



LIFTABLE BUILDINGS

excellence in engineering





Rubb's innovative liftable buildings are custom designed to suit our clients' needs.

Rubb Buildings Ltd is a leading provider of tailor-made liftable buildings. We work closely with end users to ensure our building designs incorporate the most efficient use of available space.

Rubb has delivered many high-quality liftable solutions around the world.

Rubb's liftable buildings provide the same world renowned high quality structure with the added design elements which enables the building to be liftable, moveable, extendable and re-locatable to meet your individual requirements.

They are already being used to their full potential in the ship and heavy fabrication industry. The versatility of these structures enable all kinds of work to be carried out whilst under cover with the ability to be positioned and repositioned in multiple locations.

The structures are equipped with lifting points providing easy crane connections, allowing the structure to be lifted into position to provide the require cover. In addition Rubb's liftable buildings can also be designed to be mounted and ran on a track system to provide a perfect solution for large scale production lines or coverage of ships and dry docks.

Rubb has the capability and experience to design, manufacture, deliver and install custom structures.

With Rubb, you can be sure everything is under control from concept to completion—including cost, quality and delivery.

While we generally have the right standard structure available to meet project needs, Rubb can also design custom solutions to meet special requirements. We have the in-house resources to provide a cost effective solution customised to our clients' needs.

Design

Using proven engineering software, we can tailor the project to the specific requirements of the site, type of operations and logistical needs.

Production

Steel and membrane components are fabricated with proper equipment and quality control.

Installation

Pre-engineered and pre-fabricated to make on-site installation by a Rubb crew—or your crew—go smoothly and efficiently.

Structure doors

Rubb offers a variety of different door solutions. They can be selected and designed to suit many size and opening requirements. This flexibility ensures that our clients get the best option for their selected Rubb building type, depending on their operational needs.



Advantage Points



Low maintenance and costs

Our high-quality membrane materials and post-production galvanized welded frames deliver durability over time, making the cost of maintaining Rubb buildings more economical compared to conventional structures.



Energy-efficient roof membranes

Translucent membranes allow natural daylight to illuminate the workspace while the white roof surface reflects heat. Optional Thermohall® insulation minimises heat transfer, prevents condensation and virtually eliminates thermal bridging and air infiltration.



Structure quality

All structures are code compliant, designed to meet wind and snow loadings of its geographical location. Rubb PVC fabric cladding has a manufacturer's warranty of 10 years. Steelwork is hot dip galvanized in post production to eliminate any chance of corrosion, and comes with a 25-year warranty.



Multiple door options

Rubb offers a variety of different hangar door solutions. They can be selected and designed to suit many size and opening requirements. This flexibility ensures that our clients get the best option for their selected Rubb building type, depending on their operational needs.



Complete environmental control

The membrane cladding of a Rubb building is continuously sealed to provide a weather-tight shell. The buildings can be insulated, heated or air-conditioned as required. Rubb structures are uniquely suited for use as dehumidified facilities.



Reduced time on-site

Our established supply chain streamlines coordination of delivery and installation. Pre-fabricated elements and the ability to construct our buildings in a variety of weather conditions speeds up the construction process.



Rapid construction, installation and relocation

Rubb buildings can be quickly erected, dismantled and relocated due to module pre-fabrication. Rubb can provide site supervisors or fully dedicated construction teams to complete any custom project. Structures are transportable by land, sea and air.



Flexible and cost-efficient foundation systems

Rubb buildings can accommodate many foundation options such as concrete up-stand, ballast weights, and ground anchors into an existing surface. Rubb's co-ordination with the groundwork contractor is key for the client to reach the most cost-effective solution.



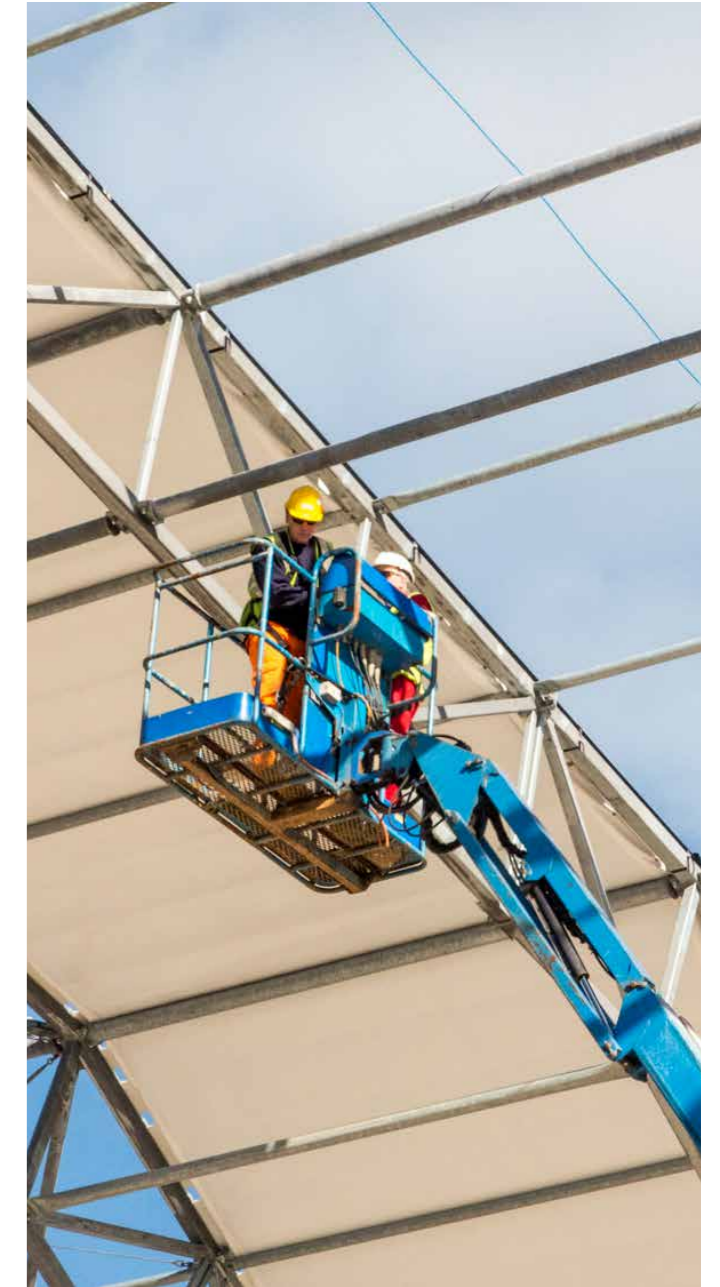
Customisable features

Buildings can accommodate all types of door, ventilation and other systems. They can safely support high loads imposed by overhead cranes, ceiling-mounted HVAC and fire-suppression systems, fall-protection equipment and other superimposed loads.



Comprehensive long-term service

Rubb personnel are on hand to provide help and support, from initial contact and quotation, to installation and beyond. Rubb's commitment to customer service continues after project completion and forms the basis for long-term customer satisfaction.



Harland and Wolff Liftable Building

2x 30m (98.4ft) span x 35m (114.8ft) long BLE
Belfast, Northern Ireland

Rubb Buildings Ltd was tasked with designing, manufacturing and erecting two crane liftable buildings to cover offshore pile clusters.

The two marine manufacturing covers from Rubb's new 'BLE Series' feature spans of 30m and each measure 35m in length. To increase the overall internal apex height of the manufacturing bays to 20.2m, H&W asked Rubb to use a 7.3m high wall constructed out of 40ft containers as the building's foundation. A custom designed supporting frame was created to hold the containers together and act as the fixing base for the Rubb BLE structures.

The marine manufacturing buildings are designed with reinforced base beams and anchor brackets so they can be easily lifted from their container foundations and moved to one side. This allows the client to then crane lift materials into the space within the foundation frames for various operations. The building roof is replaced to protect employees and materials from the elements. Each gable end of both paint and blast facilities includes a pedestrian door and a 4m x 4m roller shutter door for equipment access.

Harland and Wolff has 150 years of marine manufacturing experience. The company, based at Queens Island, Belfast, Northern Ireland, offers a unique combination of vast facilities and technical capability. From initial consultancy through detailed engineering, fabrication and through-life support, Harland and Wolff are perfectly positioned to support the needs of the maritime, offshore and renewable energy sectors.



Maintenance Structure

22.3m (73.2ft) span x 20m (65.6ft) long BVI
Kent, UK

The building was transferred via crane from the dockside onto an offshore vessel. The custom designed building will support improvement and upgrade operations to wind turbine blades off the Kent coast in the outer Thames Estuary.

This offshore building project was a direct request from a company which delivers integrated solutions for the offshore industry via a fleet of vessels which support offshore wind installations.

After working closely with the Rubb design team, a viable concept was created. Rubb provided a solution by designing and constructing a bespoke structure on board the specially designed vessel. The new blade improvement facility was fully constructed on the dockside, then lifted with the a 1000-tonne crane into position onto a specially designed platform.

The Rubb custom designed, wind turbine blade building measures 22.3m wide x 20m long x 5.5m high. This bespoke offshore structure is designed in line with SOLAS to specific wind and snow loads to withstand the extreme conditions of the North Sea. The facility comes complete with three 2-tonne AFT doors to create a climate controlled internal production area. The doors will allow three 58.8m long B58 wind turbine blades to protrude at 19m from the end of the blade, whilst maintaining a weather-proof seal.

To enhance the internal working environment, the structure is insulated with Rubb's 150mm thick Thermohall cladding, producing a U-Value of 0.25 W/m²K. High Lux level lighting has been installed along with a suitable heating and ventilation system to ensure a temperature performance of +18 to +25 oC and to make sure humidity will not exceed 80%.



Swan Hunter Ship Building Covers

2x 27m (88.6ft) span x 24m (78.7ft) long NV
Newcastle, UK

For over 25 years the skyline of Newcastle Upon Tyne, England, was dominated by the Swan Hunter Shipyard buildings located in the dockyards on the banks of the River Tyne.

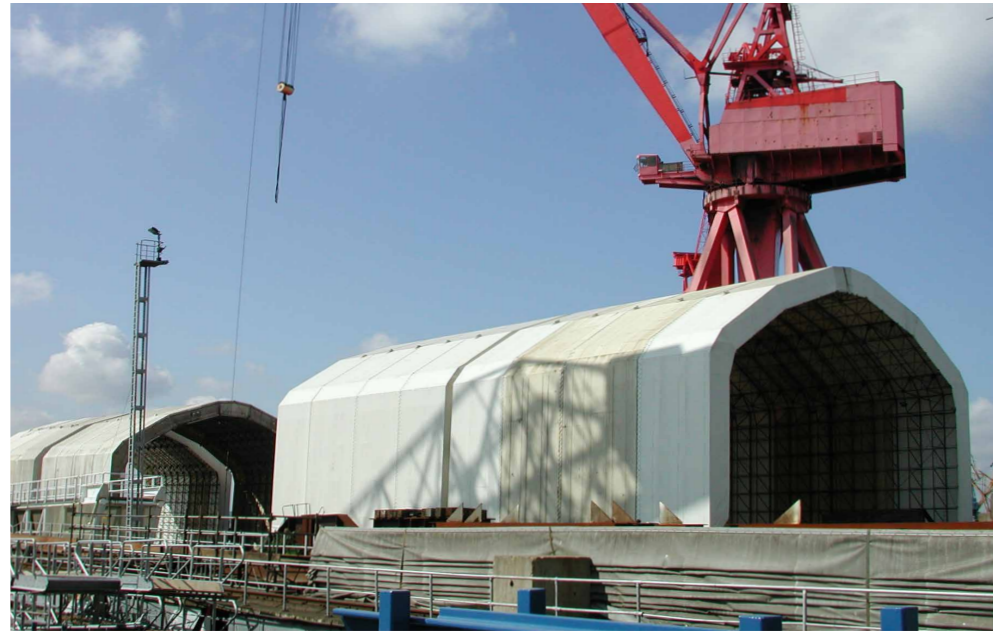
Originally manufactured by Rubb back in 1982, the two rail mounted liftable structures measuring 27m span x 24m long and 11.5m high sidewalls, were often moved from shipyard to shipyard along the river by barge, and were used to house the ships and frigates being built by Swan Hunter during manufacture.

The structures have since been dismantled and shipped to India where they will continue to be used by the shipbuilding industry.

The hot dipped galvanized steel framework of Rubb structures has proved to be long-lasting and durable — already 26 years old, the structures are still able to preform in the harshest of climates.

The PVC fabric membrane was rolled up and reused once the structures arrived at their new destination.

The long life and continued re-use of these marine fabric structures is a further testament to the longevity, value and flexibility of Rubb structures.



David Abels Liftable Cover

3x 23.6m (77.4ft) span x 12m (39.4ft) long BLE
Bristol, UK

Rubb Buildings Ltd completed a custom project for David Abels Dock Yard based in Bristol, UK. David Abels needed a bespoke movable liftable ship manufacturing cover.

Rubb UK used its design, manufacture and building skills to complete the complicated process of supplying and installing a building to provide a marine cover for the existing dry dock.

Three modules each measuring 23.6m span x 12m long with 10.7m high sidewalls, were constructed at the bottom of the dry dock, and then lifted onto a track way system positioned on top of the existing dock sidewalls.

The buildings were used to cover boats and ships during the refurbishment and/or build process.



Thermohall® Insulated Fabric

Rubb's patented Thermohall® features a flexible insulated fabric system which offers major advantages over other insulating systems:

- Non-combustible glass wool is encapsulated in air and water tight pockets
- Insulation thickness from 50mm to 150mm
- No air gaps in the cladding, which reduces heat loss and helps eliminate condensation
- Buildings are fully relocatable

Development of Thermohall® started several years ago, with the goal of a new and eco-friendly insulation system. Thermohall® is now fully developed and patented. Thermohall® offers great energy savings and is environmentally friendly, both in fabrication and operation.

- Rubb uses a heavy duty PVC fabric with a long, useful life and high density, non-combustible glass wool insulation
- All the materials are recyclable. Steel can be recycled through various means and PVC can be recycled through initiatives which are part of the Serge Ferrari operational supply chain and environmental partnerships. The insulation material that Rubb uses is processed from recycled glass
- Rubb Thermohall® structures combine the best properties of both conventional buildings and fabric buildings, high thermal insulation and full relocatability. All Thermohall® buildings can be delivered to suit our customers' insulation requirements

The outer membrane of a Thermohall® building is manufactured using the same high strength PVC coated polyester material used on Rubb's uninsulated buildings. These materials have a self cleaning exterior finish and feature coated weights ranging from 850g/m² to 950g/m² for most applications.

PVC battens are welded to the outer cladding panels at regular intervals and then to the inner fabric panels to create closed cells to hold the insulation. The +/-550 g/m² inner fabric is white, with a self-cleaning coating on the inside face.

Glass wool insulation sections are enclosed within the completed PVC assembly, which is then sealed to prevent movement of insulation and moisture from entering the cladding system.

Specification

Outer layer Flame retardant heavy duty PVC fabric

Core High density glass wool insulation

Inner layer Self-cleaning, PVC fabric

U-Values (R-Values) US approximate equivalent

Thickness	U Value (SI) W/m2K	R Value (US) ft2-°F-hr/BTU
50mm	0.67 W/m2K	R11
100mm	0.36 W/m2K	R19
150mm	0.25 W/m2K	R27





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