



*we will never stop innovating*

# RUBB RELOCATABLE emergency relief SHELTERS

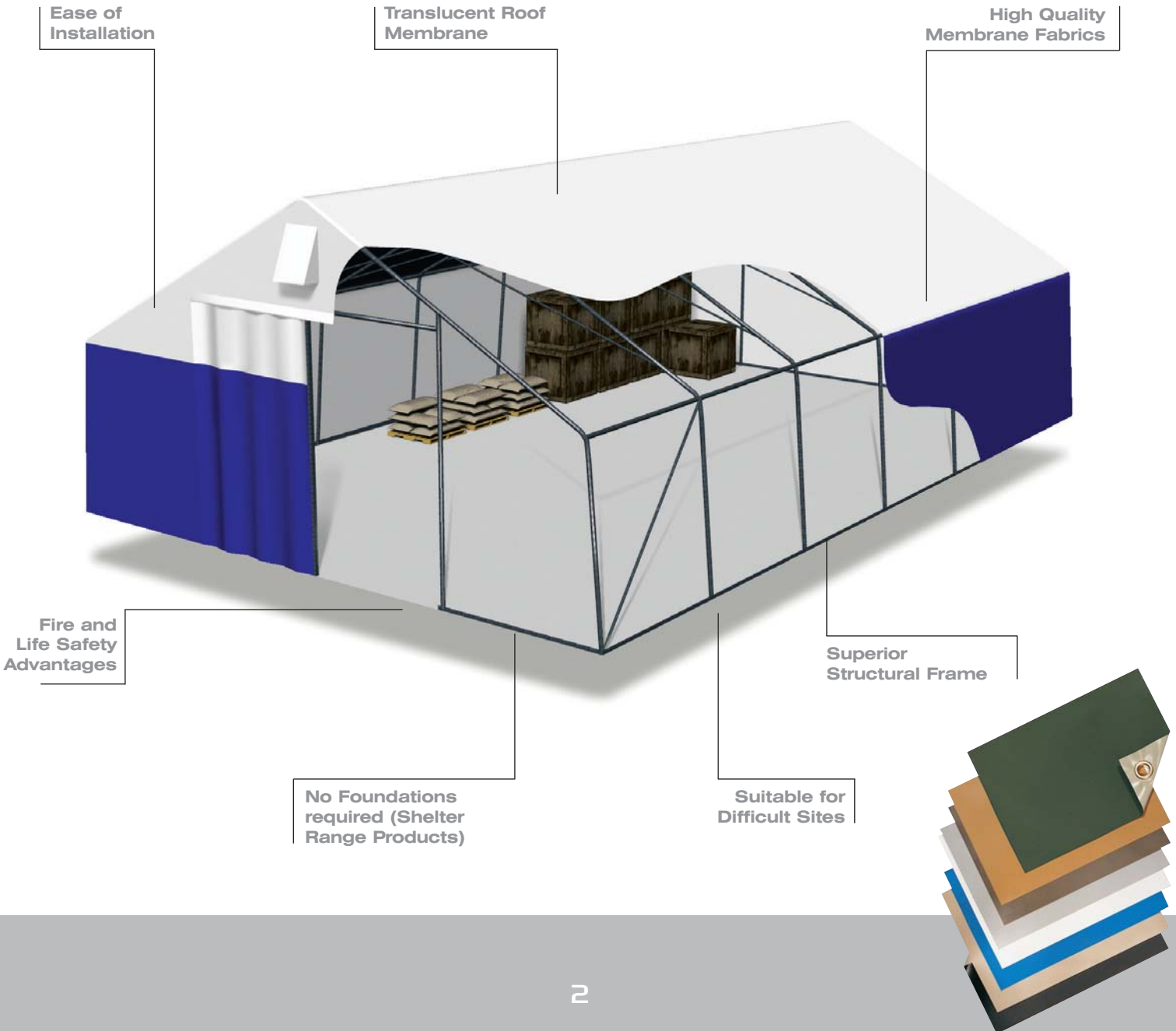


# Dependable, practical and proven solutions when challenging times demand.

Rubb is an international supplier of frame supported tents, shelters, warehouse buildings, aircraft hangars and a broad array of special purpose structures.

Our products feature a high strength frame system that is clad with a flexible, fire safe PVC membrane. All Rubb structures are designed for extended use in difficult climates and conditions and most of our products are also cost effectively relocated to meet changing requirements.

Rubb has been a major supplier to the aid and development market for over 25 years. The THA shelter is the workhorse of Rubb's product range offering a rugged but economical solution for a wide range of aid and emergency relief applications.





A reputation for quality,  
design integrity & long  
term service.



THA shelter components pack compactly for shipment.



**Major Benefits**

Rubb shelter systems range in clear span from 5m(16.4') to 15m(49.2'). The shelters are self-supporting and do not rely on guy ropes or inflation devices to maintain stability in difficult environmental conditions. Most shelter types include integrated foundation systems and may be installed on natural ground surfaces without substantial site preparation.

Designed and manufactured to be rugged and provide a service life of fifteen plus years, Rubb facilities are able to effectively support communities transitioning from recovery through rebuilding and development into stabilization. This capability sets Rubb apart from most manufacturers. Rubb shelter systems are shipped complete with tools, spare parts and detailed instruction manuals. These shelters can be provided with a range of environmental and electrical systems.



Interior of a typical THA shelter

Left: THAB shelters, Juba, South Sudan. 10m wide x 24m long x 3.35m side wall. These are used for storage of water treatment equipment for UNICEF.

500 people were temporarily housed in these THA Type shelters in Kampong Som, Cambodia.

## Rugged components withstand the test of time.

All Rubb THA shelters consist of a series of pin together frames that are connected and braced by horizontal tubes and diagonal bracing cables. Shelters come standard with a galvanized base angle foundation that allows placement on a wide range of surfaces with simple anchors.

Main span tubes are 76mm(3") and 89mm(3.5") high strength galvanized steel and all steel elements are standard mill items meaning ease of repair or modification when required.

THA shelters are load rated based upon documented destruction testing undertaken at Rubb's factories. THA shelters will withstand high loads and offer a fifteen year plus service life in most environmental conditions.

**THA Range** shelters are available in standard spans of 6m(19.7'), 8m(26.2'), 10m(32.8') and 12m (39.4') with a 3.35m (11') sidewall and 3m (9.8') bay spacing. All shelters can be supplied with a 2.35m(7.7') wall THB configuration in spans of 7m(23'), 10m(32.8') and 13m(42.7') for personnel shelter uses. As standard, the THA is supplied with a PVC folding door, base foundation angle and gable vents. Options for THA shelters include windows, insect netting, lighting and environmental control systems, insulation kits, ground sheets, interior partitions, lifting kits, a variety of door systems and snow load kits for certain models.

**THAB Range** shelters are a modified version of the THA shelter. The THAB is designed such that there are no welded components in the main frame system and is available in a 10m(32.8') span and with 4m(13.1') bay spacing. The THAB is optimized for the aid market with 10m(32.8') x 24m(78.7') long shelters inventoried to allow for fast response to emergency needs with a shelter that is more economical than Rubb's THA range. The THA/B is destruction tested with 25% safety factor to a roof loading of approximately 40kg/m<sup>2</sup> (8.2lbs./ft<sup>2</sup>) and shares most accessory options with the THA shelter.



10m(32.8') x 24m(78.8') span THAB shelter supplied to Focus Humanitarian Assistance for Afghanistan



500 tonne grain stores for UN in Ethiopia



10m(32.8') x 24m(78.8') span THAB shelter supplied to UN in Sudan



A total of 98 hangars, workshops and stores were supplied to the United Nations for this relief camp in Cambodia



NV buildings, Entebbe, Uganda. 20m wide x 42m long with 4m side wall. Used for the UN mission in Congo (MONUC).



6m(19.7') span RDS structures bound for the UN packed at Rubb Buildings Ltd, UK

## Clear advantages over other shelter products.

- **Readily Transported:** Shelters pack to less than 1% of their erected volume, efficiently fit in ISO containers and are also suitable for air transport.
- **Easily Installed:** Shelters are readily erected with simple tools and equipment. Components are colour coded for ease of identification. Maximum parts interchangeability and detailed instruction manuals simplify installation.
- **Space Efficient:** High inclined sidewalls and rectangular footprint provide more usable volume per unit floor area.
- **Durable:** Heavier weight, PVC cladding materials are fire safe and UV resistant. Post production hot dip galvanizing of welded components ensures long structure life.
- **Light Weight Alternatives:** Aluminium frame versions of the THAB and RDS range of shelters are ideal for air freight.



5 off 10m(32.8') span x 24m(78.7') long THAB shelters can be packed in one 20ft container



Inner skin being installed in a 10m(32.8') span THAB delivered to the UN in Sudan



## More shelter options to meet a wide range of user requirements.

In addition to Rubb's THA and THAB range of shelter products Rubb also offers the THPA and RDS shelter range products.

THPA and RDS shelters are designed to function as readily erected and fully relocatable field housing and operations shelters. Larger RDS shelters also provide efficient space for storage and workshop applications.

These shelters come with a complete range of options including insulation kits, floor kits, electrical and climate control systems and a variety of door and window options.

The standard **THPA shelter** is provided in a width of 5.5m(18') which is optimized for personnel housing. Lengths are in increments of 4m(13.1'). Other widths are available. The THPA comes standard with a base angle foundation which allows the shelter to be readily erected on a wide variety of surfaces. Simple, proven components bolt together with common hand tools allowing installation without special skill and equipment requirements.

The **RDS shelter** is a arch shaped shelter that provides high structural efficiency in a lightweight kit. The 5m(16,4') span RDS comes standard with an aluminum frame system allowing a finished weight of just over 4.88kg/m<sup>2</sup> (1lb./ft<sup>2</sup>). RDS shelters are available in spans from 4m(13.1') to 9m(29.5') and in high strength versions for severe climates. Higher strength versions are fabricated from steel.

25m(82') span x 48m(157) long with 4m(13.1') side wall NV type building supplied to World Food Programme at UN base in Brindisi



10m(32.8') span THABL shelter. This shelter is a light aluminium frame version of the THAB type shelter



5m(16.4') span x 10m(32.8') Mk II shelter. This is an aluminium framed light version of the RDS shelter. It can be supplied with inner skin, floor, and internal walls



20m(65.6') span NV type building and 10m(32.8') span THAB type shelter supplied to UN in Congo





# Large building options and engineering capability for custom projects.

Rubb's expertise in products for the aid market is complemented by its ability to provide a wide range of standard and custom products of extraordinary size and complexity. Whether the requirement is for a 10,000m<sup>2</sup> (107,600 ft<sup>2</sup>) air cargo facility for a major airline or a custom enclosure for a sea going vessel, Rubb has the products, the personnel and the expertise to meet the challenge.

**Rubb BVE and NV** range steel truss frame structures find uses in any location where design integrity and operational flexibility are highly valued.

**Rubb RES** aluminum frame hangars fit the bill where freight and site logistics require optimal shipping and installation efficiency.

United Airlines, Cargo facility at LAX, California, USA



United Airlines Cargo Facility at JFK Airport in New York, USA.



27m(88') x 30m(98') hangar for Scot Airways in Dundee, Scotland



12m(39.4') x 14.6m(48') BVE helicopter hangar on board the ship USNS Mercy



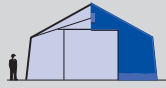
# Typical span configurations



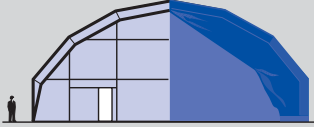
**RDS Type Shelter**  
Up to 9m(29.5') span



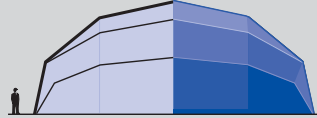
**TH Type Shelter**  
Up to 7m(23') span



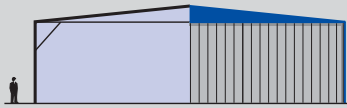
**THA Type Shelter**  
Up to 13m(42.7') span



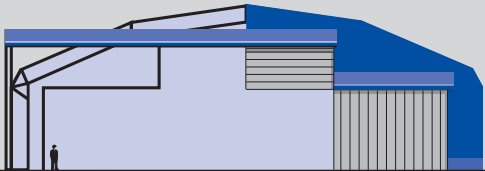
**NV Type Building**  
Up to 25m(82') span



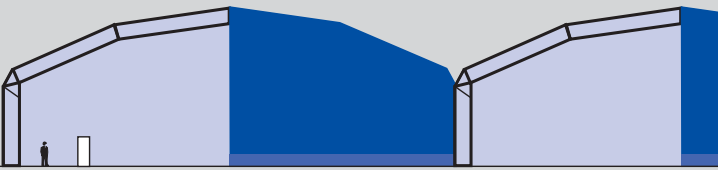
**RES Type Building**  
Up to 26m(85') span



**REH/BVR Type Building**  
Up to 25m(82') span (shown with hangar doors)



**BVE Type Building** Up to 85m(279') span (shown with hangar doors)



**Twin Link Building** Shown in BVE profile configuration

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

- Design - Using proven engineering software we can tailor the project to the specific requirements of site, type of cargo and logistics 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.



USA - CERTIFICATE  
No. US97/0897



UK - CERTIFICATE  
No. 95/6243



Norway - CERTIFICATE  
No. 144535A

## Peace of mind when you choose a Rubb structure...

Rubb structures are designed, manufactured, installed, serviced and warranted by the companies of the Rubb Group. Rubb's expertly engineered product design is backed by over thirty five years experience worldwide. More importantly, Rubb has a reputation for accountability and for providing practical solutions to weather protection problems of all kinds.

Our buildings are designed, manufactured and erected to ISO 9001/2000 standards and meet international building code standards for wind, snow and seismic loads.

After-sale service includes repairs and any further adaptation, relocation or refurbishment work. So your peace of mind extends well into the future.



**we will never stop innovating**

## RUBB AS

Sundvoldshovet, 3535 Krøderen,  
NORWAY

Tel: +47 24 048150

Tel from Norway: 0RUBB

Fax: +47 24 048151

E-mail: post@rubb.no

### RUBB BUILDINGS LTD

Dukesway, Team Valley  
Trading Est. Gateshead.  
Tyne & Wear NE11 0QE,  
ENGLAND  
Tel: 0191 482 2211.  
Fax: 0191 482 2516  
E-mail: info@rubb.co.uk

### RUBB INC.

1 Rubb Lane, Sanford  
Airport, Sanford,  
Maine 04073  
USA  
Tel: 1 207 324 2877  
Fax: 1 207 324 2347  
E-mail: info@rubbusa.com

visit Rubb at: [www.rubb.com](http://www.rubb.com)