Mining & energy

Innovative fabric buildings

RUBB
Building Systems

Rubb's innovative mining and energy facilities are custom designed to suit our clients' needs.

Rubb is a leading provider of tailor-made mining and energy facilities. 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 solutions across mining and energy industries around the world.

Rubb's tensioned fabric structures are strong, durable, reliable and cost effective. Our products feature the highest quality materials. Hot dip galvanized steel frames and premium quality PVC ensure that our fabric facilities are built to last.

Rubb buildings meet the high demands of the mining and energy sectors - they are robustly engineered to stand up to tough climatic conditions and can be erected quickly at remote locations. Rubb offers a wide range of facilities suitable for temporary or permanent building solutions.

Advantages

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. Thermohall® insulation can minimise heat transfer, prevents condensation and virtually eliminates thermal bridging and air infiltration.

Structure quality

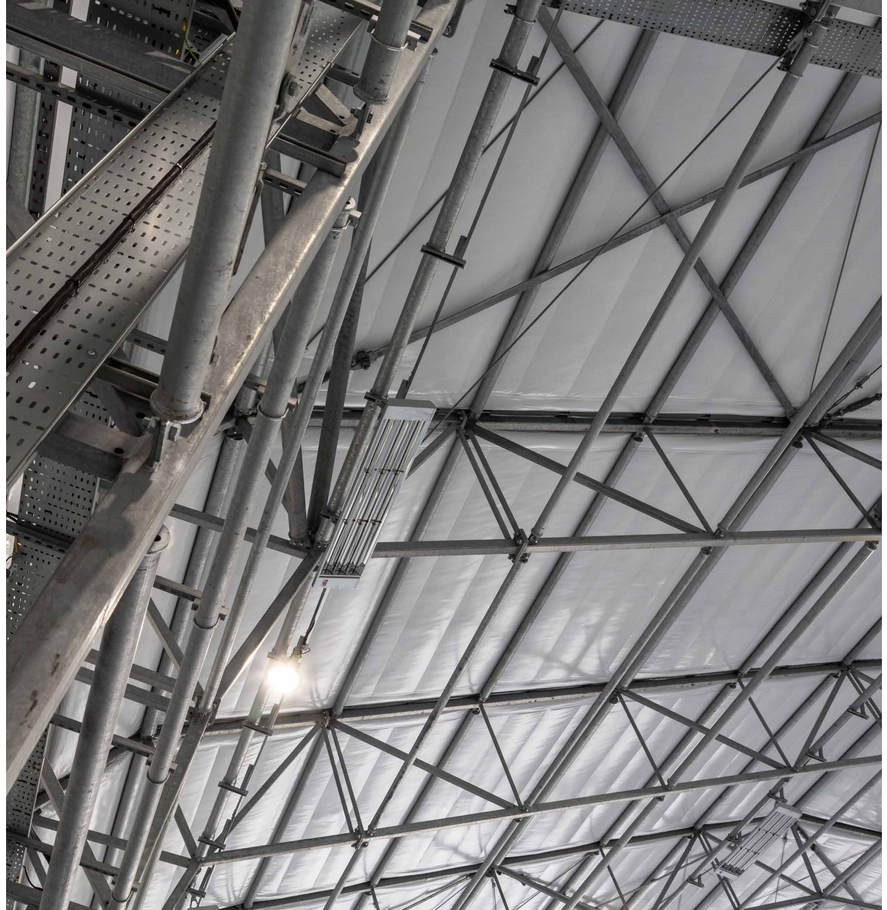
All structures are code complaint, designed to meet wind and snow loadings of its geographical location. Rubb PVC fabric cladding has a manufacturer's warranty of 10 years. Steelwork is hot dip galvanized in post production to eliminate any chance of corrosion, and comes with a 25-year warranty.

Multiple door options

Rubb offers a variety of different 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 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.

E.ON Energy

Ironbridge Power Station, UK

Type
BVC

Span
31.5m

Long
137m

Eaves
8.8m

Apex
21m

Door
RSD

Rubb worked with AJS Contracts Ltd to provide its tallest structure to date to energy giant E.ON UK.

The 31.5m span x 137.5m long building at Ironbridge Power Station, Shropshire, UK, has an apex height of 21m. The roof provides rigidity with minimal deflection, providing stability and support for a 200 ton roof-mouted conveyor system used for the dispersal of biomass fuel products. The wood pellet processing facility features a roof pitch of 35° which was designed around the angle of repose of the biomass materials. Ironbridge was previously a coal fired power station that has been converted to run on biomass fuel. It is the first of its kind in the UK.

It was clear from the outset that Rubb were determined to deliver what was their most challenging build ever on a project that had an almost impossible timescale. Rubb Buildings have developed a biomass facility that can be rolled out globally across the renewable industry sector and AJS Contracts would be more than happy to recommend their services to any prospective client.

Renewable Energy Manager,
AJS Contracts, **Martin Wylie**

Marshall Industries

Ontario, Canada

Type
BVE

Span
18m

Long
35m

Eaves
7.92m

Apex
12.2m

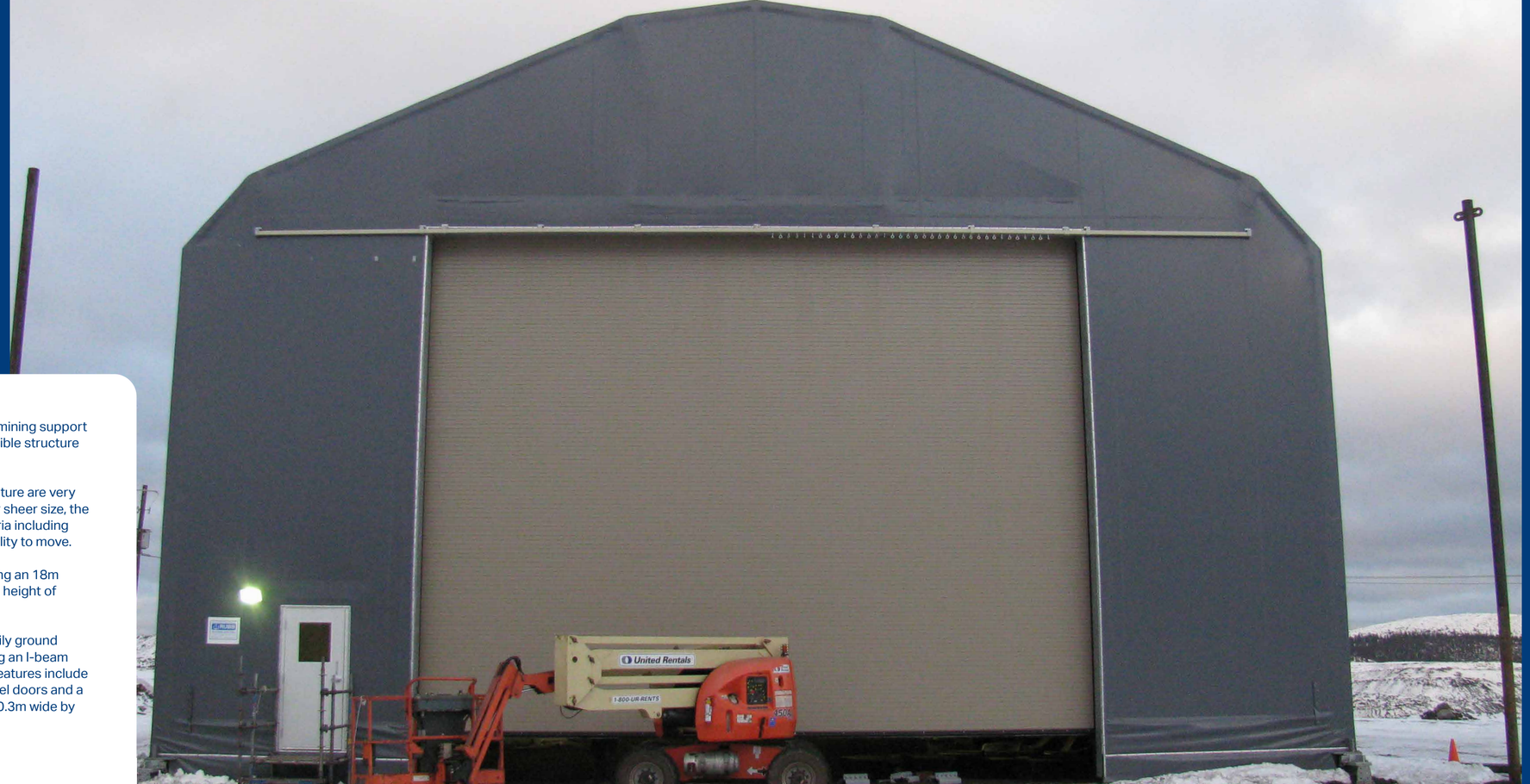
Door
RSD

Rubb was contacted by Marshall Industries, a mining support contractor based in Ontario, who needed a flexible structure for a truck maintenance and assembly facility.

The types of vehicles to be housed in the structure are very large mining dump trucks and, because of their sheer size, the building had to meet very specific design criteria including high sidewalls, a large service door, and the ability to move.

Rubb's engineering team went to work designing an 18m wide by 35m long BVE structure with a sidewall height of 7.92m.

In addition to the extreme design loads (primarily ground snow load), the structure needed to move along an I-beam foundation utilizing Hilman Rollers. Additional features include full insulation package with inner liner, personnel doors and a large Cookson roller shutter door measuring 10.3m wide by 8.5m tall.



Larvikittblokka

Larvik, Norway

Type
FH

Span
15m

Long
25m

Eaves
6.4m

Apex
7.7m

Door
RSD

Thermohall®
100mm

Rubb has supplied stone mining company Larvikittblokka with a 15m span x 25m length x 6.4m sidewall FH hall.

Erected on top of the Klåstad quarry in Larvik, the Rubb building will assist in the sawing and production of larvikite blocks. Chosen specifically for its deep, dark colour that lends the stone an 'organic, solid, and elegant feel,' Larvikittblokka offers the stone in 0.4m to 1m falling lengths. With blocks this large, it's no surprise they reached out to Rubb for a flexible storage solution.

The hall is complete with two ventilation fans in each gable and several doors. An electrically operated 4.8m x 5m motorized industrial articulated lift door; two 1m x 2.1m wicket doors; and a 3m x 3m folding door placed in the gable.

We needed a hall that was both temperature-regulating and had a frost-free indoor climate. At the same time, it was important that the hall was noise-reducing. Rubb AS has been very good in both the planning phase and the implementation of this project.

Manager, Larvikittblokka,
Jan Henrik Hansen

Offshore Repairs

Kent, UK

Type
BVI

Span
22.5m

Long
20m

Eaves
5.5m

Apex
8m

Door
3x AFT

This company was investigating a wind turbine blade improvement and upgrade solution which would utilise its offshore jack up vessels.

To make the operation cost effective and efficient, the wind turbine blades had to be modified out at sea and under cover. Doing this would save the time and money usually taken to transport the blades back to shore, and it would resolve the high risk of personnel doing the modifications up at height.

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.

DMC Mining

Scarborough, UK

Type
THA

Span
8/12m

Long
9/18m

Eaves
3.3m

Apex
5/6m

Door
RSD

Thermohall®
50mm

Rubb provided a solution for DMC Mining and their pot ash project in Scarborough.

Two THA structures were supplied for the project, measuring 8m span x 9m long and 12m span x 18m long.

Both buildings include 150 lux lighting, as well as a heating package to maintain an ambient temperature for workers. This is supported by each building's 50mm Thermohall® insulated cladding, which will make sure the heat is contained for a comfortable working environment.

Each structure is equipped with an electrically operated roller shutter door to the gable. The smaller structure's measures 2.9m wide by 3.5m high, while the larger structure's is 4m by 4m.

Both structures will be used as housing for grouting machines.

The structures are required for a pot ash mining operation in Scarborough and are situated in a conservation area managed by North York Moors National Park Authority. Due to this, the buildings have to meet very stringent regulations and standards—such as the dark green colour of the cladding, and the overall size of the buildings—which Rubb confidently oversaw.

Rubb's handling of this project goes to show the level of professionalism and responsibility which can be expected from the team.

Cavendish

Berkley Power Station, UK

Type
BVR

Span
13.8m

Long
12.8m

Eaves
4.4m

Apex
5.6m

Door
RSD

Thermohall®
150mm

Rubb continues to support Cavendish's Berkley Power Station with a nuclear waste processing facility.

The 13.8 span x 12.8m length BVR is custom designed to aid in the recovery and processing of "sludge canisters"—packaged mobile waste currently stored within Berkley's vaults. Around 1,400 of these canisters are currently stored, so the processing and packaging structure needs to be up to the task.

For the project to be a success, safety was of the upmost importance.

Rubb was tasked with developing a design which can be easily decontaminated, as the processing facility's equipment must be disposed of with conventional methods once the project reaches completion. As a result, Rubb had to design the structure with smooth surfaces and minimal contamination traps in mind.

Additional protection for personnel and equipment is provided by a 150mm Thermohall® insulation, ensuring no interference from the elements.

A 3.5m x 3.5m electrically operated roller shutter door was added to allow easy access for the nuclear waste canisters.

Rubb was thrilled at the opportunity to demonstrate the adaptability of Rubb structures, showing that Rubb can meet the requirements of the most challenging and safety-conscious projects.

ThermoHALL®

Rubb's insulated cladding system

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 our 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 relocatablity. All Thermohall® buildings can be delivered to suit our customers' insulation requirements

Thermohall® technical specification

Thickness	U Value (SI) W/m2K	R Value (US) ft-F-hr/BTU
50mm (2in)	0.67 W/m2K	R11
100mm (4in)	0.36 W/m2K	R19
150mm (6in)	0.25 W/m2K	R27

Outer layer

Flame retardant heavy-duty fabric

Inner layer

Self-cleaning PVC fabric

Core

High-density glass wool insulation

Rubb structures

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 cargo and logistical needs.

Production

Our 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.

Rubb can provide custom designed facilities in a variety of configurations and sizes to suit your specific requirements.

The structure types below are typically used for Rubb's energy projects.

To learn which kind best suits your project, contact the Rubb team today.

BVE

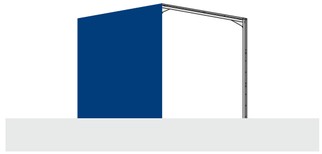
BVE structures feature lattice frame sidewalls and can be designed with single or multiple lattice roof pitches. 20m to 40m span widths, by any length.

BVC

The BVC is designed with a vertical column leg and a lattice frame roof. This structure type offers a large clear internal area. 40m to 100m width spans are available.

BVL

The BVL has vertical lattice frame sidewalls and single or multiple lattice roof pitches per span. Large spans start from 40m to 100m in width, by any length.



BVR

The versatile BVR structure type features rectangular leg and roof box sections. The leg height can be extended for additional interior clearance.

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.

Rubb can supply a wide range of access and industrial roller shutter doors.

Access door

These types of doors are suitable for public and non-public areas. EN 1125 and EN 179 standards apply to push bars and touch bars respectively. All doors and emergency exit doors supplied by Rubb adhere to European product standards. To meet customer requirements, all doors come with CE marking and are ISO 9001 approved.

Roller shutter doors

Commercial off-the-shelf doors, measure up to 10m x 10m, but Rubb can also offer custom door sizes. All doors incorporate a motor driven system, with built in safety mechanisms. Doors can be electrically operated and can be combined with safety devices and traffic lights. All doors can be customised to suit business operations.

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RUBB
Building Systems

Rubb Buildings Ltd is a company in Rubb Industries AS, which is part of Zurhaar AS.