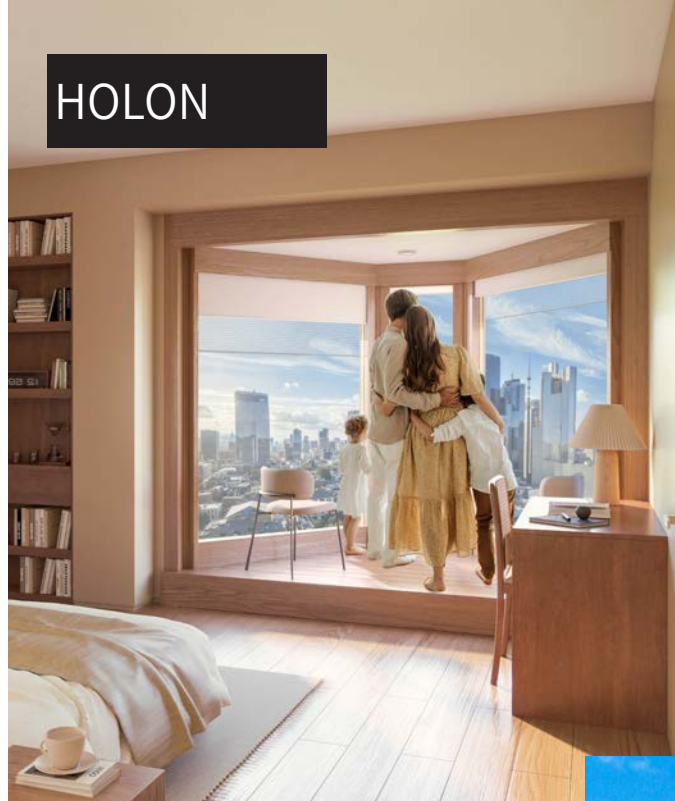


4 WORLD-CHANGING PRODUCTS OVERVIEW

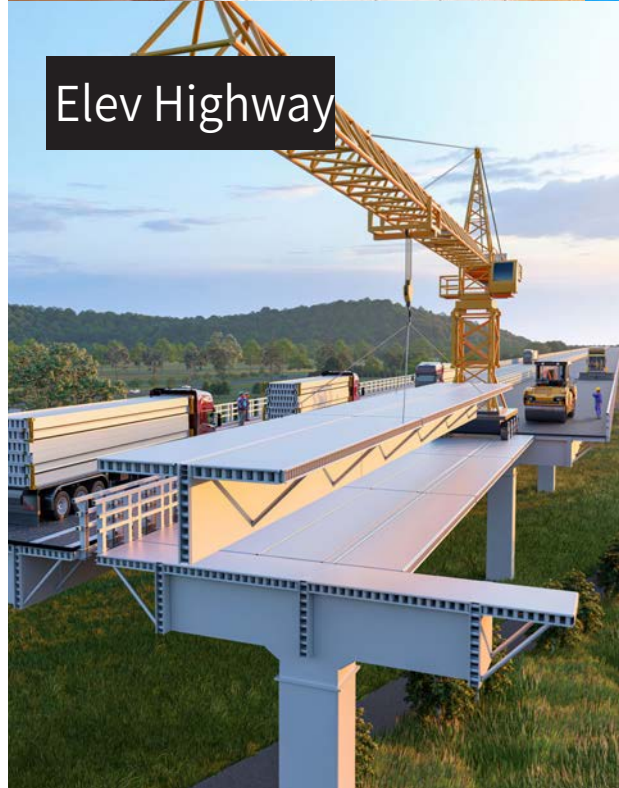
HOLON



Data Center



Elev Highway



Wind Power



BROAD GROUP
远大科技集团

BROAD Town, Yuanda San Rd,
Changsha, China
www.BROAD.com

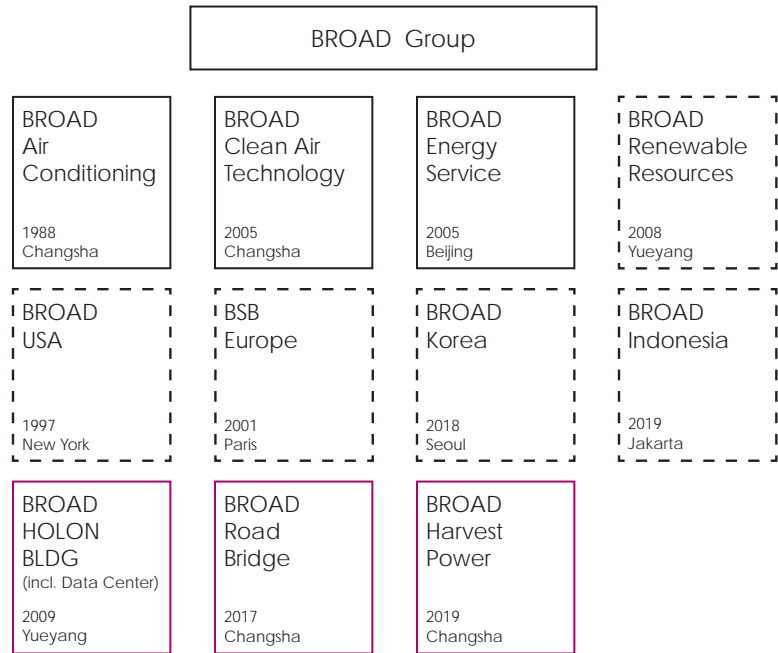


5/12/2025

BROAD INTRO

Founded in 1988, BROAD Group is a private enterprise with over 3,000 employees, a mission of innovation, and a commitment to environmental protection. From 1992 to 2021, BROAD developed a full range of central air conditioning and clean fresh air products. For more than 30 years, BROAD has been a global leader in non-electric central air conditioning, earning an excellent reputation in over 80 countries.

From 2009 to 2025, BROAD Group has mobilized 1000+ employees and invested over \$1 billion to have successfully developed 4 key products that are expected to change the world: Prefab Res Highrise HOLON, Prefab Supertall Data Center, Prefab Sandwiched Elevated Hwy, Aluminum Wind Power. These products have been implemented in 6 countries.



Note: Solid boxes represent companies wholly owned by BROAD Group (red boxes represent 4 key products companies); dashed boxes represent subsidiaries in which BROAD Group holds ≥60% of the shares.



BROAD Group Headquarters & AC/Air System Production Base
BROAD Town (Changsha), established in 1994, covers an area of 1 square kilometer, with 80,000 m² of production plants and 240,000 m² of offices and living facilities.



Production Base for BROAD's 4 key products
Located in Xiangyin, Yueyang, Hunan Province, established in 2010, covers an area of 1.5 square kilometers, with 230,000m² of production plants and 120,000 m² of offices and living facilities.

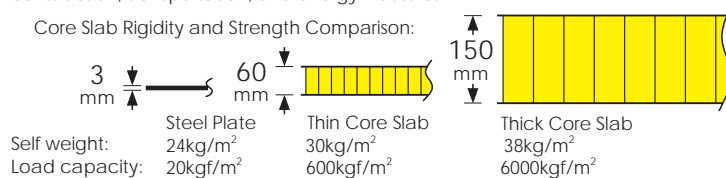
PRODUCT TECH BACKGROUND

1. Base Material: Core Slab

All 4 products - Prefab Res Highrise HOLON, Prefab Supertall Data Center, Prefab Sandwiched Elevated Hwy, Aluminum Wind Power - use BROAD's proprietary invention Core Slab as the base material. Core Slab and its production line were successfully developed in 2018 and are protected by PCT international patents across 70+ industrialized countries.

Core Slab consists of two thin metal plates with an array of ultra-thin round tubes and brazing filler sandwiched in between, by melting the brazing filler with 1100°C oxygen-free hot wind, these components are firmly brazed together. Compared with solid metal plates of the same weight, Core Slab has a rigidity and strength 10-400 times higher, making it a plate material with ultimate mechanical properties. Thanks to the large size of the Core Slab, an extremely high production efficiency and extremely low cost, as well as a wide range of applications, this seemingly simple material technology has the potential to fundamentally change the world's construction, transportation, and energy industries.

Core Slab Rigidity and Strength Comparison:



Copper Brazing Process Comparisons

Items	Brazing Process	Product Size	Output/Oven	Brazing Time	Power Consumption
Traditional Honeycomb Slab	Heat Radiation 1100°C	Length/Width <1.5m	<6 m ²	>8 hours	80 kWh/kg
BROAD Core Slab	Hot Wind 1100°C	Length 12m Width 2m	240 m ²	4 hours	1 kWh/kg

2. R&D Investment

Products	R&D Period	R&D Employees	Investment Capital USD	Pilot Projects	Patents
HOLON	2009-2024	1000	\$ 1.1 B	60 BLDGs	225
Data Center	2018-2025	150	\$ 0.06 B	3 BLDGs	27
Elev Highway	2017-2025	120	\$ 0.09 B	9 Units	28
Wind Power	2019-2025	300	\$ 0.17 B	12 Units	75



Core Tube Flanged Edge

The brazed surface area is far larger than that of the core tube, and the brazing is 100% thorough, resulting in an extremely strong bond

The Production Capacity is Enormous

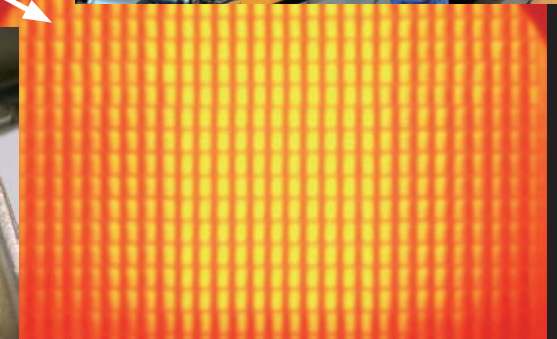
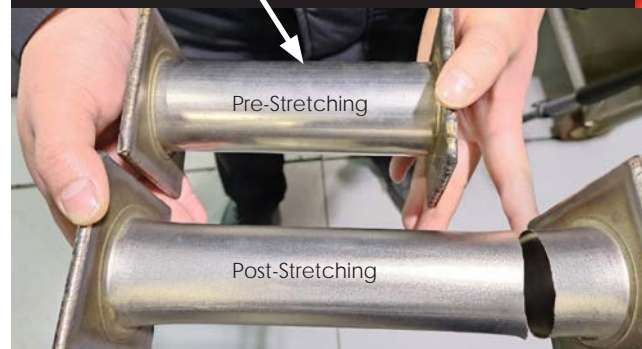
Output: 240 m²/oven, 2,880 m²/day
Brazing oven is fully automatic with smart controlling system

Original Technology: Hot-Wind Copper Brazing

Hot wind: 1,100°C, 300,000 m³/h
The technology of the hot-wind copper brazing oven is extremely complex, even more complex than that of a launch vehicle in a sense

Core tube tensile test

Apply force until core tube breaks completely, verifying that the joint is stronger than the component



COMPETITIVE ADVANTAGES

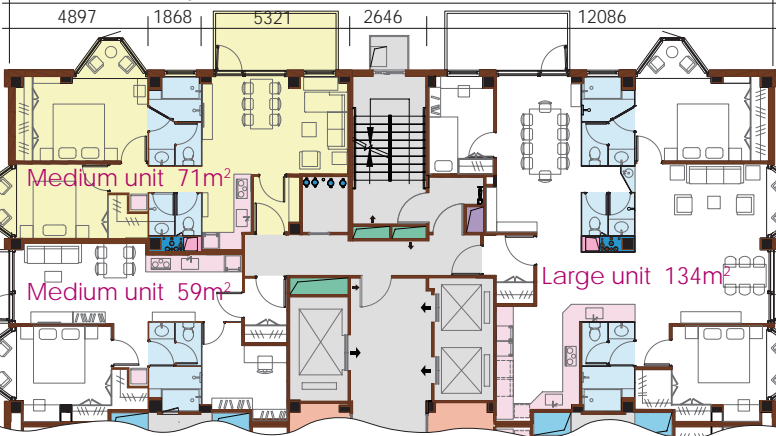
	Target Market	Market Opportunity	Cost Advantage	Performance Advantage	Environment Advantage
Prefab Res Highrise HOLON	Developed countries: 20F-120F residential (Major cities in countries with a GDP per capita ≥\$30,000)	\$2,000 B (USD construction costs, same below) Due to restrictions on immigration and work visas for low-skilled workers in developed countries, construction labor shortage has been a structural problem for a long time, housing gap is huge. If a low-cost, short-construction-period housing solution like HOLON became available, the demands of the developed countries will be over 500M m ² annually over the next 5 years.	40%-60% lower cost Due to long-term labor shortages in developed countries, building construction costs are extremely high. HOLON is prefabricated in developing countries and constructed in developed countries, costs are 40%-60% lower than that of developed countries. If factor in the 10 times shorter construction time, the overall cost is even lower.	1. Factory prefabrication ensures nearly-zero quality defects. 2. Superior sound insulation: Adopting the highest acoustic standards among the developed countries such as EU/US/AU/JP/KR. Extreme sound insulation measures are applied, including 4-paned glass windows and 3-layer floors. 3. Equipped with clean air systems for extremely high air quality.	1. All stainless-steel structure, durable for millennia, zero concrete. 2. Superior thermal insulation, nearly-zero energy consumption. 3. Only targeting mid-to-high-rise markets, reducing the city radius and preserving more green spaces.
Prefab Supertall Data Center	Global: 20F-140F High-rise data centers	\$280 B (building & cooling systems) The rapid development of AI has led to an urgent need to expand data centers globally. Due to the scarcity of urban land and the need to avoid excessive investment, as well as the wear and tear on network cables, the only option is to expand into the sky. Over the next 5 years, the global data center market will see an annual increase of approximately 50M m ² .	20%-70% lower cost Thanks to the unique Core Slab structure, the costs of constructing high-rise buildings are similar to low-rises, and the construction speed is more than 10 times faster with the factory prefabrication, building & cooling systems achieve a cost 20%-40% lower than in developing countries and 50%-70% lower than in developed countries.	1. 13m column spacing, the clear space is more than twice of the ordinary high-rise buildings, allowing the installation of more cabinets and easier maintenance. 2. All-steel structure, super seismic resistant. 3. Over 30 years of experience with central AC in more than 80 countries, ensuring precise cooling and zero failure of the server racks.	1. Uses BROAD Air Conditioning exhaust chillers, 100% utilizing power generation exhaust for cooling, zero emissions. 2. All-steel structure, zero concrete, material recycling. 3. Dust-free and waste-free construction.
Prefab Elevated Highway	Global: Elevated hwy Urban Elevated Roads Bridges	\$170 B Traditional ground-level highways have long design cycles and slow construction, while traditional elevated highways are barely affordable. If a low-cost elevated highway was available, at least 6,000 km new highways would be added globally each year over the next 5 years.	30%-70% lower cost Thanks to the unique Core Slab structure and factory prefabrication, on-site construction is reduced by 90%, and the construction period is 10 times shorter. Cost is 30%-40% lower than in developing countries and 50%-70% lower than in developed countries.	1. 38m wide, larger than typical elevated highways. 2. Steel-Core Slab has 5 times higher fatigue resistance than traditional orthotropic slabs and longer lifespan, can withstand vehicles twice the weight of highway standard load capacity. 3. Factory prefab ensures quality.	1. Elevated highway does not interfere with water systems or animal migration. 2. All-steel structure, zero concrete. 3. No construction access road is needed, no damage to the land; no construction waste.
Aluminum Wind Power	Developed countries: On-shore/ Off-shore Wind Power	\$280 B Driven by the global growth of electric vehicles, the electrification of heavy chemical industries, and the surge in power consumption for AI computing, coupled with the increasingly strong global trend of phasing out fossil fuels, approximately 400 GW of renewable electricity will be added annually over the next 5 years.	20%-40% lower cost/kWh 1. Blade cost is relatively higher, but taller tower, longer lifespan and larger power generation capacity can make the cost/kWh lower. 2. Blades, towers, and main units can all be shipped in sections of container size, greatly reducing shipping cost. 3. 100% recyclable at disposal.	1. Aluminum blades can last for 50 years; blades and towers are in truss structure and typhoon resistant 2. Double-layer blades provide a larger windward area, significantly increasing the power generation. 3. Aluminum alloy blades do not get deformed; the wind-capturing performance remains unchanged even after decades of operation.	1. Aluminum replaces fiberglass. It is the only product compliant with the regulations on phasing out fiberglass in the EU/US. 2. Container-sized shipping reduces carbon emissions. 3. Self-climbing cranes are used to build high towers, eliminating the mountain destruction for road way.

PREFAB RES HIGHRISE HOLON

A HAPPY HOME, A GENERATIONAL LEGACY

- Hi-tech design:** 16 years of R&D, invested over \$1.1 billion and 1,000+ engineers, 60+ buildings in 6 countries validated after thousands of trials and errors and 16 technology iterations.
- Hi-tech material:** Original ultra-strong & ultra-light 'Stainless Steel Core Slab' is durable for millennia, uses zero concrete, and is 10 times stronger than traditional materials, enabling the construction of high-rise/super high-rise building to be at a cost similar to that of low-rise building
- Hi-tech construction:** Globally sourcing top-quality materials and adopting Intelligent streamlined production to ensure zero defects in every detail. On-site construction only requires simple work such as bolt connection, enabling the installation of 3 floors per day.
- Flexible space:** 12m×4.8m column-free clear span creates an open, versatile layout; room sizes and quantities can be adjusted post-occupancy. Every bedroom features a bay window, flooding the space with natural light from morning till night.
- Superior acoustics:** 4-paned windows, 3-layer floors & ceiling, double demising walls and entrance doors. Adopts the highest acoustic standard among the EU/US/AU/CA/JP/KR standards.
- Healthy air:** 100% fresh air, 99.9% PM2.5 filtration, ensuring indoor air is 100 times cleaner than outdoors; interiors remain dust-free for weeks without cleaning. All materials are toxic-free tested and certified.
- Comfortable temperature:** Passive House standard insulation, ultra-energy-efficient AC, off-peak electricity water energy storage, lowering more than 90% of the energy bill for the household while maintaining a constant temperature throughout the year, and contributing to the balance of the peak/off-peak loads to the power grid.
- Global recognition:** Winner of global awards in building technology field, "First Place in Multifamily Category" from the MBI (Modular Building Institute) and "Innovation Award" from the CTBUH (Council on Tall Buildings and Urban Habitat).

HOLON Standard Layouts mm



BROAD HOLON BLDG
远大活楼有限公司



Floor Slab Material:
Stainless Steel Core Slab



PREFAB SUPERTALL DATA CENTER

LIMITED RESOURCES, UNLIMITED AI

- 1. **Super Seismic-Resistant:** The building adopts BROAD's proprietary sandwich-structure "Steel Core Slab" and uses zero concrete, making it ultra-light and ultra-strong in the structure.
- 2. **Super Land-Saving:** The weight of the "Core Slab" building is only 1/6 of the concrete building, which reduces the cost of constructing high-rise. If building data center upward to 45-140 stories, it will save about 5-40 times the land usage than a typical data center. This makes the data center suitable for urban locations, which can solve the pain point of recruitment difficulty, and reduce the costs of network construction and operation.
- 3. **Zero-Carbon Cooling:** Employing BROAD's proprietary exhaust gas absorption chiller, which utilizes 100% of the exhaust gas from power generation for cooling.
- 4. **Fast Delivery:** Building modules and MEP are 100% prefabricated in the factory by intelligent streamlined production. On-site construction achieves 3 floors per day. Furthermore, construction cost can be reduced by 20%-70%.

Type	Model		B130	B600	B1000	B5000
Building	Building Model	-	45F54	70F93	90F54m4	140F93m4
	Floors	F	45	70	90	140
	Building Size (LxWxH)	m	54x54x223	93x93x345	148x148x440	246x246x680
	Minimum Lot Size	m	84x84 (0.7 ha)	123x123 (1.5 ha)	178x178 (3.2 ha)	276x276 (7.6 ha)
	Building area	m ²	131,220	605,430	1,049,760	4,843,440
	Cabinet area	m ²	86,600	400,000	692,800	3,030,600
Generator	NVL72 Cabinet	Set	29,000	133,000	200,000	1,000,000
	Generator Model (Qty)	-	7HA.03(1)	7HA.03(4)	7HA.03(6)	7HA.03(30)
	Total Power Generation	MW	430	1,720	2,580	12,900
	Total Natural Gas Consumption	m ³ /h	108,700	434,800	652,200	3,261,000
Chiller	Chiller Model (Qty)	-	BE2000(14)	BE2000(64)	BE2000(96)	BE2000(480)
	Total Cooling Capacity	MW	450	1,800	2,710	13,540
Cost. \$	Building System	M	448	2,064	3,446	16,741
	Power Generation System	M	300	1,200	1,800	9,000
	Cooling System	M	40	183	274	1,371
	Total	M	788	3,447	5,520	27,112
	Cost / Cabinet	\$	27,172	25,917	27,600	27,112

Note: Building sizes & floors are adjustable per customer's needs.

Building Technical Data:

- 1. Structural Material: High-strength carbon steel.
- 2. Floor and Beam Material: Steel Core Slab.
- 3. Column Spacing/Diameter: 13m/0.95m
- 4. Floor Height/Clear Height: 4.8m/4m
- 5. Generator and Chiller Location: Refuge floor and rooftop.
- 6. Technical Standards: ANSI/TIA-942-C, ASHRAE 90.4
- 7. Construction Method: building module & MEP 100% factory prefabricated.
- 8. Construction Period: Design and prefabrication 3-7 months, installation 3 floors/day.



Floor Slab & Beam Material:
Steel Core Slab

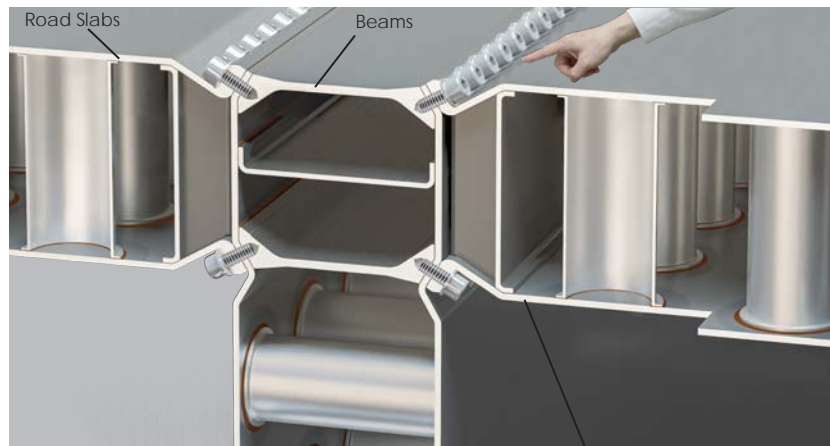


Figure: Model B1000

PREFAB SANDWICHED ELEVATED HWY

A CORE SLAB ROAD, A NEW WORLD

1. **Hi-tech material:** Slabs and beams adopt BROAD's sandwich-structure "Steel Core Slab", use zero concrete and is 60%-70% lighter. "Steel Core Slab" is fabricated with hot-wind brazing, the joints are stronger than the materials themselves, boasting a fatigue life over 5 times longer than the traditional orthotropic plates, ensuring no split of the joints in its 150 years life.
2. **AI design & manufacture:** All components are intelligently manufactured by AI and brazed in one piece. Each module can be transported in container size and form 120 m² highway area (surface area), realizing global shipping with low cost.
3. **Hi-tech construction:** On-site only needs to build the pier foundation, no temporary road is required. The piers, slabs and beams can all be hoisted by crane from the new highway, construction speed is 10 times faster, a crew can at least complete 1 km per month.
4. **Replacing traditional steel highway:** Costs are 30%-70% lower than traditional steel structures, due to the lower steel consumption, lower prefabrication costs, lower transportation costs, lower installation costs, and shorter construction periods.
5. **Replacing concrete highway:** Concrete is a brittle material and might collapse due to geological defects or earthquakes, and rust is hard to detect. Many concrete bridges collapsed every year globally, but not steel bridges.
6. **Alternative to surface roads:** The cost is even lower in hilly/mountainous/desert/rainy areas.
7. **Ecological protection:** Reduces disturbance to villages and towns and protect natural water systems and ecosystems from disruption.
8. **Application:** Highways, municipal roads, cross-river/sea bridges, railway foundations, can also be used for suspension bridges, double or multiple decks. Suspended rail interfaces are reserved under the bridges, making the installation of light rail trains easy.



Road Slab & Beam Material:
Steel Core Slab



120m² elevated highway slabs make one 40ft container (container-free), enabling low-cost global transportation

Direct hoisting on elevated highway with standard cranes

Key Parameters:

Standard Bridge Width: 13m/17m/22m

Standard Span: 38m

Net Height of Piers: 5-30m

Construction Speed: 1km/month

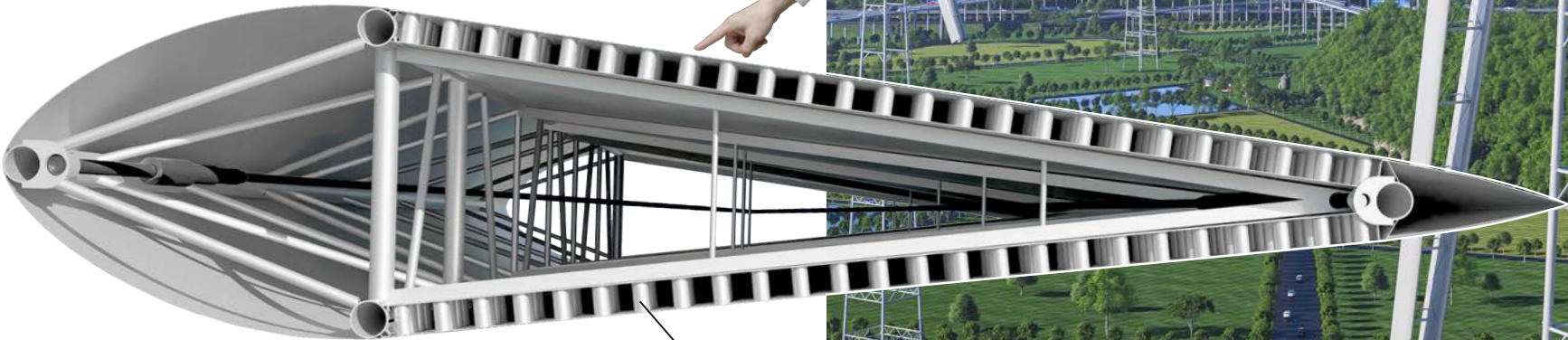
Design Life: 150 years

ALUMINUM WIND POWER

A GREEN POWER, A GREEN WORLD

- 1. **World's Strongest:** Original innovation of aluminum-alloy Core Slab double-layer blades with carbon fiber ropes, resistant to typhoons.
- 2. **World's Thriftiest:** Blades are innovatively transported in sections of container size, which can greatly reduce the transportation cost by several times.
- 3. **World's Highest:** Proprietary self-climbing crane makes it easy to construct high towers, creating wind farms anywhere around the world.
- 4. **World's Most Profitable:** Aluminum alloy is durable for 50 years, making the ROI twice of traditional wind power.
- 5. **World's Cleanest:** Aluminum is recyclable which solves the global problem of fiberglass pollution.
- 6. **World's Greenest:** The carbon emission from the production, operation, and installation of one set wind power can be offset in just half a year of operation.

Product Model		F8	F30
Rated Power	MW	8	30
Rotor Diameter	m	160	320
Blade Material		Aluminum Alloy	Aluminum Alloy
Tower Height	m	212 / 153 / 106	307 / 236 / 189
Shipping Dimensions	m	12.2x2.4x3 (Based on 40ft Container Dimensions)	



Blade Main Material:
Aluminum Alloy Core Slab

