

MEGA STRUCTURE



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Introduction

HR Structures has one of the most technically advanced design & production centres in Europe.

HR Structures Australia are the official Australasian agent for HR Structures GmbH. A company that uniquely combines the customer care of a family run business with the service capacity of a global powerhouse.

Pioneering product innovation, quality and performance are at the heart of their products, people and processes, the German facility located in the Hessian town of Grebenhain, can produce up to 80,000 m² of new structures per week – ensuring fast, economical, factory-direct dispatch worldwide.

HR Structures GmbH state-of-the-art factory incorporates purpose-built production lines.

All structures are designed to comply with international design code criteria, including the USA-IBC2009/12 and AS/NZS standards.

All components used (roofs and walling systems) are designed to comply with international fire safety codes according to DIN 4102 B1, M2, BS5438/7837, USA NFPA701.



**Design.
Innovation.
Tradition.**

OUR MEGA

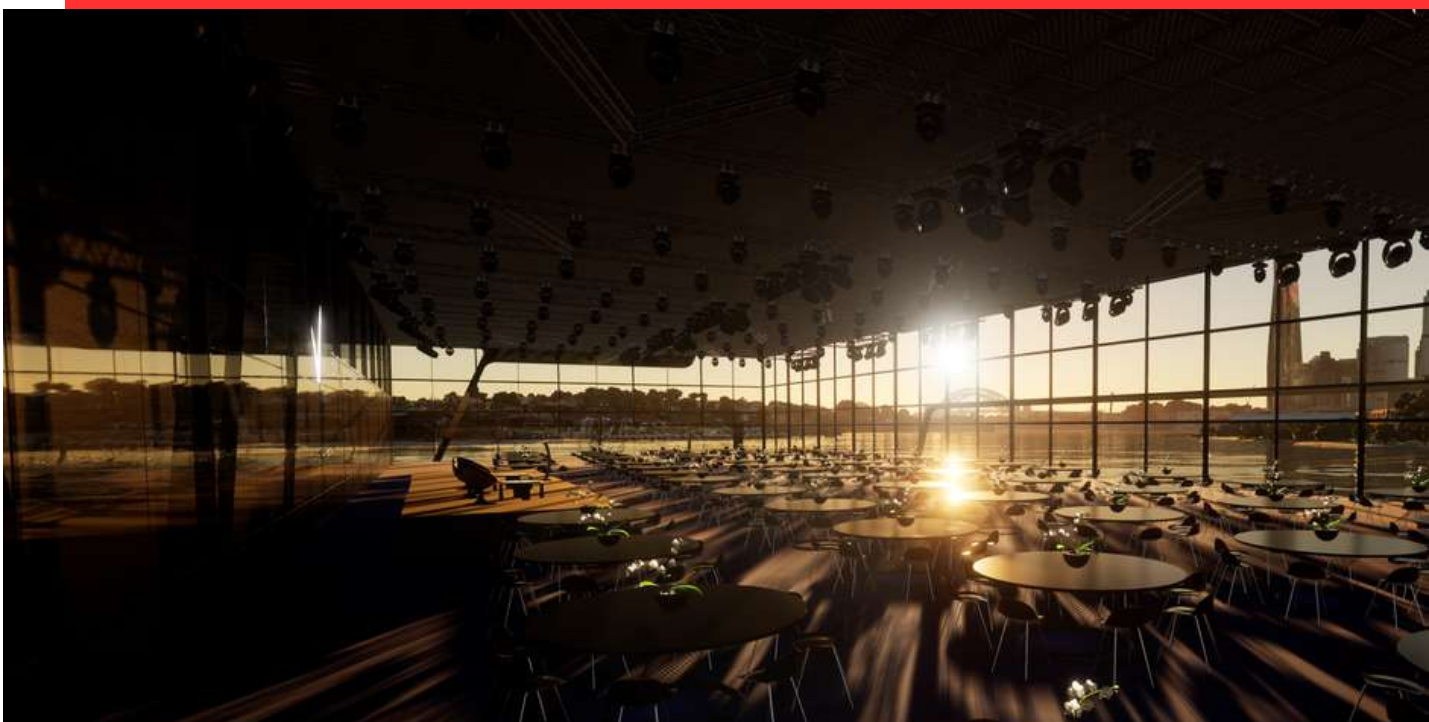
Revolutionary Buildings

For Large Scale Commercial Projects

Mega Structures offer an ideal solution to large commercial projects that require extra-large clear-span space to accommodate multiple uses. The Mega Structure provides robust, secure space that can be configured to your exact requirements.

HR Structures take competency and innovation very seriously when it comes to large-scale infrastructure. Our team collaborates with major contractors on the structural design, offsite fabrication, module delivery, and onsite installation of many large-scale projects, including national and international infrastructure projects.

The Mega structure offers a range of cost-saving benefits. These structures can be permanent, semi-permanent and relocatable, with limited foundation requirements. Making them perfect for many applications, such as sporting complexes, airport terminals, rail projects, maritime ports, mining, energy, international exhibitions, film studios and much more.



OUR MEGA

Benefits

Durable and Sustainable Solutions for Large-Scale Projects

The Mega Structure is an innovative construction solution made of hard-pressed aluminum – a lightweight and durable material that can withstand harsh environments without corroding. These structures are designed by German and Australian engineers to meet the highest ISO compliant standards in the industry. With all-weather durability, these structures can withstand extreme heat, cold, and winds, achieving 100 kg/m² snow load and 175km/h wind load.

The structure systems are built to comply with stringent specifications and can be adapted to meet country-specific requirements. In addition to their robust materials, the Mega Structure also utilises prefabricated components to reduce construction waste and promote repurposing and reuse. The materials are designed for disassembly, enabling the recovery and reuse of building materials at the end of the project's life.

What's more, the Mega Structure's modular design makes it adaptable to a variety of functions, from airport terminals to maintenance facilities or extra-height capital equipment storage. Their flexible configurations make them ideal for many large-scale commercial developments.



OUR MEGA

Over-Sized Designs

The Ultimate Solution for Large-Scale Applications

Mega Structures boasts a ridge height of 8.00m with customised heights available, and a span ranging from 10.00m to 70.00m in unlimited lengths of 5.00m bays.

Made with durable aluminium profiles and fireproof wall panels, these structures are built to last, meeting Australian and European safety standards.

Customise your Mega Structure package with additional features such as stage platforms, gantries, lighting, soundproofing, climate control and thermal insulation, heavy duty floors, large roller shutter doors and ramps. Our mezzanine system provides an ideal way to lift functions to a second level, allowing for additional floor space that can be used for various purposes such as cafes and meeting areas. This not only maximises the available square meterage within the same area but also provides the added benefit of covered indoor and outdoor terrace space.

Mega Structures are flat-packed for easy transportation, reducing haulage requirements and minimising our environmental footprint.











FEATURES

Structure Profile

- **Bracing System:** Internal high-level bracing giving open & clear span spaces.
- **Frame Construction:** Hard pressed 4 groove aluminium cube profile.
- **Profile Size:** Profile sizes relative to situation requirements.
- **Roof Covers:** Steel Sheet, insulated Sandwich Panel or Thermo System
- **Wind Loading:** Structures are all calculated to withstand wind loading based on the physical site location, and to meet Australian and European safety standards.
- **Walling:** Steel-clad sandwich panels, steel sheet, facade walling system, vertical or horizontal glass walls, ABS solid wall
- **U-Values:**
 1. Roofs – 1.5 W/m²K
 2. Walls & Gables – 0.44 W/m²K

Specifications

							
Span Width 10.00m - 70.00m	Length Unlimited in 5.00m bays	Side Height Up to 8.00m	Wind Load To site specifics	Custom Fixtures & Dimensions available	Anchoring As site specifically requires	Loads Suspended loads up to 6 tonnes	Area Free standing area over 5000 sqm

ROOF OPTIONS

- Sandwich Panel
- Steel Sheet
- Thermo Inflatable Roof

WALL OPTIONS

- Facade Walling System
- Insulated Steel Sheet
- Non Insulated Steel Sheet
- Panoramic Glass Wall
- Horizontal Glass Wall
- Vertical Glass Wall
- Framed Glass Wall

FLOOR OPTIONS

- Heavy Duty Flooring System

ANCILLIARIES

- Ventilation panels
- Various door types
- Various window types
- Balconies
- Atrium
- Balustrades
- Mezzanine floor
- External and internal stairs
- Signage Parapets
- Disability access
- Wet areas
- Lighting
- HVAC
- Colour Options



OUR MEGA

Structure Types

Airport Terminals & Hangars

Modular structures have several possible applications in airport expansion, including baggage claims, waiting areas, terminals, hangars, and administrative or security offices. These structures can enhance efficiency and provide a better experience for passengers.

Film Studios

HR Structures specialise in designing and constructing film studios that meet international filming industry requirements. The Mega Structure offers a quick and cost-effective solution to creating studio space, including feature-film and television production studios, as well as ancillary structures for workshops and offices.

Rail Terminals

Mega Structures are a cost-effective way to replace outdated railway station facilities and minimise site disruption during construction.



OUR MEGA

Structure Types

Sporting Complexes

Mega Structures are ideal as sporting complexes that include swimming pools, spas, sports halls, basketball courts, and gymnasiums. We can add specialised flooring, temperature-controlled installations. Our designs also incorporate office suites, administration space, cafes, break-out areas, and hygienic installations for physiotherapy and treatment rooms.

Exhibitions

We offer contemporary exhibition centre design with floor to ceiling glass elements and white panel walls that can connect to an existing convention centre. Our energy-efficient structures feature a thermo-roof solar installation with a large loading capacity suitable for events.





HR STRUCTURES

Mega Structure Concept
ICC Sydney

40.00m x 75.00m x 8.00m



HR STRUCTURES

Mega Structure Concept
Hamilton Airport

Thermo Roof | 40.00m Hangar
Door

Your Innovative Partner in Modular Building

Modular buildings provide better opportunities for companies interested in greening the footprint of the building construction process, as well as the impacts of recycling the building after it's complete. As modular structures deliver positive environmental outcomes, then modular construction can be an ideal fit for any company looking for a flexible, renewable, and sustainable method of building.

Modular construction is a highly streamlined process that can see project times reduced by up to 50% as the structure components are manufactured offsite. And the insulated structure ensures a more consistent R-value rating (the measure of thermal resistance).

Modular structures are leading the way to reduce the extraction of new material resources, demolition waste, construction time and transportation costs, while ensuring that these structures have a new purpose beyond its planned lifespan.

Structures can be relocated, packed down in a matter of days and moved to another site. They can also be repurposed for different functions – including applications in the commercial and industrial sectors – their flexible configurations adapt well to different applications, such as offices, hospitals, warehouses, airport terminals, sporting facilities and many other large scale commercial developments.

A large, white, stylized double quote icon.A dark, atmospheric photograph of a car showroom. In the center, a white sports car is displayed on a raised platform. To the left and right, other cars are visible in the shadows. The lighting is dramatic, with spotlights creating beams of light from the ceiling.

**Design.
Innovation.
Tradition.**



Build Your Next Project

HR STRUCTURES

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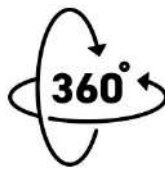
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CUSTOM
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RELOCATABLE
RECONFIGURABLE



PURCHASE
OPTION



GREENER
FUTURE

