

# Emergency services

Innovative fabric buildings





**Rubb's innovative emergency services facilities are custom designed to suit our clients' needs.**

Rubb is a leading provider of tailor-made emergency services 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 emergency services solutions across 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 emergency services sector—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 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 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.

# Oslo Fire Municipality

Oslo, Norway



**Type**  
Rubb Hall



**Span**  
34m



**Long**  
34m



**Door**  
RSD

Rubb and Renthall supported the fire service in Oslo by providing a temporary fire station.

The solution was to build a temporary fire station at Eikenga to cover the Bryn Fire Station catchment area. The fabric clad structure was constructed in February and is already in use. After the main station is complete in 2023, the Eikenga fire station will be demobilised.

This Rubb hall measures 34m wide x 34m long and includes six doors in the front gable, each measuring 4m wide x 5m high. The temporary fire station building can accommodate five fire engines and a washing/cleaning area. There is also a gym and washing facilities for staff.

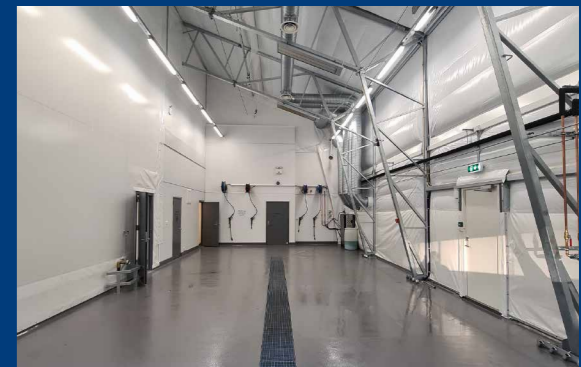
Rubb AS and Renthall's flexible rental building solutions have proven to be the perfect fit for the fire service's needs.

Rubb and Renthall completed this project in collaboration with Thorendahl as the main contractor. This relationship will continue throughout 2020, with Rubb and RentHall providing another temporary fire station for property management company Omsorgsbygg. This will be at Suhms Gate in Oslo.









**We were faced with a real challenge to establish both a main station and central fire station, while simultaneously safeguarding the fire service's capabilities and capacity in Oslo City.**

CEO, Omsorgsbygg  
**Tore Fredriksen**



# NPAS Bournemouth

Bournemouth Airport, UK

	<b>Type</b> BVE		<b>Span</b> 26m
	<b>Long</b> 17m		<b>Eaves</b> 7.5m
	<b>Apex</b> 11.4m		<b>Door</b> Heli-Door

The National Police Air Service needed a new helicopter hangar after moving its Dorset base from police HQ to Bournemouth Airport.

Rubb helped NPAS meet that requirement with a custom designed helicopter hangar. A Rubb Heli-Door in the front gable provides a clear opening of 21.5m wide x 5.5m high. The rear gable end includes a 4m x 4m roller shutter door and one personnel door. Each sidewall includes an additional personnel door for access and egress.

The Rubb BVE aviation structure features Rubb's traditional galvanized internal steel frame and a tapered lattice leg design. The building is clad with durable PVC Ferrari fabric, providing Sargaso blue walls and roof.



**The facilities at the new hangar and base are excellent. It is an ideal location to operate from in order to service Dorset, Hampshire and the Isle of Wight.**

NPAS Base Manager  
**Sergeant  
Neil Cartwright**



# USNS Mercy

USA



Type  
BVE



Span  
12.2m



Long  
17/14m



Eaves  
5m



Apex  
7m



Door  
RSD



Rubb is proud to have provided USNS Mercy and USNS Comfort with flight deck helicopter hangars to support medical evacuations.

The prominent Rubb structures are 12.2m wide x 17m (USNS Comfort) and 14.6m (USNS Mercy) long with 5m sidewalls. Both structures currently hangar Blackhawk helicopters.






The USNS Mercy and USNS Comfort are 272m long, can carry 1200 medical personnel and are equipped with 1000 hospital beds. Both ships contain 12 operating rooms, 80 ICU beds and similar specialty equipment that can be found in any large hospital.

The Mercy and its sister ship the USNS Comfort have been in service since 1986. Most recently these ships were deployed to Los Angeles harbor and New York harbor respectively to support local health-care efforts in dealing with the COVID-19.



# L & N Air Ambulance

RAF Waddington, UK

-  **Type**  
BVE
-  **Span**  
20m
-  **Long**  
33m
-  **Eaves**  
3m
-  **Door**  
Sliding

Rubb constructed a 20m wide x 33m long helicopter hangar from 'legacy stock' at the new LNAA base at RAF Waddington, south of Lincoln. The helicopter hangar features a clear door opening of 17.2m wide x 6.5m high.

Lincs and Notts Air Ambulance is a dedicated Helicopter Emergency Medical Service, funded by charitable donations. LNAA's MD 902 Explorer helicopter can reach any point in the two counties in less than 20 minutes and on average can transfer a patient to hospital within 8 minutes. The 'Ambuicopter', is fully equipped for medical emergencies. It is permanently staffed by two paramedics, and a doctor on occasion.









**We were able to reuse the existing frame and double skin, insulated fabric and it looks brilliant. We are delighted to be able to deliver this project to the air ambulance team.**

Sales Manager, Rubb  
**Andrew Knox**



# North Weald Airfield

Essex, UK

	<b>Type</b> BVL		<b>Span</b> 40m
	<b>Long</b> 42m		<b>Eaves</b> 6m
	<b>Apex</b> 9.5m		<b>Door</b> Sliding

Rubb supplied a custom-designed solution for the National Police Air Service, situated in North Weald Airfield.

The 40m span x 42m long BVL will provide cover for police aircraft, and is fully relocatable if necessary. Easy access for aircraft is provided by a bespoke sliding door system, with pedestrian access to the sides.

The hangar features Rubb's durable steel framework, which is hot dip galvanized to protect from corrosion. The frame is fully covered with a high tenacity, flame retardant PVC-coated polyester fabric, which has a life expectancy of up to 25 years. The PVC cladding features two contrasting tones: blue walls, with a white roof.

Rubb was thrilled to continue this relationship with NPAS, especially with the chance to work somewhere with so much historical significance and importance to the local area. During WW2, the airfield was known as RAF North Weald and proved instrumental in the Battle of Britain. Today, North Weald connects people across England, as well as having destinations abroad.







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



## Thermohall® technical specification

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

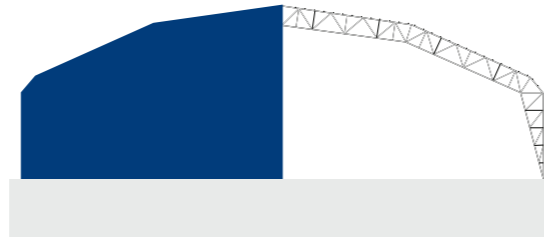
Our steel and membrane components are fabricated with proper equipment and quality control.



## Installation

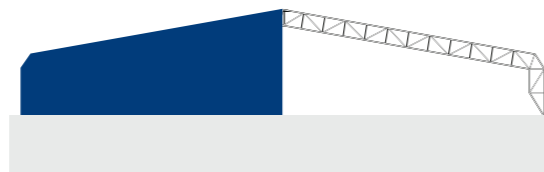
Pre-engineered and pre-fabricated to make on-site installation by a Rubb crew—or your crew—go smoothly and efficiently.

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



## 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.

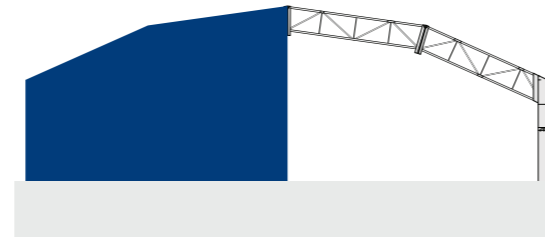


## BVL

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.

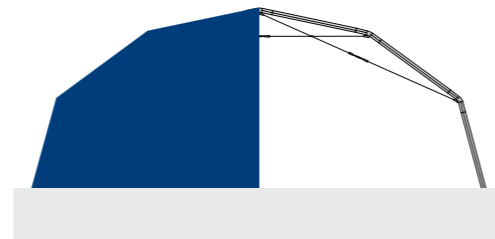
The structure types below are typically used for Rubb's emergency services projects.

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



## 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.



## EFASS

The EFASS hangar is designed for rapid deployment. Lightweight, robust and relocatable, these hangars are available in three widths (11m, 20.4m and 25m).

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



## Access door

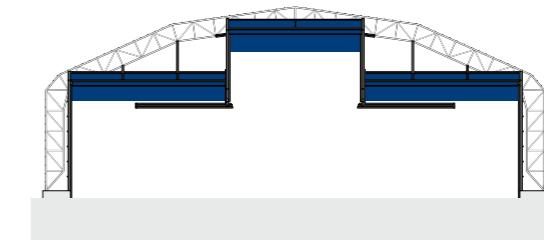
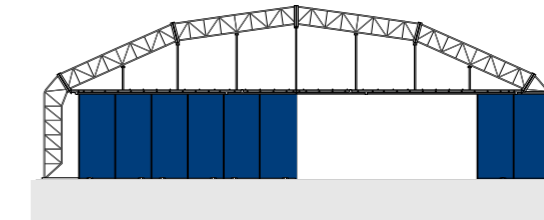
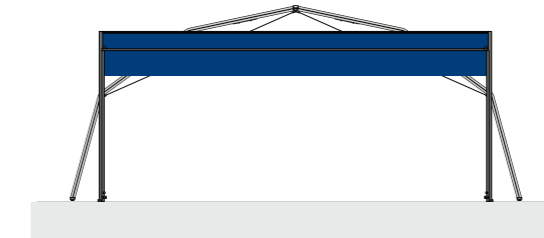
These types of doors are suitable for public and non-public areas. EN 1125 and EN 179 standards apply to push bars and touch bars respectively. All doors and emergency exit doors supplied by Rubb adhere to European product standards. To meet customer requirements, all doors come with CE marking and are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

Rubb has several different options for projects that require clear door openings for aircraft and vehicles.



Aside from Rubb's in-house Heli-Door system, our sliding and vertical lifting aircraft doors are supplied by world-renowned producers. All doors are bespoke and designed to project-specific requirements.

## Heli-Door system

Designed to be quickly constructed, this vertically folding door is electrically operated via two helical geared motors, with emergency hand operation capability.

## Sliding aircraft doors

This door is available in a variety of sizes to meet project requirements. These bottom rolling doors can be electrically or manually operated and insulated if needed.

## Vertical lifting doors

These doors are cost-effective, reliable and help create a bright working environment. They can withstand high windloads and eliminate draughts when closed.

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