Thermohall®

Rubb's innovative insulated system

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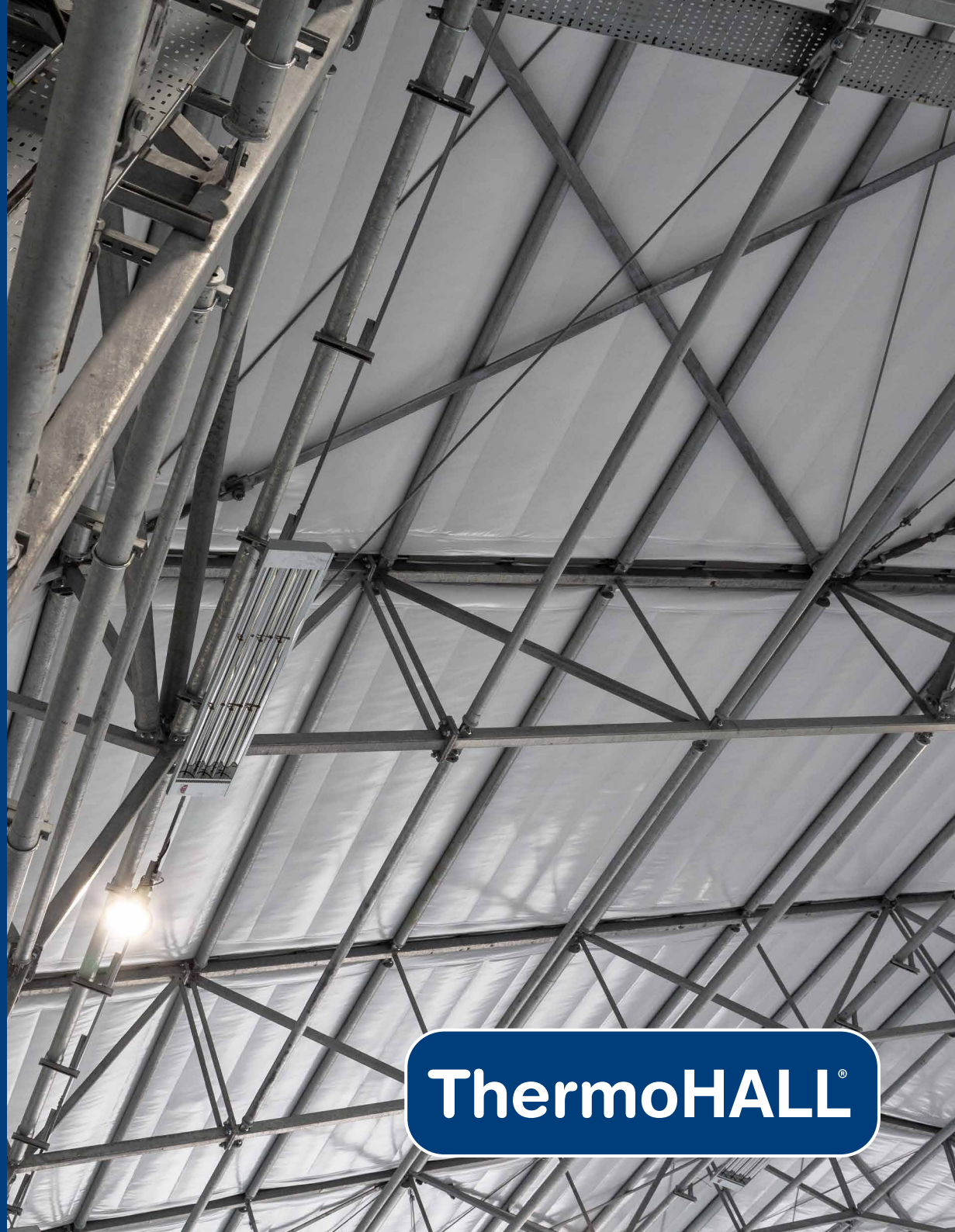
RUBB Building Systems



Rubb's innovative fabric insulation system is available on all our buildings.

Rubb's Thermohall® fabric can be used to clad many Rubb structure types, from small standard shelters up to large scale multi-span aircraft hangars. The fabric provides many benefits to help promote energy efficiency. Thermohall® cladding consists of a durable external PVC layer and a self cleaning internal PVC layer, which encapsulate a series of air-tight PVC 'pockets', each featuring a non-combustible glass wool insulation core.

The insulated panel system provides a full vapour seal, which minimises thermal bridging and reduces infiltration losses. This reduces condensation on framing members, improving insulation efficiency.

The cladding is highly resistant to tearing, stretching and movement under load—even in very harsh weather conditions. It is securely fastened to the outside of a galvanized steel support structure and virtually eliminates thermal bridging and air infiltration. Together with our use of special high density insulation, Thermohall® structures typically out perform other systems that have higher insulation thicknesses but lower overall effective thermal resistance.

Thermohall® benefits

- Insulated panels include outer weather liner, integral glass wool insulation and inner liner
- System provides a full vapour seal, greatly reducing infiltration losses compared to other insulation systems
- U-value flexibility: Thermohall® can be provided in different levels of insulation value, adaptable to customer needs and environmental conditions
- Insulated panels completely cover the structural frame to minimise thermal bridging
- This greatly reduces the condensation on framing members and improves insulation efficiency
- The system leaves the structural frame exposed internally, allowing for more efficient installation and service of electrical and mechanical equipment
- Roof and interior surfaces are provided in high gloss white to reduce solar load on the outside and increase reflectance within the building
- Factory pre-fabrication offers significant labour savings on site and greatly reduces installation time
- Rubb Thermohall® buildings are fully and easily relocatable
- Vacuum packaging reduces shipment volumes

Thermohall® attributes

Alternative solution

Rubb Thermohall® structures combine the best properties of conventional buildings and fabric buildings, including high thermal insulation, rapid construction and full relocatability. All Thermohall® buildings can be delivered to suit all customers' insulation requirements.

Insulation and heating

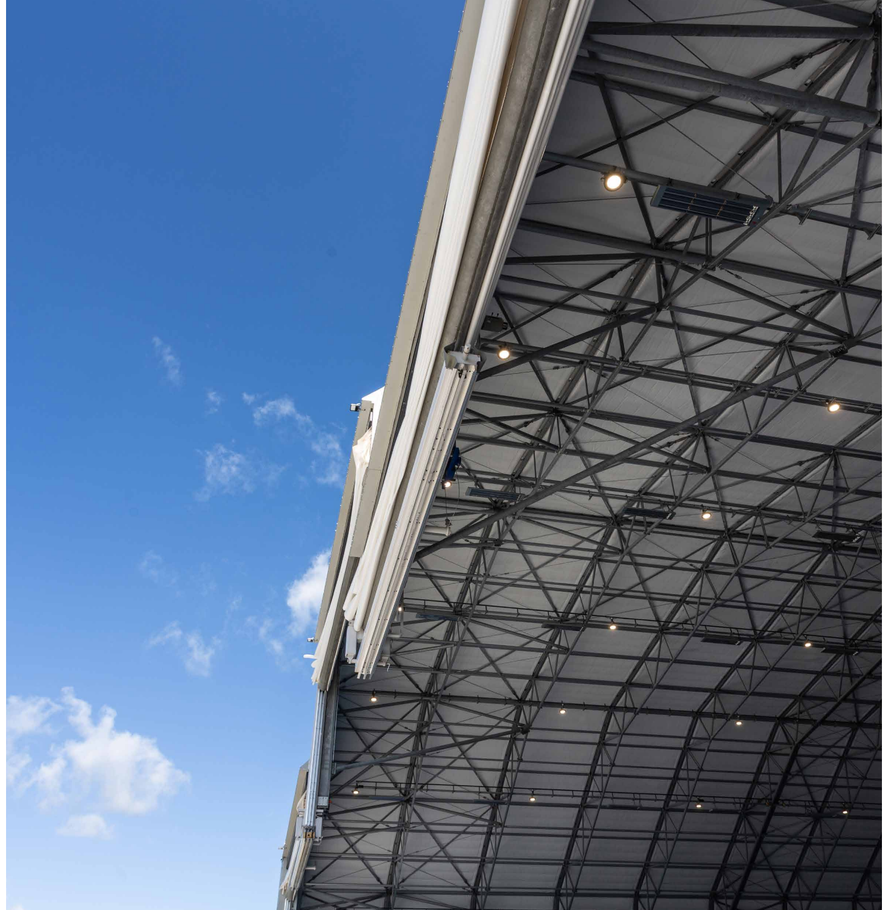
The depth of insulated cladding ranges from 50mm to 150mm, which provides a range of U Values to suit your requirements. Rubb can also supply various heat sources within the structure such as oil or gas fired hot air units, radiant heating, heat pump or electric fan heaters.

Quality

Thermohall® features high density, non-combustible glass wool insulation, encapsulated within a heavy duty PVC fabric cladding system, which is designed and manufactured in-house to suit site specific project requirements. All materials are of the highest quality and meet regulations.

Proven fire safety performance

Rubb buildings offer significant fire safety advantages over other building types, including lower risk of combustion, flashover and structural frame failure, even in severe fires. The fabric will not propagate flame or sustain combustion when exposed to a severe fire.



Moisture

Thermohall® has excellent drainage properties, is water repellent and does not absorb moisture or odours. It also helps eliminate condensation. We deliver our Thermohall® clad structures with simple or sophisticated ventilation systems to provide a comfortable working environment.

Soundproofing

Technical regulations and guidelines set standards for sound insulation. Our patented insulated fabric cladding system satisfies the requirements for sound passage, which is essential for our customers who are located in industrial areas or near roads or airports.

Sustainability

The insulation consists mainly of recycled glass. Thermohall® cladding can provide many environmental benefits including reduced energy use and helping support a stable indoor temperature all year round. Rubb structures are also fully reusable across the sectors we serve.

Recyclable

All materials used to create a Rubb building can be recycled if necessary. No materials from Rubb structures are considered to create any toxic or hazardous waste. 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.

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

Welsh Government

Bro Tathan Business Park, Wales

Type
BVE

Span
50m

Long
50m

Eaves
8m

Apex
18.5m

Door
Vertical

Thermohall®
150mm

Rubb completed its design, manufacture, and installation of a new MRO hangar on the Welsh Government's 1,200 acres business park in the Vale of Glamorgan.

Rubb's 50m (wide) x 50m (long) x 8m (sidewall height) hangar, with an apex height of 18.5m, is capable of housing aircraft such as Boeing B737-800/Airbus A320-A321 and will be used as a compliant Part 145 MRO operation.

The hangar is insulated with 150mm Rubb Thermohall® cladding, featuring a goosewing grey exterior and white interior. The Thermohall® system effectively insulates the MRO hangar, resulting in a facility that can be easily climate controlled to suit usage and operations.

Ipswich Academy

Ipswich, UK

Type
BVC

Span
20m

Long
70m

Eaves
7m

Apex
10m

Door
RSD

Thermohall®
100mm

Rubb Buildings Ltd joined forces with construction giant Balfour Beatty to deliver a custom-made sports structure containing a mix of spaces as well as a main sports hall as part of a new £16m academy in Ipswich.

The split level 20m span x 70m long multi sports complex boasts a 7m high x 33m long playing area based on a four court badminton hall. This area, situated at the rear of the building, can also be converted to one basketball court, one netball court, one tennis court or one 5-aside football pitch.

The structure features Rubb's traditional galvanized internal BVC type steel frame. The walls from the ground up feature 4m high, 100mm thick insulated steel cladding. Rubb's Thermohall® insulated cladding completes the upper walls and roof.

Rubb were able to offer a design that met our requirements which was affordable and deliverable within the original planning timelines.

Estates & Facilities Manager
Steve Hawley

DE&S Ashchurch

Ipswich, UK

Type
EFASS

Span
25m

Long
52/24m

Eaves
6m

Apex
10.1m

Door
RSD

Thermohall®
150mm

Rubb has supplied two EFASS structures to DE&S Ashchurch, the MoD's primary location for vehicle maintenance, storage, and distribution in the UK.

The 25m span x 52m length and 25m span x 24m length EFASS buildings will support the MoD's vehicle operations. The larger 52m long building will serve as a vehicle maintenance and testing shop, while the smaller 24m long structure will store the vehicle parts to assist with this.

The MoD specified that an ambient temperature of 18°C was necessary for this project, which can easily be met with Thermohall®'s excellent performance. This temperature is maintained by an environmental control unit for heating and air-conditioning.

FTS Eiendom AS

Fredrikstad, Norway

Type
FXG

Span
30m

Long
59.3m

Eaves
6m

Thermohall®
150mm

Four insulated Thermohall® buildings increased storage space, while halving the costs for FTS Eiendom AS.

FTS is set to streamline its flow of goods and expand storage capacity with the help of Rubb. FTS Eiendom AS is a provider of a range of logistics products within shipping, forwarding, storage and distribution.

FTS chose Rubb as its partner to help set up four storage halls, each measuring 1800m² (19,375ft²). The concept includes rental of warehousing space for customers who need space near the growing port in Fredrikstad. In order to keep costs and rental rates down, FTS Eiendom decided not to build traditional warehouses, and selected insulated buildings provided by Rubb.

We could have built an 'ordinary' steel building, but it was twice as expensive. Now we can go into the market with a very favourable price.

Manager, FTS Eiendom
Jon Børresen

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.

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.

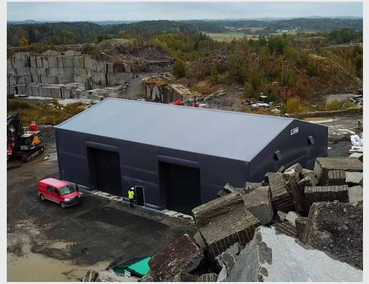
Erected on top of the Klåstad quarry in Larvik, the Rubb building will assist in the sawing and production of larvikite blocks. Chosen specifically for its deep, dark colour that lends the stone an 'organic, solid, and elegant feel,' Larvikittblokka offers the stone in 0.4m to 1m falling lengths. With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

Noise reduction was significant factor the client needed to be addressed, as a good solution to that would allow work to take place on evenings without disturbing their neighbours. To meet this requirement, Rubb AS insulated the hall in 100mm Thermohall®. In addition to the glass wool technology's temperature-regulating properties, Rubb's energy efficient solution also insulates sound.

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. The quarry has been given a hall that meets all our requirements and wishes.

Manager, Larvikittblokka
Jan Henrik Hansen



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

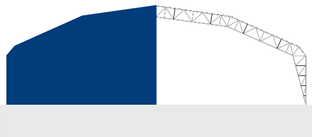
Using proven engineering software, we can tailor the project to the specific requirements of the site, type of cargo and logistical needs.

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.



BVE

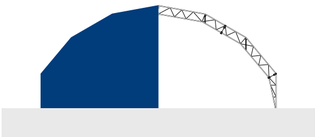
BVE structures feature lattice frame sidewalls and can be designed with single or multiple lattice roof pitches. 20m to 40m span widths, by any length.

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.

THA

The Rubb THA fabric shelter range features robust industrial tents and portable temporary shelters to suit your construction, manufacturing, and storage requirements.

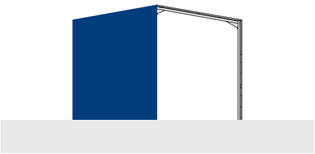


NV

The Rubb NV is designed with a high apex height in mind for maximum storage space. It is also a structurally efficient shape for regions of high snowfall.

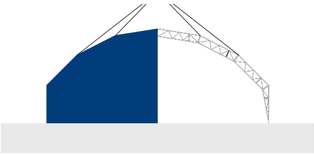
BVL

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.



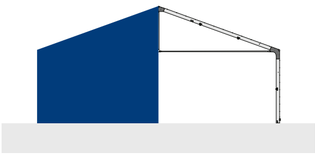
BVR

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



BLE

The Rubb BLE series of structures are BLE structures are equipped with lifting points and designed to be liftable, moveable, extendable, and relocatable.



Rubb Hall

Our standard prefabricated Rubb Halls have been optimised for a variety of industrial applications. Rubb Halls are flexible, durable, portable, and designed for fast delivery.

Twin/triple link

Twin and triple links are more affordable than single roofs for very large projects, due to the reduced amount of steel work.

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.

Rubb can also 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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