Project: The Venetian Hotel

Location: Macao

Featured Product: Stone Honeycomb Panels

Composition: 6 mm Beige Marble Crystal with 12 mm

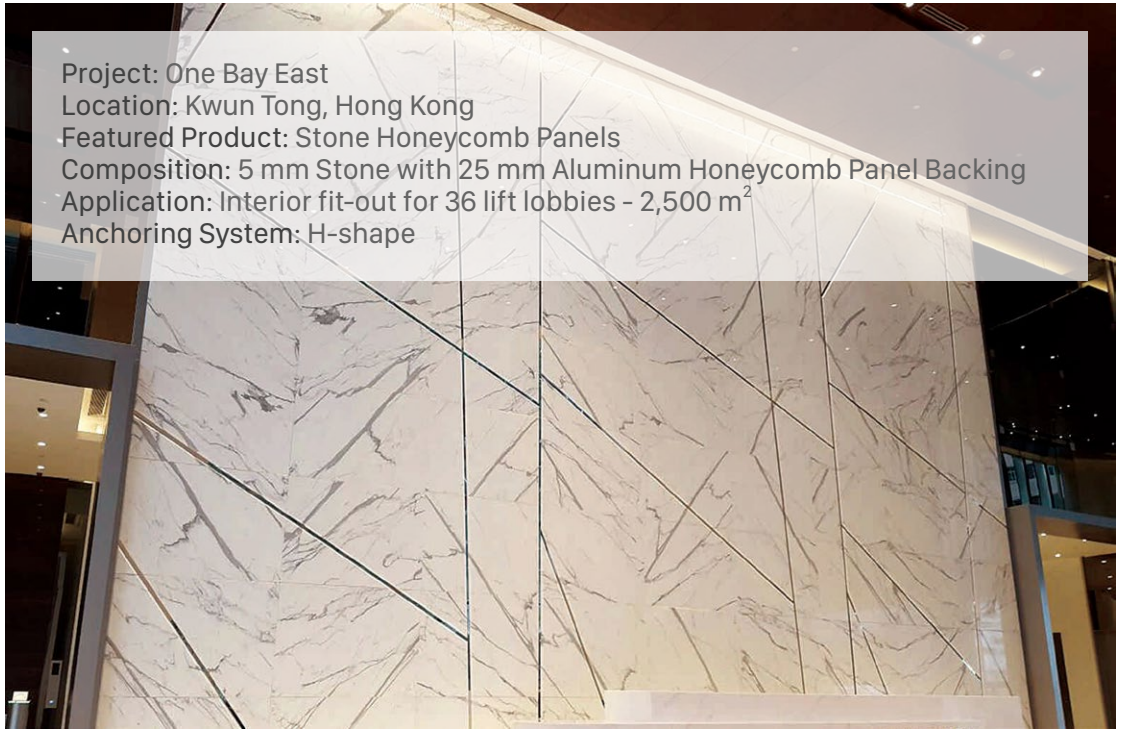
Aluminum Honeycomb Panel Backing


Application: Bathroom Walling and Flooring 30,000 m<sup>2</sup>



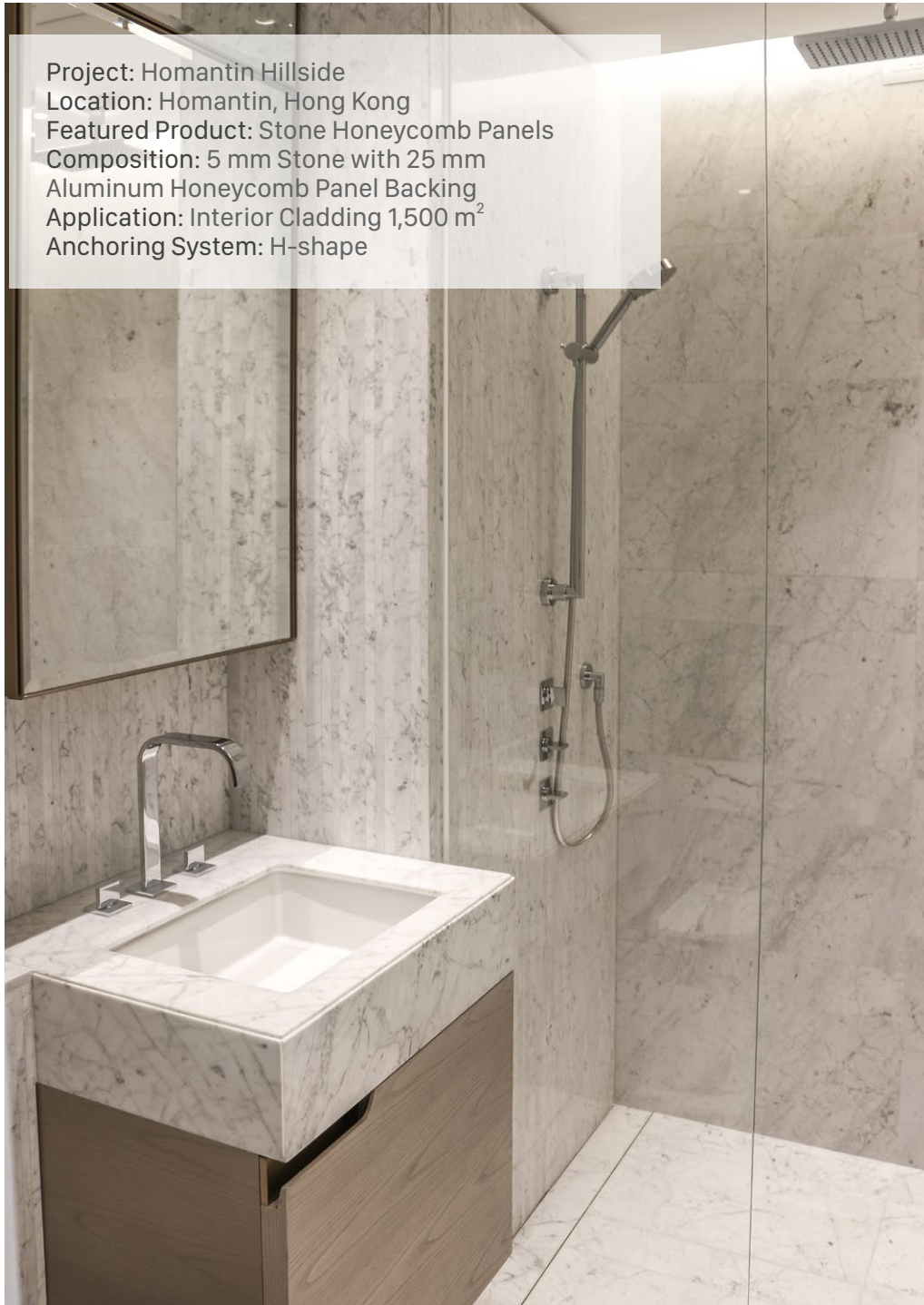


Project: One Bay East  
Location: Kwun Tong, Hong Kong  
Featured Product: Stone Honeycomb Panels  
Composition: 5 mm Stone with 25 mm Aluminum Honeycomb Panel Backing  
Application: Interior fit-out for 36 lift lobbies - 2,500 m<sup>2</sup>  
Anchoring System: H-shape





Project: Metro Stations  
Location: Kuala Lumpur, Malaysia  
Featured Product: Aluminum Honeycomb Panels  
with PVDF coating  
Application: Roof - 15,000 m<sup>2</sup>  
Anchoring System: H-shape



Project: Homantin Hillside  
Location: Homantin, Hong Kong  
Featured Product: Stone Honeycomb Panels  
Composition: 5 mm Stone with 25 mm  
Aluminum Honeycomb Panel Backing  
Application: Interior Cladding 1,500 m<sup>2</sup>  
Anchoring System: H-shape

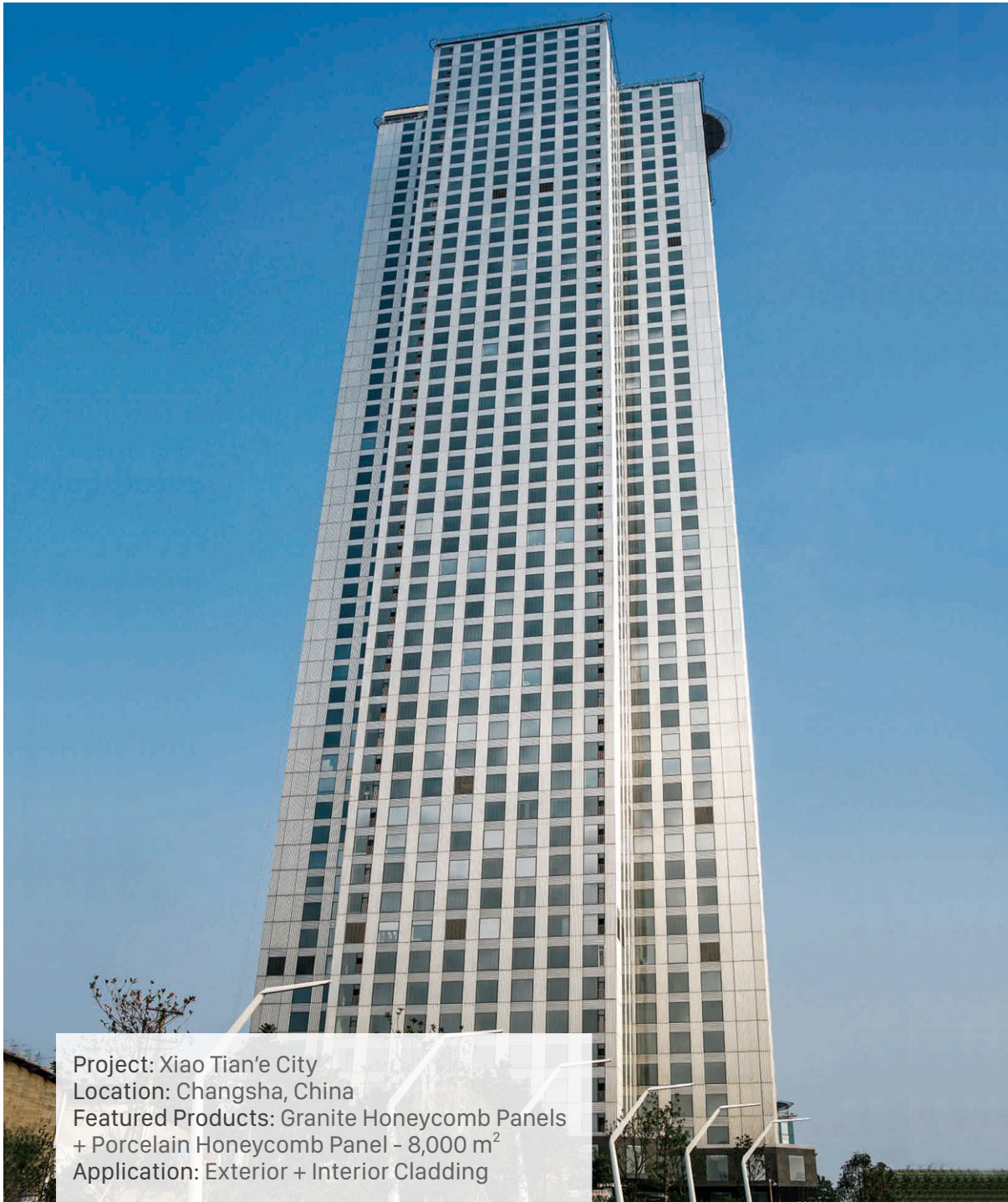


Project: Ruxin Maternal and Infant Hospital  
Location: Xiamen, China  
Featured Product: Shaped Stone Honeycomb Panels  
Composition: 6 mm Oman Beige honed with 19 mm  
Aluminum Honeycomb Panel Backing  
Application: Shaped Feature Wall with aligned angle,  
2,000 m<sup>2</sup>  
Anchoring System: G-shape









Project: Xiao Tian'e City  
Location: Changsha, China  
Featured Products: Granite Honeycomb Panels  
+ Porcelain Honeycomb Panel - 8,000 m<sup>2</sup>  
Application: Exterior + Interior Cladding



Project: Rural Commercial Bank  
Location: Chongqing, China  
Featured Product: Stone Honeycomb Panels  
Application: Interior Cladding



Project: Waldorf Astoria Bangkok  
Location: Bangkok, Thailand  
Featured Product: Marble Honeycomb  
Panels  
Application: Interior Cladding - 10,000 m<sup>2</sup>





*Lightweight  
Honeycomb  
Solutions*

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