

Rex Hall 6.5 x 8m

Rex Hall 10.0 x 24m

Rex Hall 10.0 x 32m



Rex Hall *Series*



www.nrsrelief.org

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Introduction



Rex Hall

The king of our tent structure range

Areas experiencing humanitarian crises often lack reliable structures to accommodate affected populations, safeguard food storage and create a decent infrastructure to respond to the disasters effectively. Mobile Storage Units (MSUs), or movable warehouses, are the answer when hard structures are unavailable or inadequate.

When MSUs are deployed and installed, the available storage capacity is boosted, whilst existing structures and local constructions are rehabilitated.

NRS Relief, the industry leader in humanitarian relief products, is proud to complete its range of family and multi-purpose tents with the king of our product range, the **Rex Hall**. Our product development and engineering team has worked tirelessly to bring this advanced mobile storage unit to the humanitarian community.

Easy transportation

The Rex Hall has been designed specifically to be air freighted following a natural disaster, and has a lightweight aluminium frame and space-efficient packaging. This allows for cost-effective transportation to wherever on the planet disaster strikes.

Endless options and conversions

Our tent design team has ensured our Rex Hall can be converted to any given disaster response need. Our high quality and durable structures offer various options to ensure they are suitable in any challenging situation.

The main application for a Rex Hall is as a warehouse. The fabric buildings, which are safe to construct and logistically optimised, are designed to be used in all climates around the globe. The 10 metre wide and 3.3 metre high structures are perfect for palletised storage and the full-sized truck doors make the Rex Hall easily accessible.

Optional accessories allow better use of the Rex Hall:

- Flexible internal partitioning
- Insulation liner system
- LED lighting system
- Solid flooring system
- Pedestrian door
- Roll-up side door and linking kit to link other Rex Halls
- Fire alarm system
- Heating system
- Mechanical ventilation system
- Solar energy system for off-grid electrical systems supply.

The accessories enable the Rex Hall to be used in the following configurations:

- Accommodation
- Distribution centre
- Dog kennels
- Hospital
- Kitchen / Canteen / Recreation
- Office
- School
- Workshop.

Manufacturing in-house

We pride ourselves in manufacturing all products that we sell, including the highly specialised production of our Rex Hall in our factory H. Sheikh Noor-ud-Din & Sons in Lahore, Pakistan. Please visit our website www.nrsrelief.com to view our Rex Hall production process and assembly videos to see the king of the range come alive.

Rex Hall - 6.5 x 8 m

WFP Standard



Key features

- WFP standard - mobile storage unit (MSU)
- Fast set-up with three to four personnel without use of lifting equipment or working on heights
- Made of durable aluminium box profiles and hot-dipped galvanised hardware, with covers of durable fire retardant and UV-resistant translucent PVC fabric
- Fully HF welded for long life
- Standard size 6.5 m width by 8 m with large entry doors (sections of 4 m length can be added)
- Designed to withstand high winds up to 31 m/s (>110 km/h) and can be used in both hot and cold climates.

Dimensions

Standard size	6.5 x 8 m
Total usable area	52 m ²
Main floor	52 m ²
Centre height	3.90 m
Width	6.50 m
Ridge length	8.00 m
Side wall height	2.50 m

Gable doors (width and height)

Total size	2.90 x 3.00 m
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Modular frame

Aluminium box profiles	2.70 - 3.50 m
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Hot-dipped galvanised steel apex, base plates and other steel components



Fire Retardant



Waterproof



Rotproof



UV stabilised



Logo customisable

Materials

All our materials are UV-proof, waterproof, rotproof and fire retardant
Marking and logos can be customised to your requirements

Outer tent Roof, wall, gable covers: 700 gsm PVC coated polyester, white, UV protected

Tent parts

Ventilators The gable ends are fitted with high placed large ventilators with mosquito netting

Doors Both gable ends are fitted with roll up doors, 2.9 x 3.0 m

Modularity The length of the shelter can be endlessly extended with modules of 6.5 x 4 m

Packing and shipping

Shelter and frame are packed separately

Package	A	B	C	D	Total gross weight
Items	<ul style="list-style-type: none"> • half truss • purlins • wall tension bars • gable columns • lifting fork for purlins 	<ul style="list-style-type: none"> • wall elements • gable tension bar right • gable tension bar left 	<ul style="list-style-type: none"> • roof apex • base plate • gable base plate • counter bracing • cables wall • ground spikes 20 x 800 mm • Bolts and nuts • tension bar tool • rope 15 m • tool kit • repair kit • spade • assembly manual 	<ul style="list-style-type: none"> • roof cover • roof cover for logo • gable cover with roll-up door • logo banner 	

Weight (kg) 640

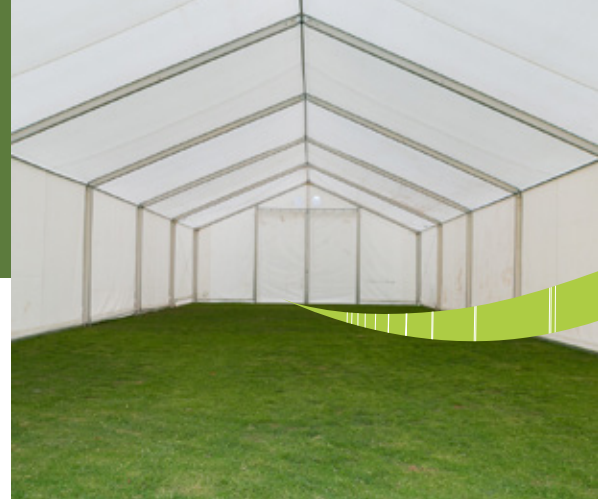
m³ 1.610

Estimated loadability

Container	Number of tents
20' GP container	14 shelter
40' GP container	28 shelter
40' HC container	32 shelter

Rex Hall - 10.0 x 24 m

Used by IFRC/ICRC/WFP/UNHCR/UNICEF



Key features

- Mobile storage unit (MSU) used by IFRC/ICRC/WFP/UNICEF/UNHCR
- Standard size 10 m width by 24 m length (extra sections of 4 m length can be added) with large entry doors
- Fast set-up with 4-6 personnel without use of lifting equipment or working on heights
- Made of durable aluminium box profiles and hot-dipped galvanised hardware, with covers of durable fire retardant and UV-resistant translucent PVC fabric
- Fully HF welded for long life
- Designed to withstand high winds up to 31 m/s (>110 km/h) and can be used in both hot and cold climates.

Dimensions

Standard size	10 x 24 m
Total usable area	240 m ²
Main floor	240 m ²
Centre height	5.50 m
Width	10.00 m
Ridge length	24.00 m
Side wall height	3.35 m

Gable doors (width and height)

Total size	4.50 x 4.00 m
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Modular frame

Aluminium box profiles	4.00 x 5.50 m
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Hot-dipped galvanised steel apex, base plates and other steel components



Fire Retardant



Waterproof



Rotproof



UV stabilised



Logo customisable

Materials

All our materials are UV-proof, waterproof, rotproof and fire retardant
Marking and logos can be customised to your requirements

Outer tent Roof, wall, gable covers: 700 gsm PVC coated polyester, white, UV protected

Tent parts

Ventilators The gable ends are fitted with high placed large ventilators

Doors Both gable ends are fitted with sliding doors, 4.5 x 4.0 m

Modularity The length of the shelter can be endlessly extended with 10 x 4 m modules

Packing and shipping

Package	A	B	C	D	E	F	Total gross weight
Items	<ul style="list-style-type: none"> • roof cover • roof cover for logo • gable cover with sliding door • gate cover • logo banner 	<ul style="list-style-type: none"> • roof apex • base plate standard • gable base plate, standard • counter bracing cables wall • counter bracing cables roof • ground spikes 20x 1000 mm • tension bar tool • rope 30 m • tool kit • repair kit • spade • assembly manual • sledge hammer • roll thread 3 mm • Nuts • Bolts • Linch pin and washer 	<ul style="list-style-type: none"> • half truss • purlins • wall tension bars • gable columns • lifting fork for purlins 	<ul style="list-style-type: none"> • wall elements 	<ul style="list-style-type: none"> • gate assembly • gable tension bar right • gable tension bar left 	<ul style="list-style-type: none"> • ladder 	
Weight (kg)							1,950
m³							4.9

Estimated loadability

Container	Number of tents
20' GP container	6 tents
40' GP container	11 tents
40' HC container	12 tents

Rex Hall - 10.0 x 32 m

Used by IFRC/ICRC/WFP



Key features

- Mobile storage unit (MSU) used by IFRC/ICRC/WFP
- Standard size 10 m width by 32 m length (sections of 4 m length can be added) with large entry doors
- Fast set-up with 4-6 personnel without use of lifting equipment or working on heights
- Made of durable aluminium box profiles and hot-dipped galvanised hardware, with covers of durable fire retardant and UV-resistant translucent PVC fabric
- Fully HF welded for long life
- Designed to withstand high winds up to 31 m/s (>110 km/h) and can be used in both hot & cold climates.

Dimensions

Standard size	10 x 32 m
Total usable area	320 m ²
Main floor	320 m ²
Centre height	5.50 m
Width	10.00 m
Ridge length	32.00 m
Side wall height	3.35 m

Gable doors (width and height)

Total size	4.50 x 4.00 m
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Modular frame

Aluminium box profiles	4.0 x 5.50 m
-------------------------------	--------------

Hot-dipped galvanised steel apex, base plates and other steel components



Fire Retardant



Waterproof



Rotproof



UV stabilised



Logo customisable

Materials

All our materials are UV-proof, waterproof, rotproof and fire retardant
Marking and logos can be customised to your requirements

Outer tent

Roof, wall, gable covers: 700 gsm PVC coated polyester, white, UV protected

Tent parts

Ventilators

The gable ends are fitted with high placed large ventilators

Doors

Both gable ends are fitted with sliding doors, 4.5 x 4.0 m

Modularity

The length of the shelter can be endlessly extended with 10 x 4 m modules

Packing and shipping

Package	A	B	C	D	E	F	Total gross weight
Items	7x roof cover 1x roof cover for logo 2x gable cover with sliding door 4x gate cover 4x logo banner	Bolts and nuts	18x half truss 24x purlins 16x wall tension bars 4x gable columns 1x lifting fork for purlins	18x wall elements & corner joints	2x gate assembly 2x gable tension bar right 2x gable tension bar left	1x ladder	
L x W x H (cm)	115 x 80 x 100 115 x 80 x 60	120 X 80 X 60	520 x 65 x 75	370 x 60 x 55	440 x 40 x 25	425 x 40 x 10	
Weight (kg)	755	420	745	430	85	10	2,445
m³	0.92 + 0.55 = 1.47	0.55	2.54	1.22	1.32	0.17	7.27

Estimated loadability

Container	Number of tents
20' GP container	5
40' GP container	8
40' HC container	10

Rex Hall applications

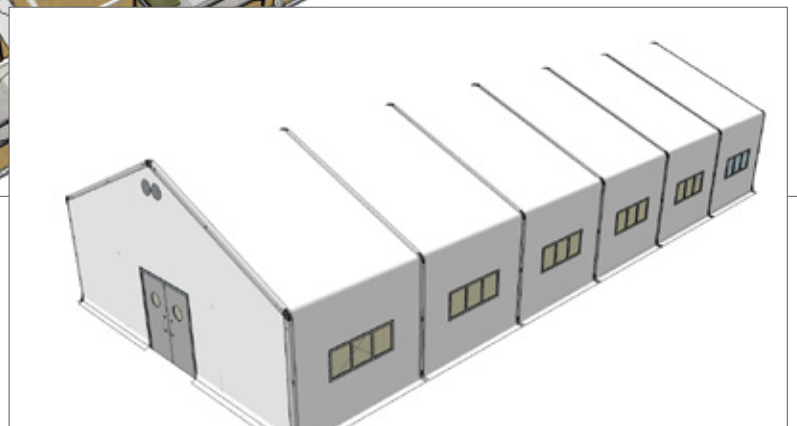
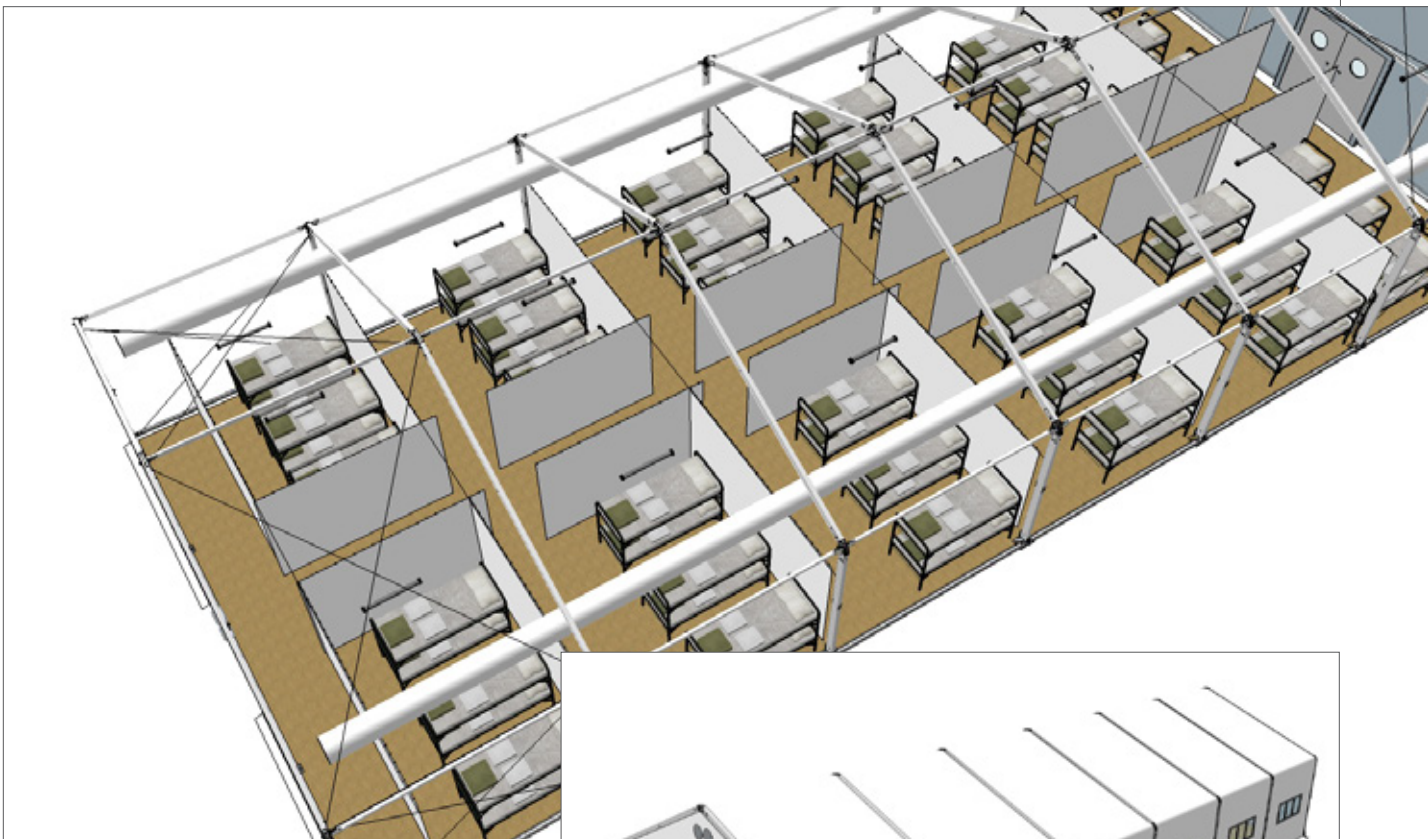
Accommodation

A Rex Hall can be easily transformed into a large accommodation tent. Depending on the scale of comfort, the standard structure can be fitted with a soft flooring liner to provide safe accommodation for 100 people in a Rex Hall 10.0 x 24.0 m. For more comfort, the tent can be upgraded with solid flooring, insulation liners with additional heating or air conditioning, and a flexible partition system to create wall partitions and even individual accommodation cabins.

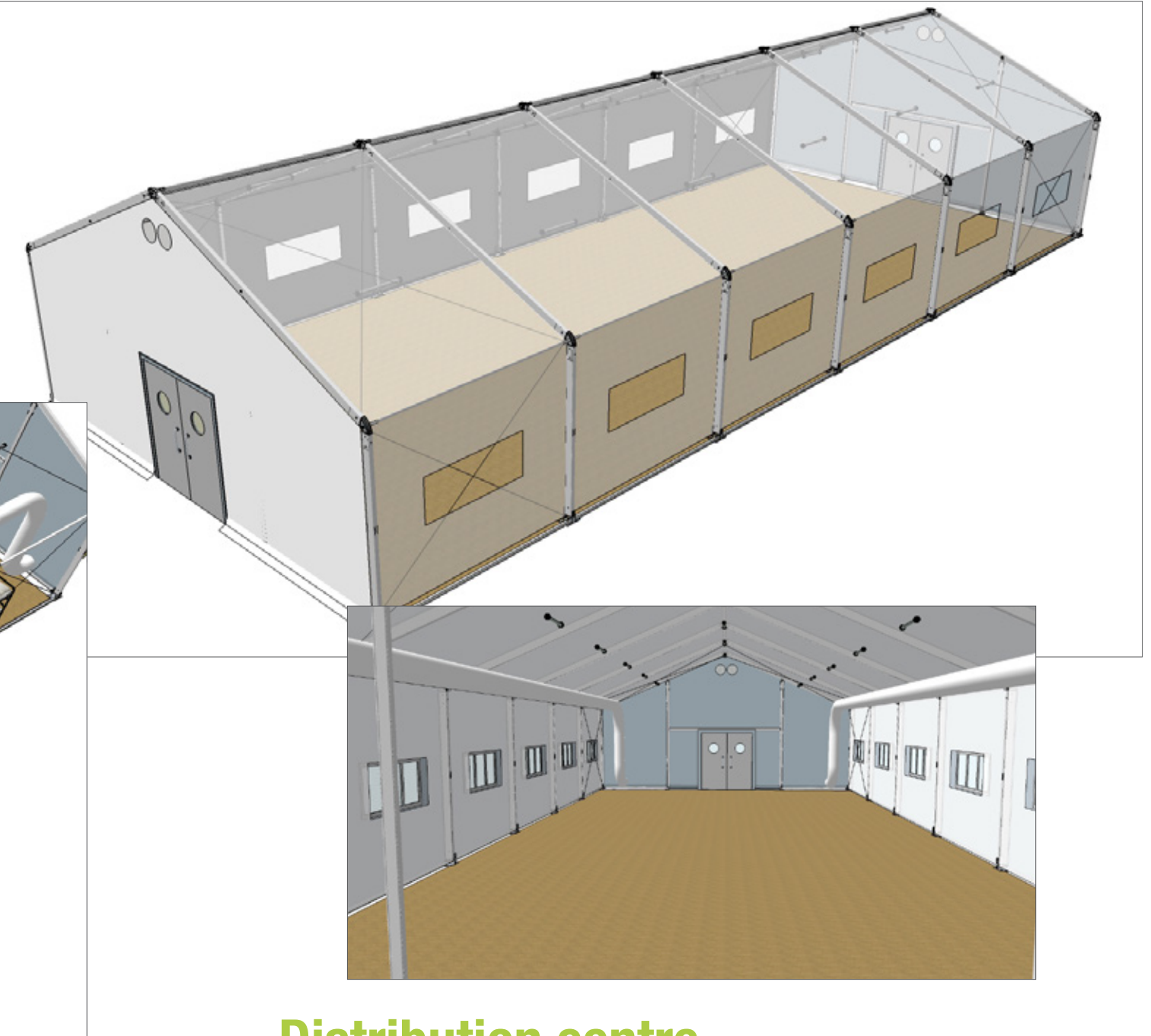
- Soft flooring
- Solid flooring system
- Insulation liners
- Pedestrian access doors in gable and side walls
- Flexible partition system
- Field beds and mattresses.

Distribution centre

A Rex Hall can also be used as a distribution centre for the controlled distribution of goods. A standard Rex Hall can be fitted with additional roll-up doors at preferred positions in the side walls, using one Linking Kit to connect other Rex Halls.



Accommodation



Distribution centre

Rex Hall applications

Hospital

A Rex Hall forms a safe and flexible modular structure that can be transformed into a medical facility, from a basic medical post to a full-scale hospital.

With standard available accessories and options such as LED lighting and a power distribution system, the basic infrastructure can be realised. Additional accessories such as special operating rooms make for a total solution.

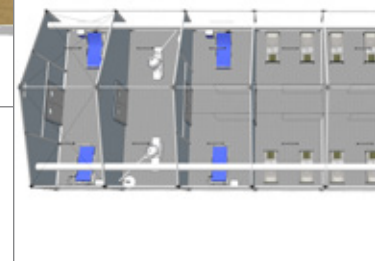
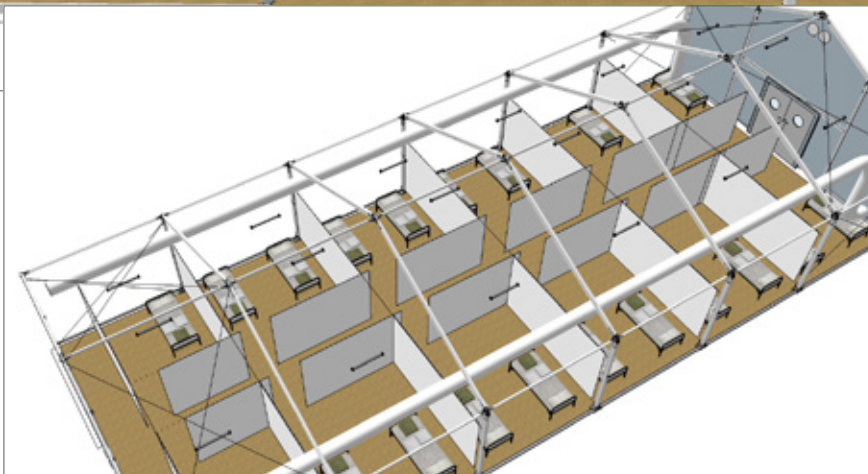
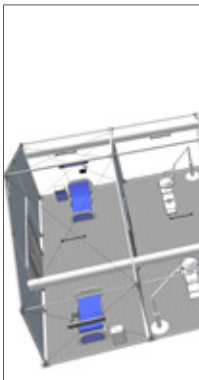
- Soft flooring
- Solid flooring system
- Insulation liners
- Pedestrian access doors in gable and side walls
- Cover panels with windows
- Flexible partition system
- Heating or air conditioning
- Medical inventory and equipment.

Kitchen / Canteen / Recreation

A standard Rex Hall can be converted into a kitchen and canteen area, with additional use as recreation area and central meeting hall.

Standard accessories such as flooring, doors, lighting, and partition walls in combination with customised appliances for the kitchen and canteen areas (i.e. extra ventilation and cooking equipment) make a comfortable and hygienic space for eating and meeting.

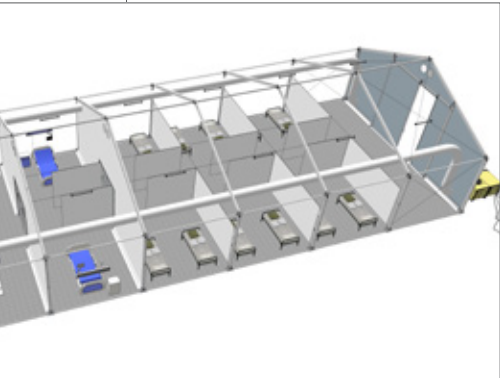
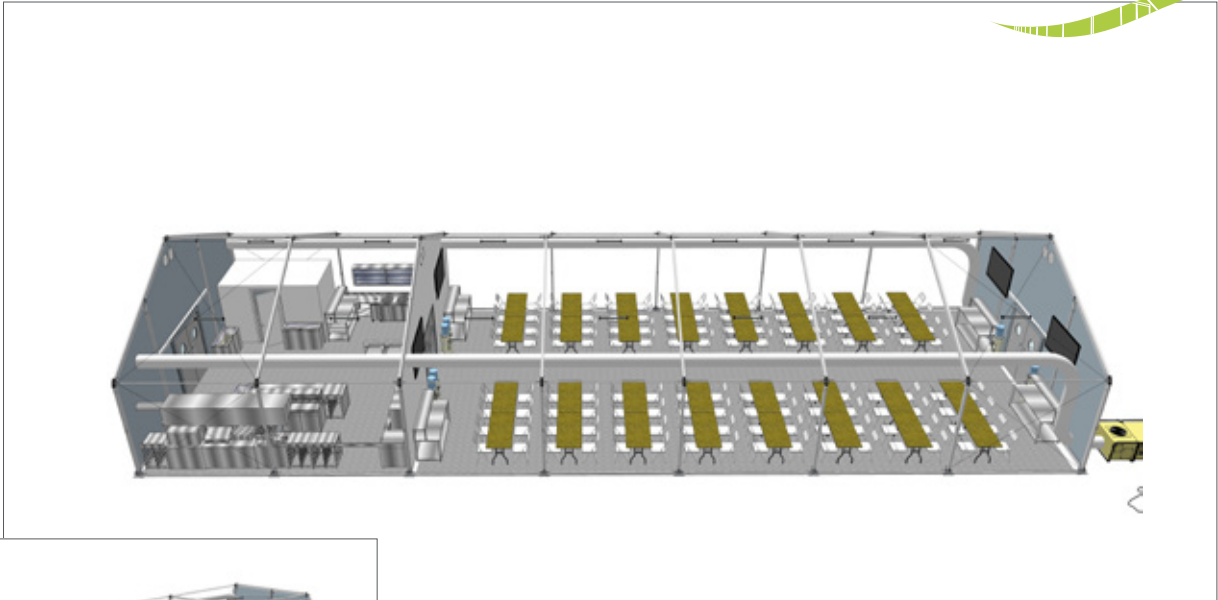
- Solid flooring with waterproof liner
- Additional ventilation
- Pedestrian access doors
- Cover panels with windows
- Internal partition walls
- Insulation liner
- LED lighting
- Kitchen and canteen inventory.



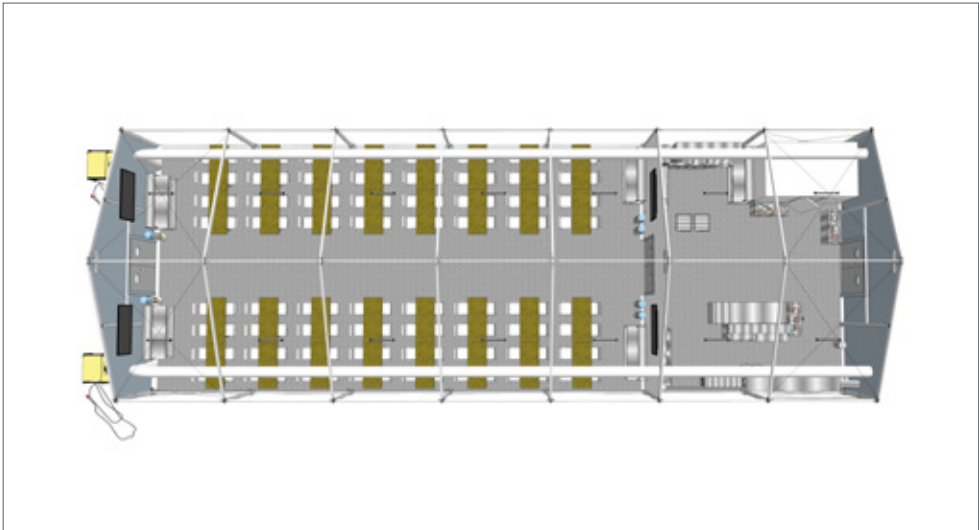
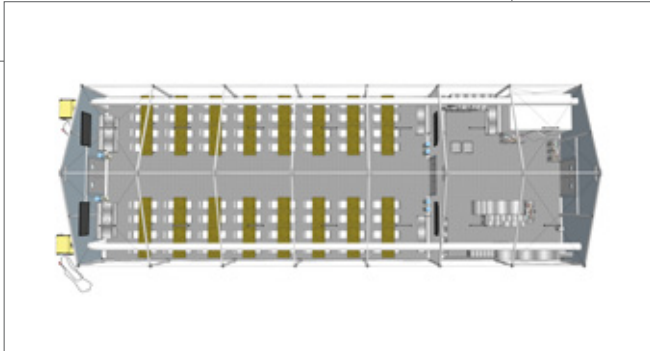
Hospital with operating theatre

Hospital

Canteen



Hospital with operating theatre



Rex Hall applications

Offices

A standard Rex Hall structure can be partially or fully converted and optimised as an office.

- Central pedestrian access doors
- Insulation liner with windows
- LED lighting
- Solid floor with waterproof liner
- Flexible internal partition system
- Fire alarm system
- Power socket harness system
- Desks, chairs and storage cabinets
- Hot air heating system
- Air conditioning
- Solar energy system.

School

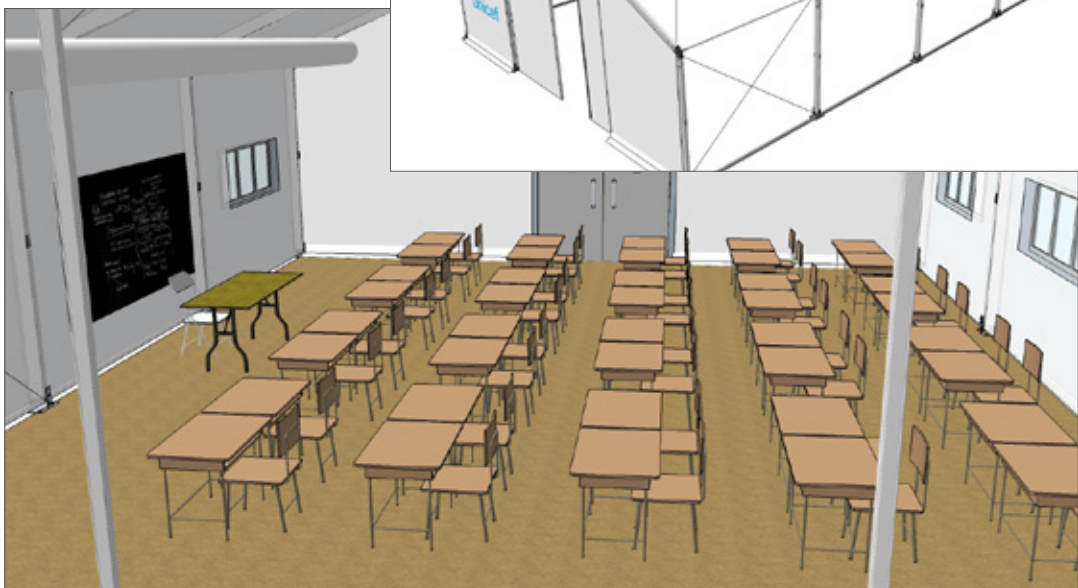
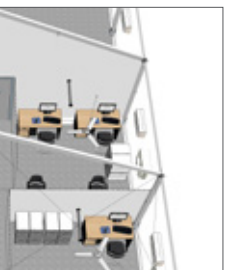
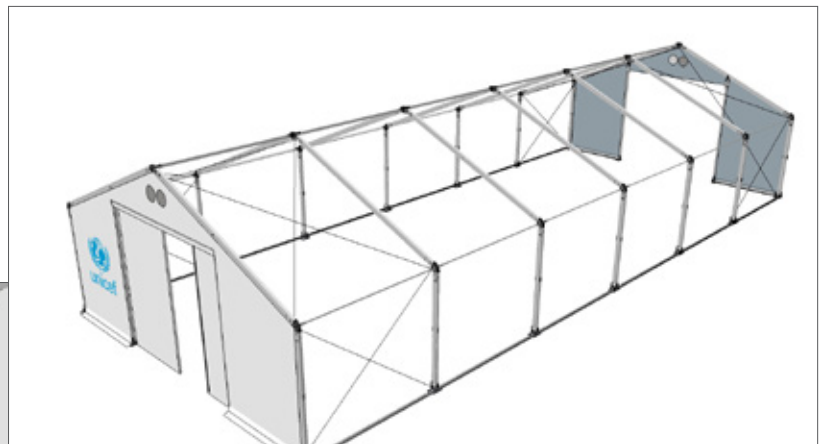
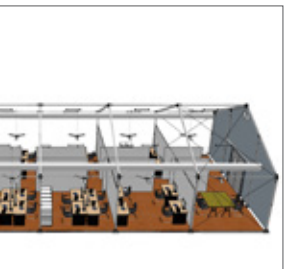
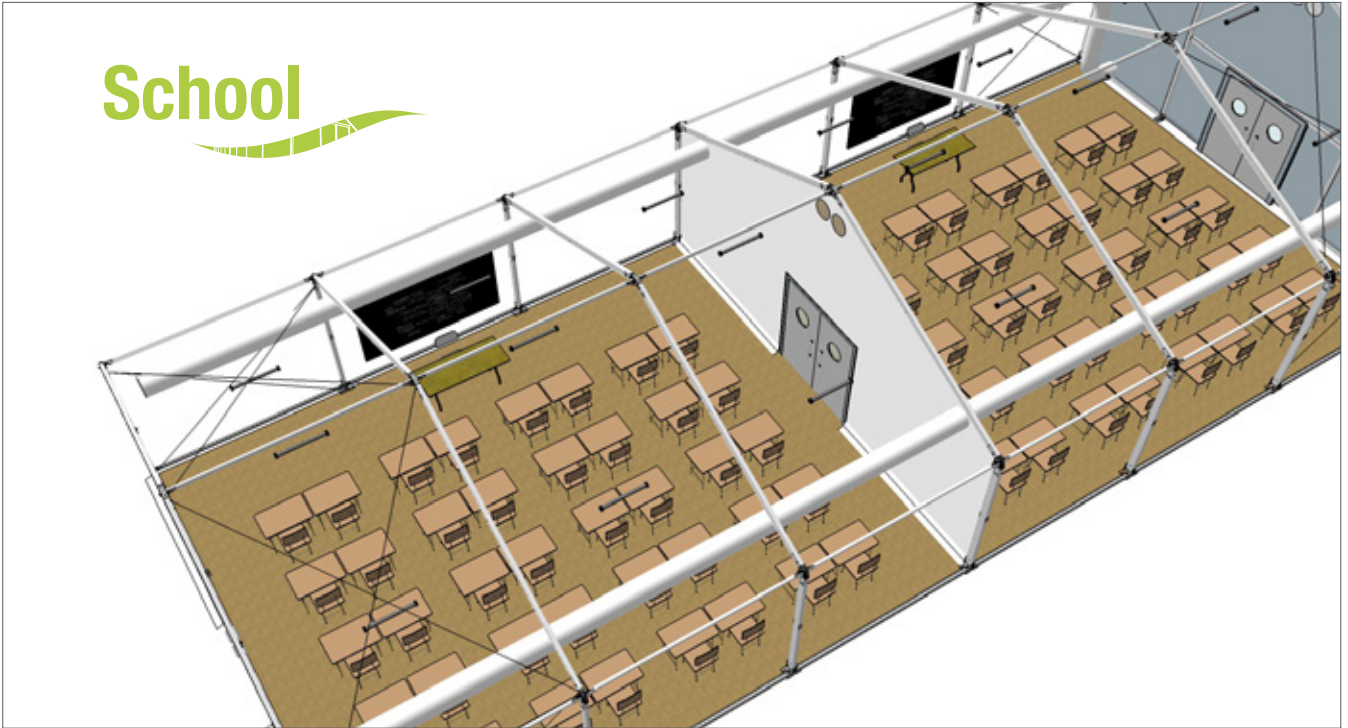
A standard Rex Hall can be converted into a temporary school building. Its modular construction allows setup of a building to its required size. One or multiple classrooms can be created, fully separated from each other and with individual entry doors.

A large window in the side walls, made of clear PVC film or with additional mesh for added ventilation, provides plenty of daylight. The Rex Hall school can be fitted with liner panels or insulated liner panels for added comfort, with heating or air conditioning, if required.

- Internal partition walls
- Solid flooring with waterproof liner
- Roof covers with 2-layer or 3-layer windows
- Pedestrian access doors in side walls
- LED lighting system
- Solar energy systems
- Desks, chairs, blackboard and cabinets.



School



Rex Hall applications

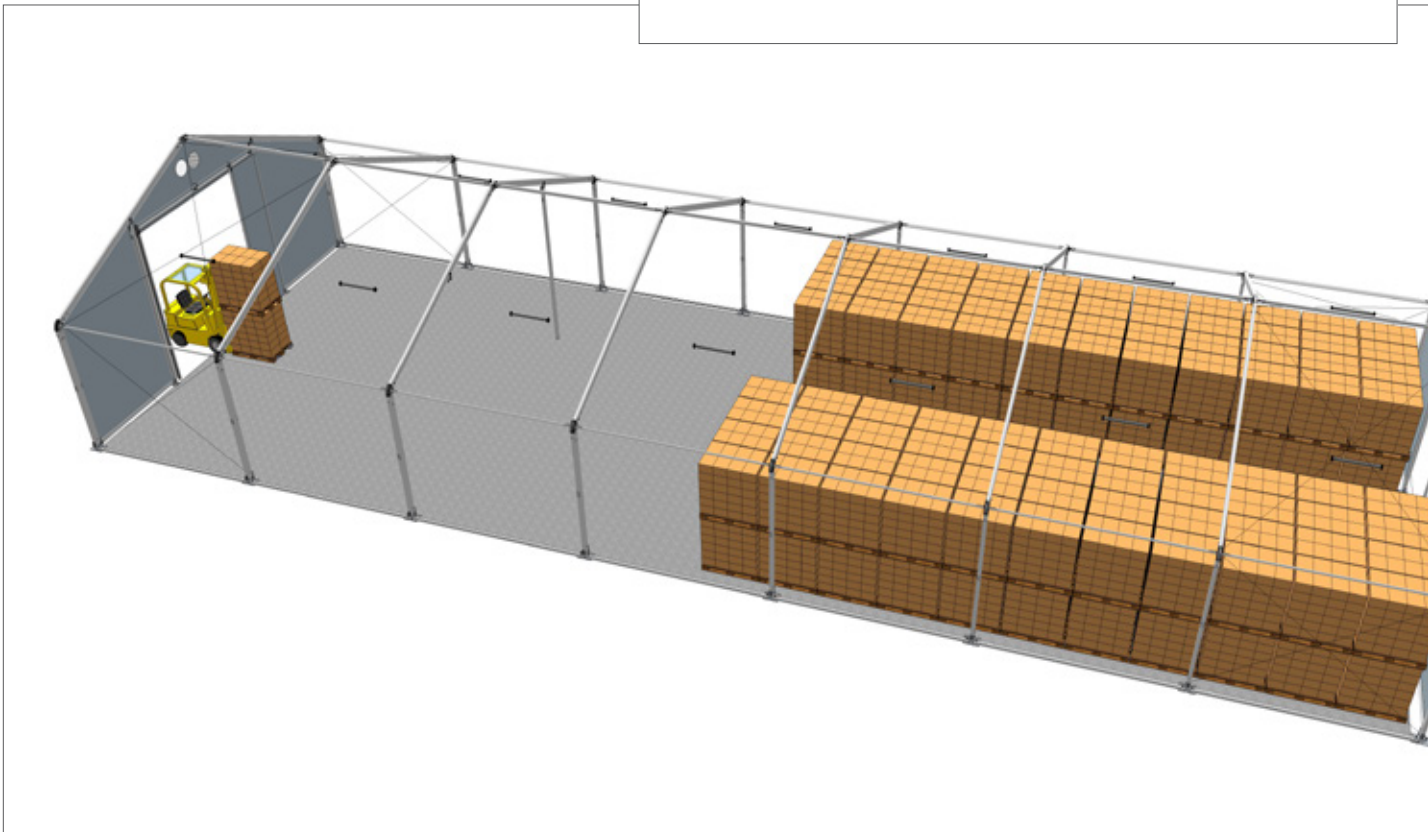
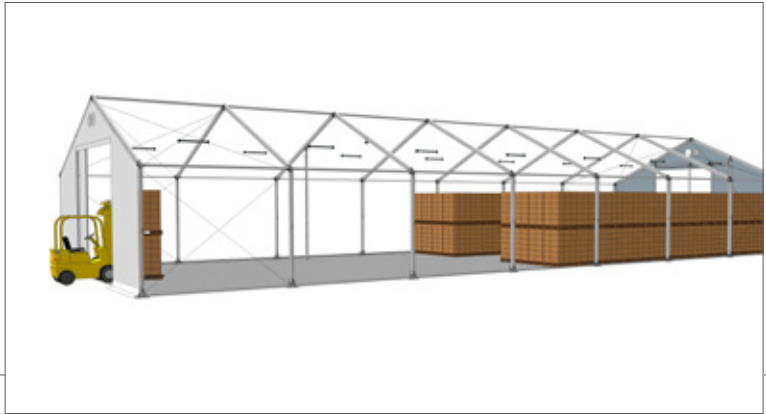
Warehouse

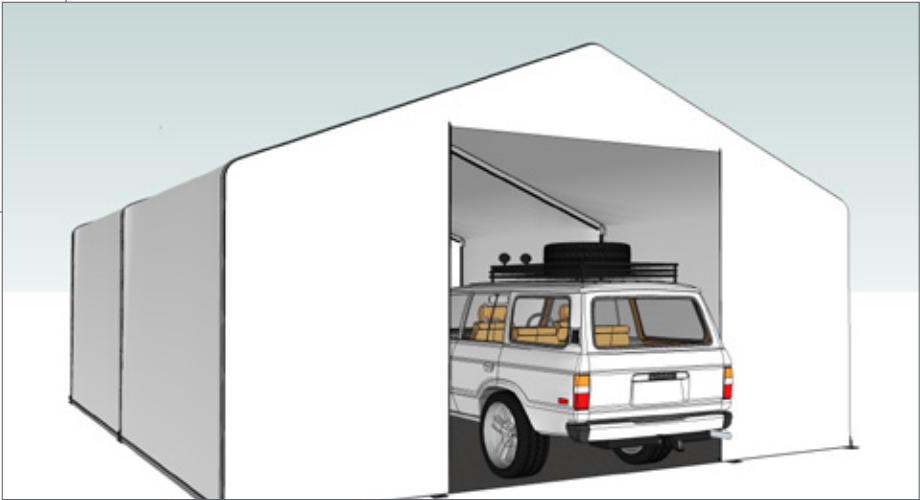
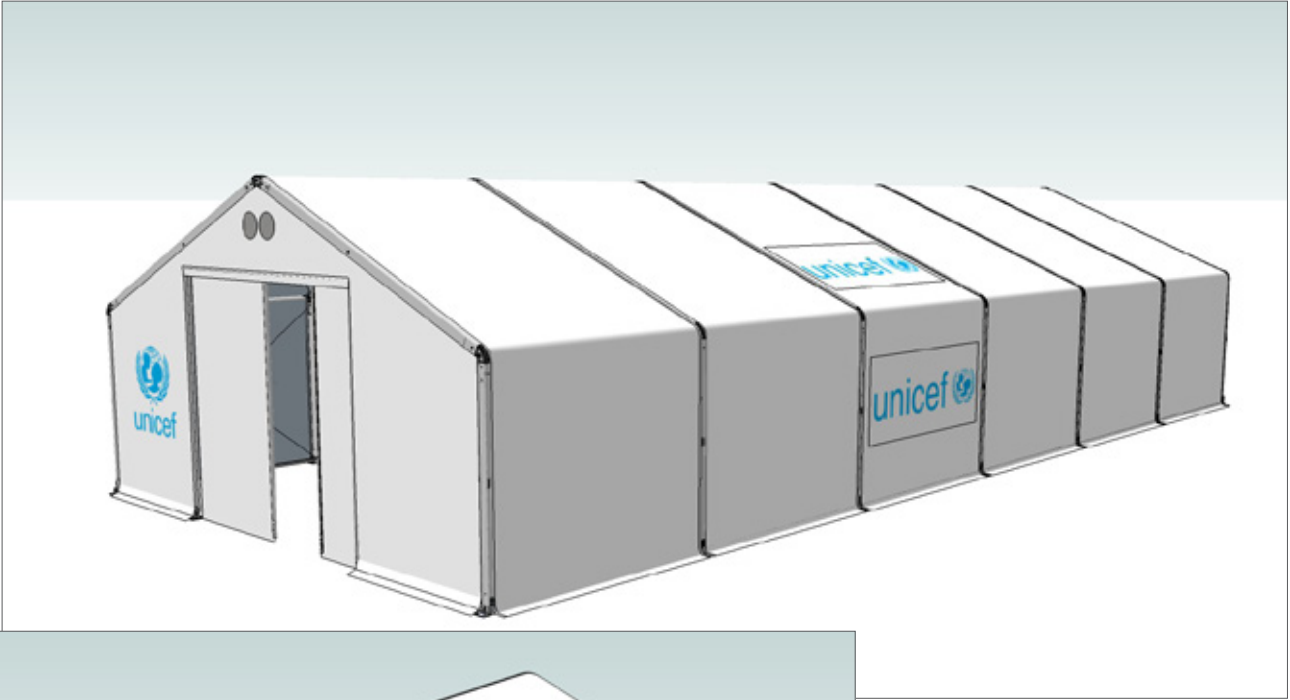
The main application for a Rex Hall is a warehouse. The fabric buildings, which are safe to construct and logistically optimised, are designed to be used in all climates around the globe. The 10 m width and the 3.3 m high walls are perfect for palletised storage and the full-sized truck doors make the Rex Hall easily accessible.

Optional accessories allow better use of the Rex Hall warehouse:

- LED lighting system
- Solid flooring
- Fire alarm system
- Pedestrian access door
- Linking kit to give access to Rex Halls via the side wall
- Outdoor lights
- Solar energy system for off-grid electrical systems supply.

Warehouse





Workshop

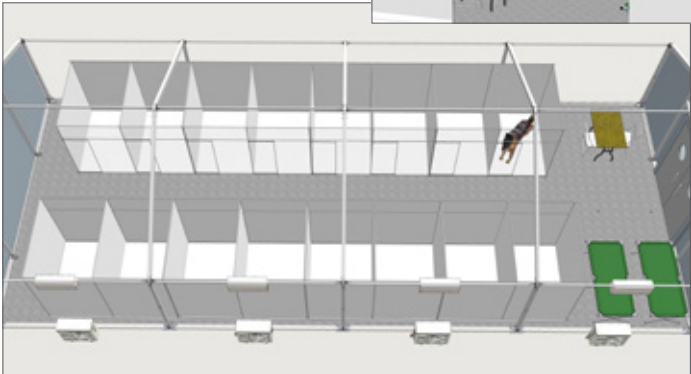


Dog Kennels



Dog Kennels

Upon special request, the Rex Hall can be turned into dog kennels, for example to accommodate rescue dog operations.





Rex Hall Series Accessories

Standard configuration

Aluminium structure with galvanised steel components

Adjustable base plates

PVC wall/roof covers with integrated ballast pockets

Logo banners

Sliding vehicle doors in both gables

- *10.0 x 24 m & 10.0 x 32 m only*

Roll-up vehicle doors in both gables

- *6.5 x 8 m only*

Tool set, spike puller & instruction manual

Field repair kit

Solar energy system

Option 1 - 50 panels

Option 2 - 80 panels

Non-electrical accessories

Flexible internal partitioning

Pedestrian door

- *Central pedestrian door*
- *Lateral pedestrian door*

Insulation liner system

Roll-up side door & linking kit

Solid flooring system

Electrical accessories

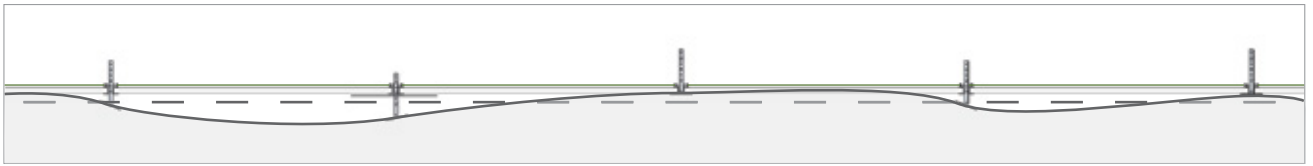
Heating system

Fire alarm

1. *Control panel*
2. *Heat detector*
3. *Optical smoke detector*
4. *Siren with strobe*
5. *Manual call point*

Lighting kit

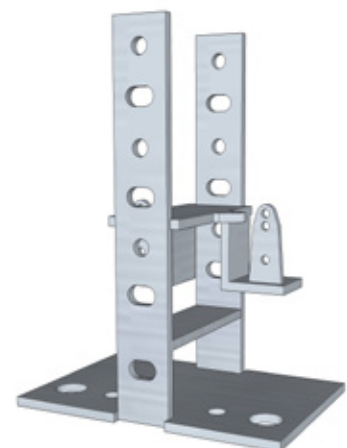
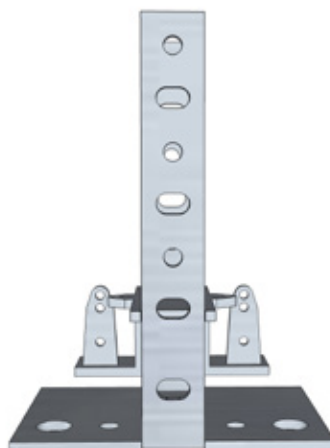
Mechanical ventilation system

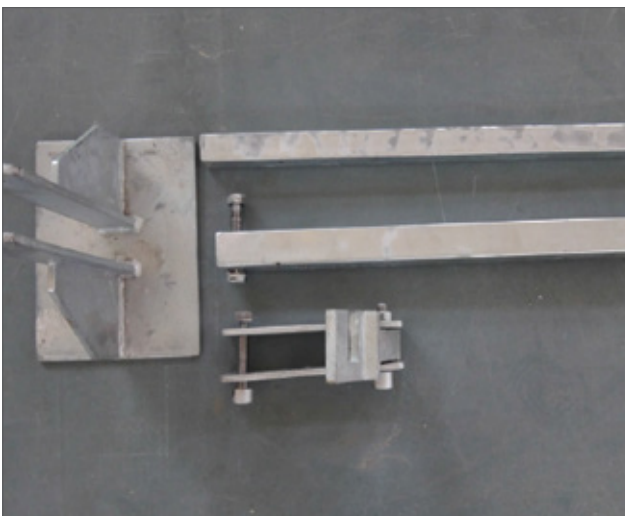


Adjustable base plates for the Rex Hall 10.0 and Rex Hall 6.5 series with vertical movement allow easy assembly of the mobile storage units on uneven ground.

Features

- 200 mm vertical movement
- Identical functionality as the standard base plates
- Available for the Rex Hall 10.0 and Rex Hall 6.5 series





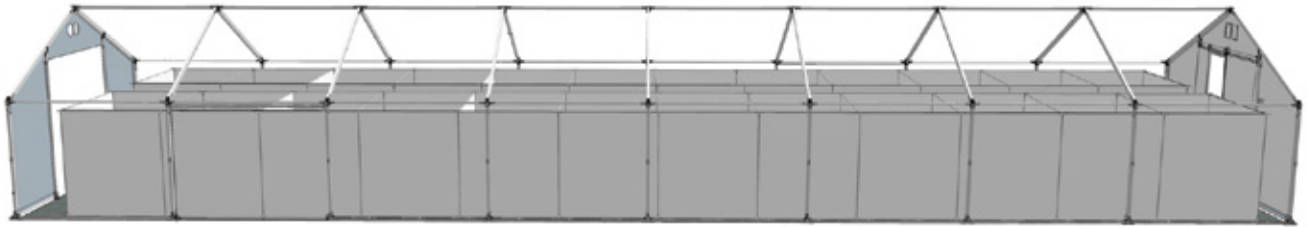
The spike puller is a heavy duty tool for easy extraction of Rex Hall spikes from the most dense soils.

Features

- Made of hot-dipped galvanised steel
- Grabber head made of hardened steel
- Easy to use
- Extendable lever for more upright force
- Usable for spikes of 15-25 mm \varnothing
- Supplied as standard with every Rex Hall 10.0 series.

Logistics

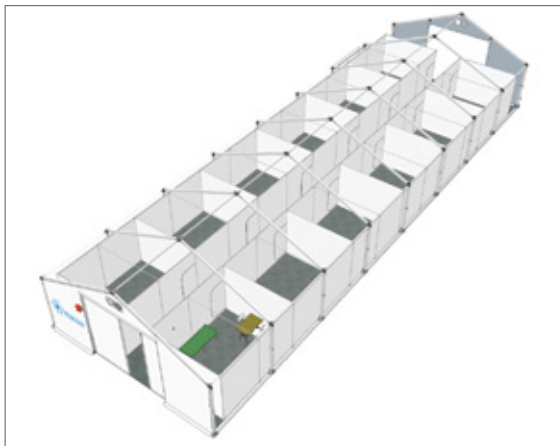
Weight (kg)	17.5
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Fabric wall system comprising corner joints, aluminium pipes and PVC fabric panels to create free-standing internal partitions.

Features

The system enables endless layout options, using independent cubicles of 2.5 x 2.5 m (6.25 m²), 2.5 x 4.0 m (10 m²), 4.0 x 5.0 m (20 m²). Cubicles can be joined together for larger spaces. The system contains all components to set up 6 cubicles of 4.0 x 5.0 m (20 m²) per side, 12 in total, separated by a corridor of 1.6 m width. One of the PVC panels per cubicle is fitted with a door, which is closable with strong zippers. The cubicles can be covered with a ceiling made of strong polyester mesh.



Components

PVC wall panel 3 x 4 m

PVC wall panel 3 x 2.5 m

PVC wall panel 3 x 2.5 m door

PES mesh ceiling panel

X top connector

X base connector

T base connector

Aluminium pipes 30 mm ø x 2.5 m

Aluminium pipes 30 mm ø x 3.0 m

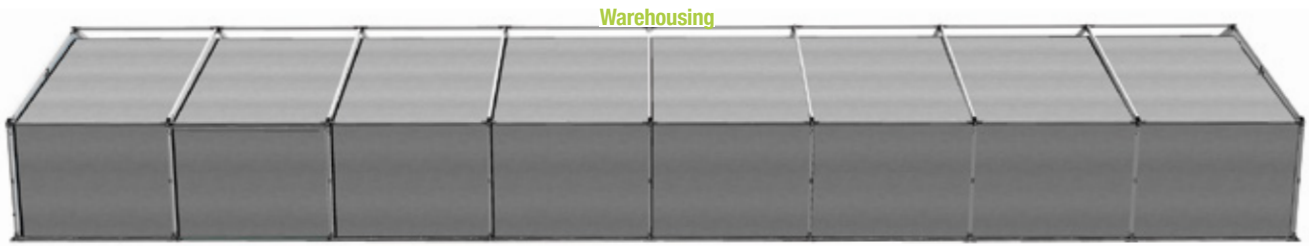
Aluminium pipes 30 mm ø x 4.0 m

Aluminium pipes

Connectors

PVC panels

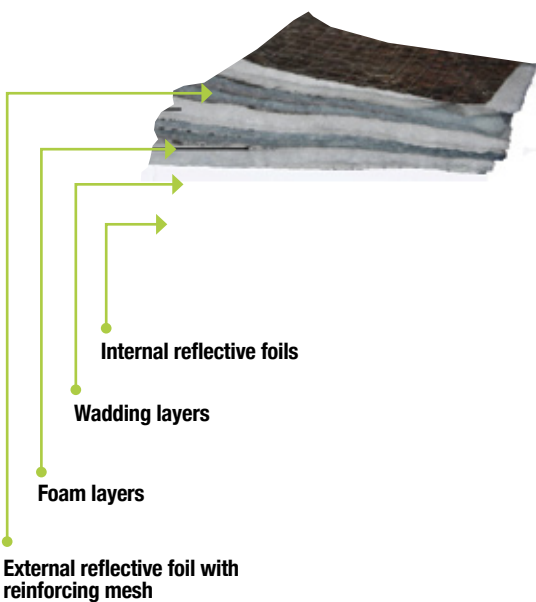




We offer a modular insulation liner system. The lightweight, high-performance, multi-layer insulation material is attached to PVC fabric. The layers can be compressed to reduce transport volume.

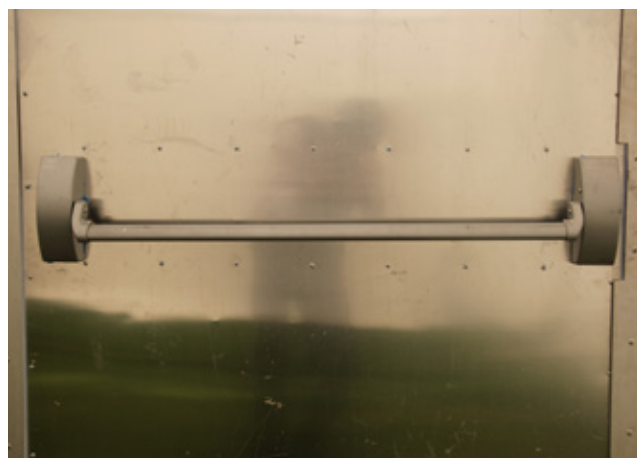
Features

- Comprises multiple layers of foams, wadding and aluminium foil attached to FR treated PVC fabric
- The combination of materials reflects heat (radiation), reduces thermal loss through air (convection) and avoids direct heat loss through the layers of materials (conduction)
- The liner is lightweight; the total weight of the material is just over 400 gsm
- The liner modules are connected to each other with Velcro and a loop/lacing mechanism and are suspended from the structure, creating an air gap of 150-200 mm with the outer cover
- The liner can be used in combination with the Lighting System and Fire Alarm System
- If the tent is fitted with a Linking Kit, a special liner module is available for it as well as an insulated connection tunnel
- If the tent is used for accommodation and fitted with windows, pedestrian doors and heating system, a special modular liner system is available with a lowered ceiling for added comfort especially in hot climates
- The insulation liner consists of 4 m length modules, allowing it to fit in any Rex Hall type, regardless of length. The individual modules are easy to pack and to transport.
- All materials are non-toxic and safe for the users and the environment. The materials are typically recyclable.



Logistics - Full set of liners, incl. suspension system

Series	Total weight (kg)
Type 1	363
Type 2	460
Type 3	470



Pedestrian door - LEFT of sliding door - complete kit

Components

Door, aluminium (100 x 210 cm) with pushbar lock	1
Door frame, steel with adjustable base plate	1
Top bar, aluminium	1
Gable cover, pedestrian door left	1
Bolts and nuts	1
Assembly manual	1

Logistics

Pack size	115 x 220 x 20 cm
Total weight	70 kg



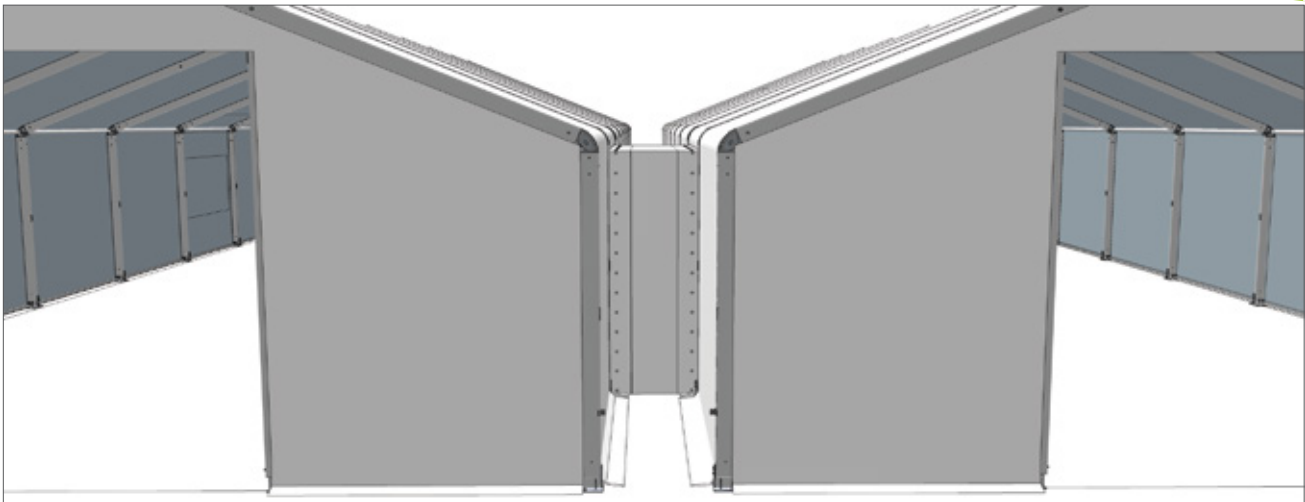
Pedestrian door - CENTRAL - replacing sliding door - complete kit

Components

Door, aluminium (100 x 210 cm) with pushbar lock	1
Door frame, steel with adjustable base plate	1
Set, gable tension bars	1
Gable cover, full for central pedestrian door	1
Bolts and nuts	1
Assembly manual	1

Logistics

Total weight	75 kg
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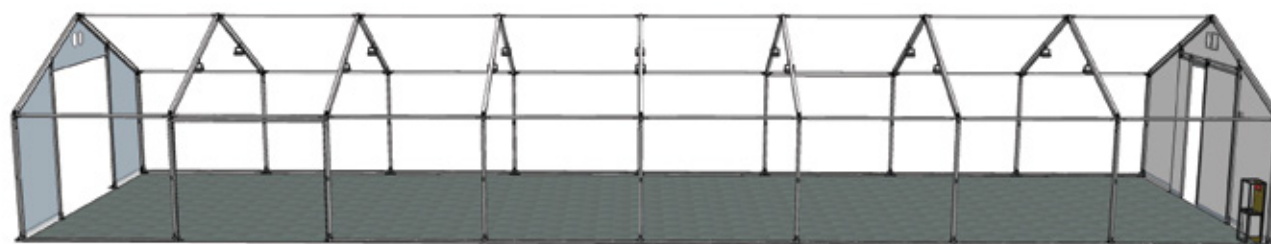
The Rex Hall series can be fitted with an optional roof panel with side doors. The 3 m high roll-up doors allow access with a forklift. When two Rex Halls are placed side-by-side, the tent can be joined with a connection tunnel, making indoor access possible between the two Rex Halls.

Features

- The roof panel with roll-up side doors can be placed in any location, except where the wall bracing cables are placed
- The connection tunnel is joined to adjacent tents with a reliable lacing and loop system
- The connection tunnel can be adjusted in length from 1 to 1.5 m to ensure a tight fit
- The overlap flap on roof covers, combined with a water lock strip on the connection tunnel, ensure a weather proof connection
- The roof panel with side doors is tensioned using the standard wall tension bars and special joining rods supplied with the linking kit
- The roll-up doors can be locked from the inside of the tent using padlocks
- A special insulated connection tunnel is available for tents fitted with insulated liners.

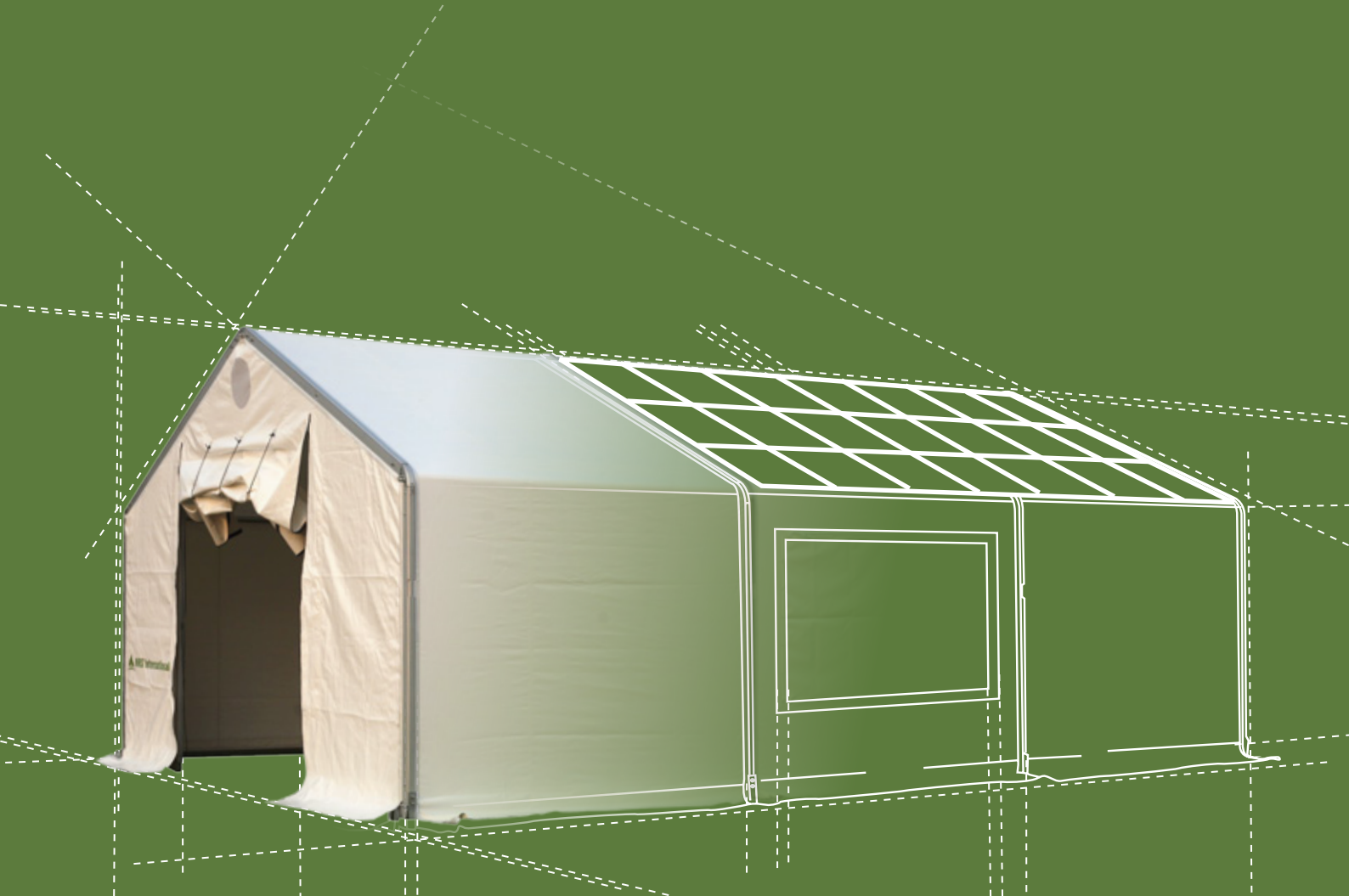
Logistics

Series	Dimensions (mm)	Weight (kg)
Rex Hall 10.0 m series	Roof cover with roll-up doors and connection flaps + 2 sets of tension tools	74
	Connection tunnel	21
	Connection tunnel, insulated	27
Rex Hall 6.5 m series	Roof cover with roll-up doors and connection flaps + 2 sets of tension tools	49
	Connection tunnel	19



Lightweight, high-impact and load bearing flooring system to cover sandy and grass-covered soil. The interlocking panels hinge at the connections allowing higher loads. The panels can be stacked for storage and transport, or made to rolls of a desired width for faster assembly.

Panel size	305 x 102 x 18 mm / 32 pcs = 1 m ²
Material	High impact polypropylene
Weight	120 g/pcs / 3.84 kg/m ²
Surface	Anti-slip, draining holes
Fire rating	UL94HB
Temperature resistance	-30°C ~ +50°C
UV resistance	Life span > 10 years
Load resistance	24,000 kg/m ²



Rex Hall

Series

Solar Energy System

Solar Energy System

The Solar Energy System is designed to provide power for the Lighting System, the Mechanical Fan and the Fire Alarm. Two size options are available to best match the power needs based on the geographical location.

Option 1

Sites with high solar irradiation

The first system offers 13 kWp with a battery bank of 57.6 kWh for areas where solar irradiation is very high (average of 2200 kWh/m² or more per year). Seasonality is marginally having an impact. In other words, the off-grid system performance should be even throughout the year.

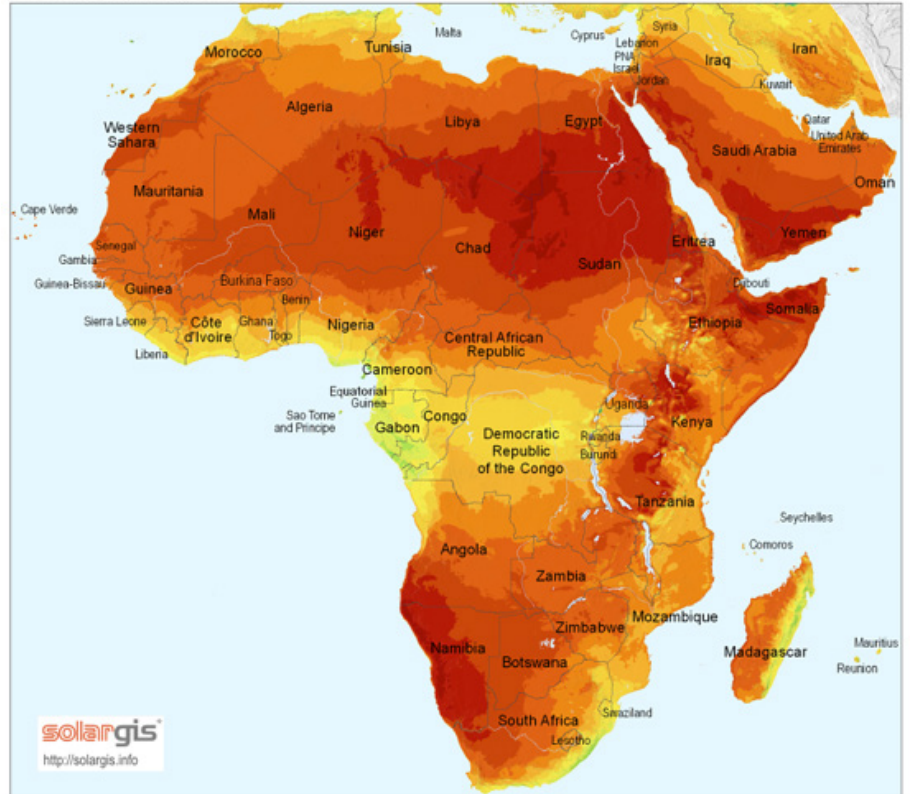
Option 2

Sites with medium solar irradiation

The second system offers 20.8 kWp with a battery bank of 76.8 kWh for areas where solar irradiation is medium high (average 1800-2200 kWh/m² average per year). The solar system performance will have its limitations during the winter season in the northern hemisphere. A hybrid system with grid-connection is more appropriate.

Global horizontal irradiation

Africa and Middle East

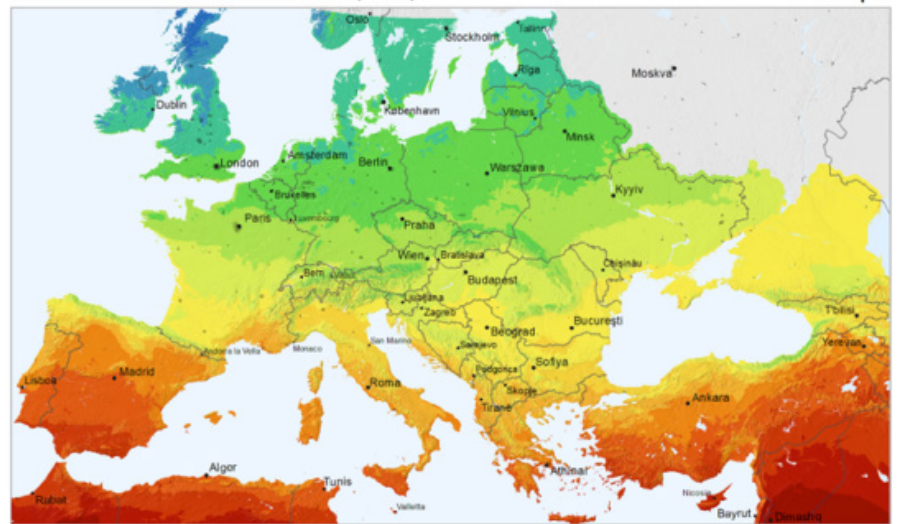


Average annual sum (4/2004 - 3/2010)
 < 1600 1800 2000 2200 2400 > kWh/m²

© 2011 GeoModel Solar s.r.o.

Global Horizontal Irradiation (GHI)

Europe



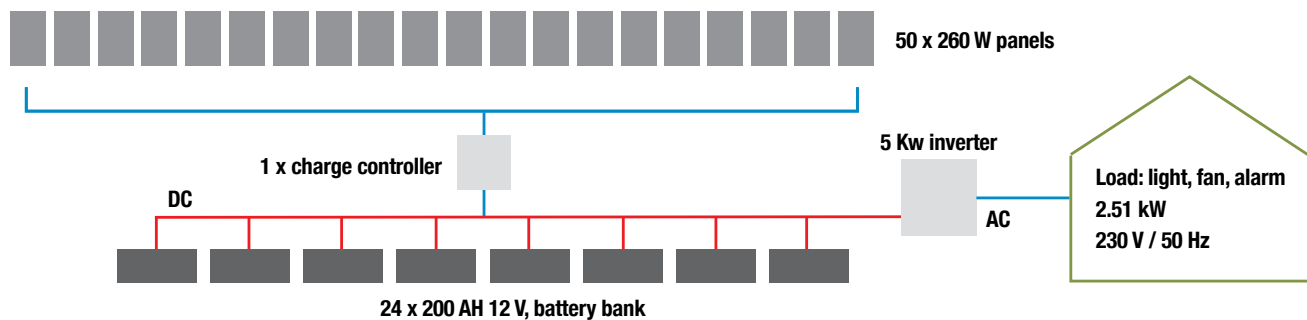
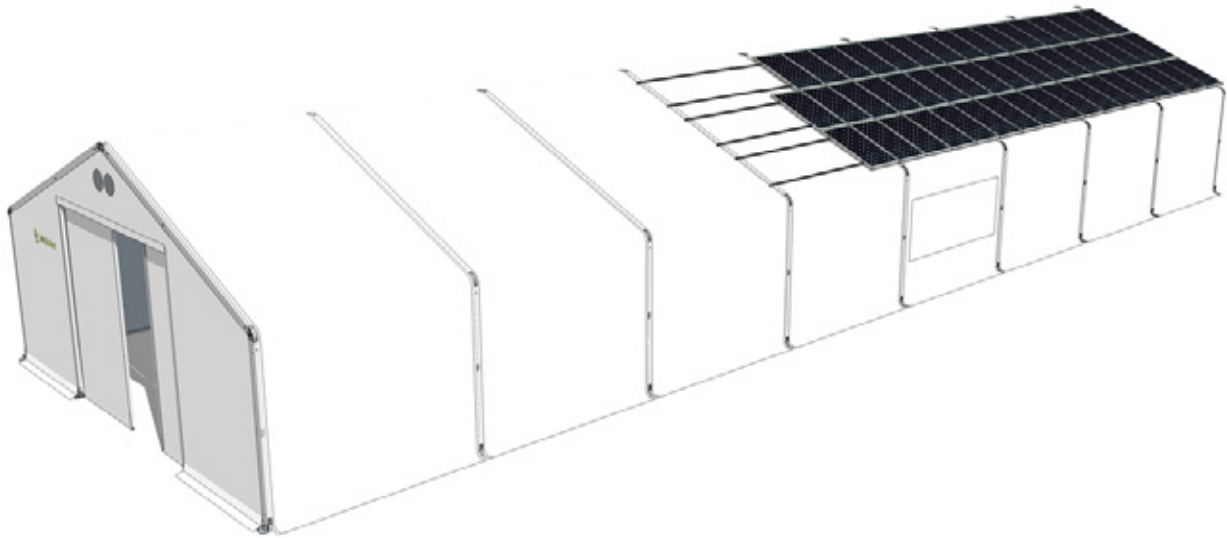
Average annual sum, period 1994-2010
 < 800 1000 1200 1400 1600 1800 2000 > kWh/m²

GHI Solar map © 2014 GeoModel Solar

Solar energy system

Option 1 - 50 panels

Independent power supply system producing 3 kW of power (230 V / 50 Hz) 24/7, generated from PV panels during the day and batteries during the night. The batteries are charged with the excess energy from the PV panels during the day.

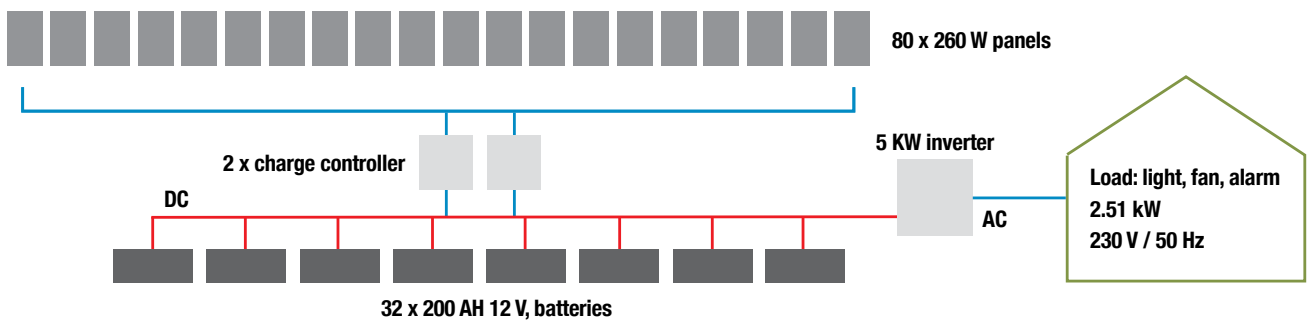
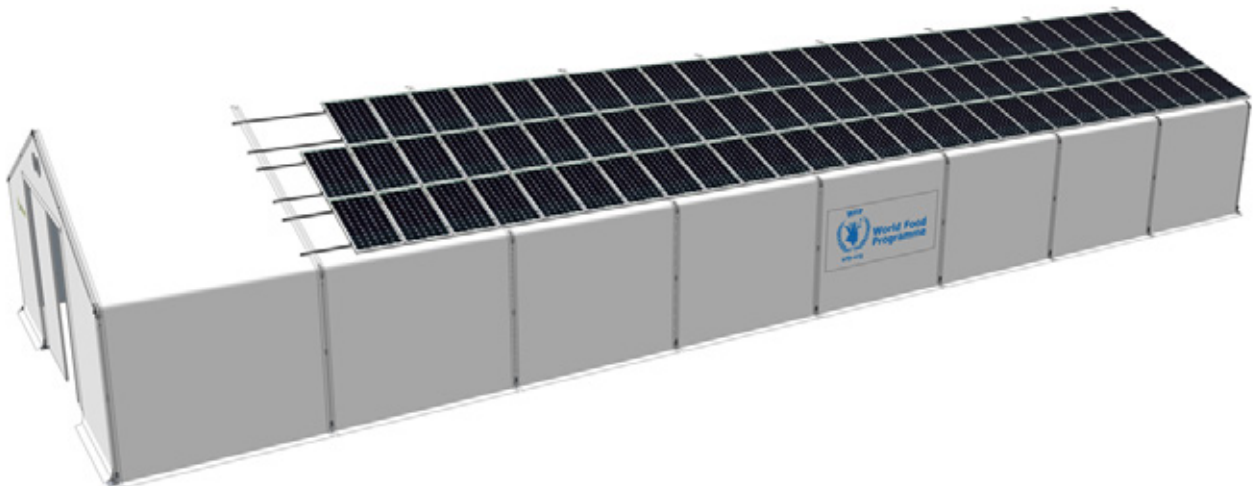


	Specs/pc	Quantity	Dimensions (mm)/pc	Mounting system
PV panel	260 W	50	1654 x 989 x 40	On Rex Hall roof structure
Battery bank	200 Ah	24	522 x 240 x 225	In two stackable racks
Charge controller	100 A	1	216 x 203 x 107	Plug and play
Inverter	5000 W	1	420 x 217 x 155	Plug and play cabinet
Connection cable mounting frame PV kit		50		

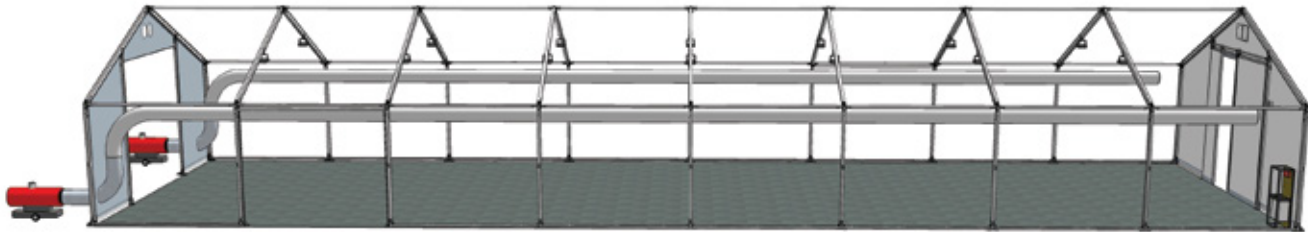
Solar energy system

Option 2 - 80 panels

Independent power supply system producing 3 kW of power (230 V / 50 Hz) 24/7, generated from PV panels during the day and batteries during the night. The batteries are charged with the excess energy from the PV panels during the day.




	Specs/pc	Quantity	Dimensions (mm)/pc	Mounting system
PV panel	260 W	50	1654 x 989 x 40	On Rex Hall roof structure
Battery bank	200 Ah	24	522 x 240 x 225	In three stackable racks
Charge controller	100 A	1	216 x 203 x 107	Plug and play
Inverter	5000 W	1	420 x 217 x 155	Plug and play cabinet
Connection cable		80		
mounting frame PV kit				



Efficient diesel/kerosene fuelled and temperature controlled space heaters with heat distribution via suspended fibre diffusion tubes.

Components

	53 kW diesel/kerosene indirect heater	Voltage	220 V-240 V, 50/60 Hz
		Max heat output at 52.5 kW/h	45,200 kCal/h
		Motor power	520 W
		Heatable area	300-400 m ²
		Operation temperature range	0°C - 40°C
		Tank capacity	60 L
		Average fuel consumption	4.8 L/h
	Colour option	Red	

Item	Diameter (mm)	Shape	Length (m)	Quantity	Specification
Fibre air duct	350	Straight	28	1x	
	350	S-shape	0.52	2x	With hot air nozzle
Galvanised air outlet	350	Straight	0.4	1x	
Stainless steel wire cable	2.5	Flexible	40	2x	With fastener

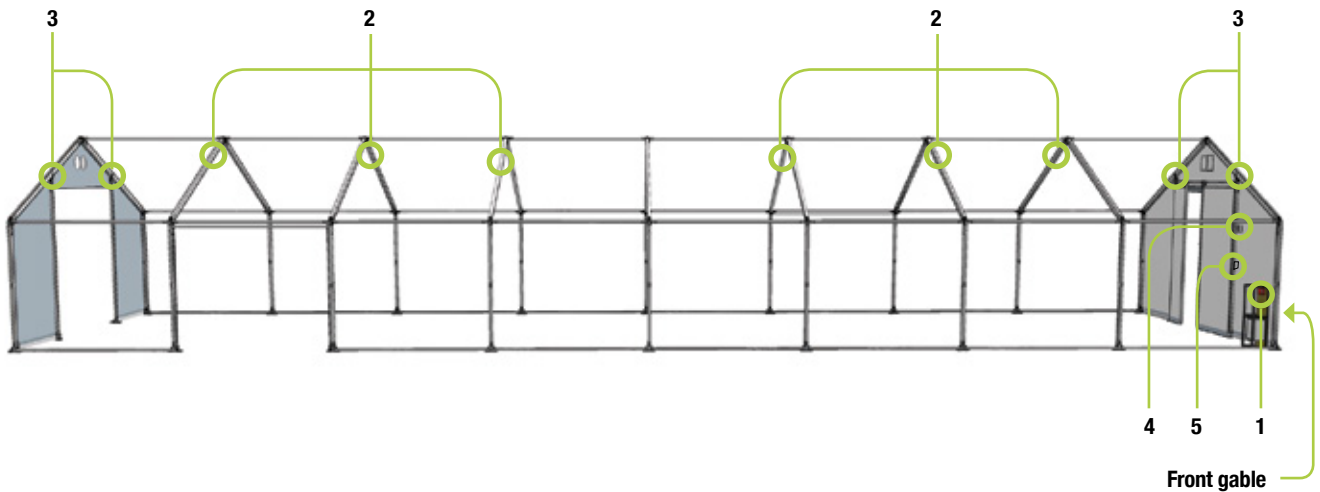
Logistics

	Weight (kg)	Dimensions (mm)	Quantity	Total weight (kg)	Total packing size (mm)
Space heater on pallet	130	1400 x 800 x 1000			2 x 1400 x 800 x 1000
Fibre diffusion tube, S-shaped duct, air outlet, steel wire cable, thermostat	80	1150 x 800 x 800	2	420	+ 2x 1150 x 800 x 800

Fire alarm



*Can be powered by the Solar Energy System, see pages 28 & 29



Fire detection and alarm system with smoke and heat detectors, manual alarm button and visual and acoustic alarm.

Components

Item No.	Quantity	Description	Remarks
1	1	Control panel conventional 2 Zone, LIFECO, Model Eagle 2	EN54
2	6	Detector heat conventional 24vdc with base, LIFECO, Model LF-HD-4112 Kite Mark	See 'Notes' No.1
3	4	Detector optical smoke conventional 24vdc with base, LIFECO, Model LF-PE-4111 kite mark	See 'Notes' No. 2 and 3
4	1	Siren with strobe 24vdc, LIFECO, Model LF / SS	Standard approved
5	1	Manual call point conventional with cover, LIFECO, Model LFB10	Standard approved

Special notes and instructions

1	Heat detector is suitable for warehouse detection
2	Smoke detector might cause a false alarm due to dust and other particles
3	Beam detector requires a minimum height of 9 m, 5.5 m might cause a false alarm.

Fire alarm

1. Control Panel

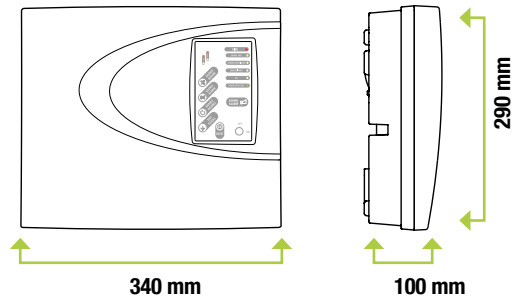


*Can be powered by the Solar Energy System, see pages 28 & 29

Technical data sheet

Used by architects and engineers

Dimension details



Description

The conventional fire alarm control panel provides two fixed zones, with up to 32 fire detectors and unlimited call points that can be connected to every fire zone. This is enclosed in a plastic box. The panel is easily installed and maintained and provides user-friendly daily operations. The panel is suitable for residential, small and medium sized office applications, with protected areas up to 1000 m². The panel is available in different language versions for the front panel.

Features

- 2 fixed zones
- Supports up to 64 detectors
- Unlimited call points
- 1 'fire' and 1 'fault' relay outputs
- 2 monitored sounder outputs
- Active EOL allowing continuous monitoring of inputs
- Walk test
- LED indication
- Levels of access protected by means of security key
- Plastic box

Fire alarm

2. Heat Detector



*Can be powered by the Solar Energy System, see pages 28 & 29

Technical data sheet

Used by architects and engineers

Heat Detector

Model No: LF-HD-4112



Description

The LF-HD-4112 conventional type heat detector identifies fire with both rapidly rising and gradually increasing temperature. The three levels of fixed temperature settings adapt to the local temperature of the area being protected.

The detector utilises a modern, accurate, state of the art negative temperature coefficient (NTC) thermistor that senses thermal changes in the protected area. Combined with the data stored in its non-volatile memory, the detector sends out alarm information to the fire alarm control unit during rapid rise of heat or upon reaching its pre-set temperature rating.

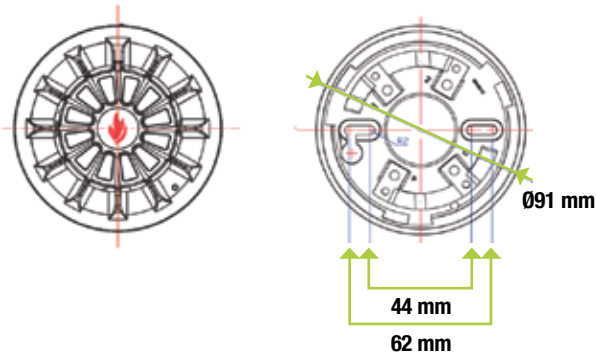
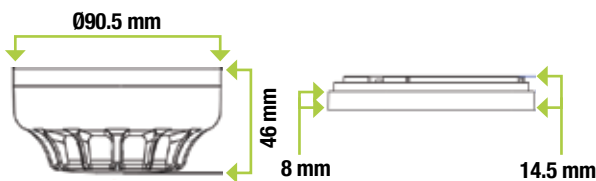
The LF-HD-4112 conventional heat detector also has the provision of connecting a remote LED indicator.

The detector's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation.

Features

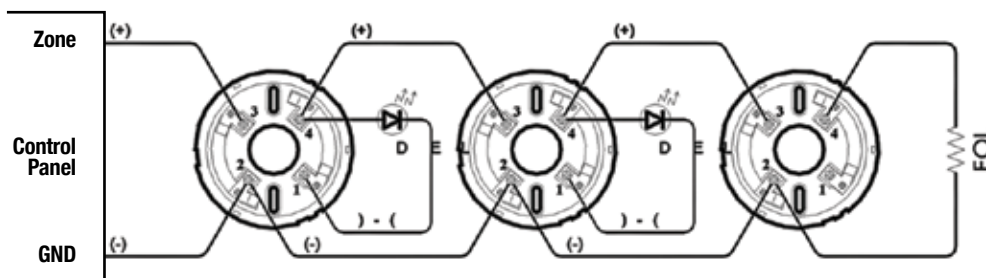
- Microprocessor-based design
- High accuracy of fire detection
- Rate of rise and fixed temperature
- Quick fire alarm transfer speed
- Polarised wiring
- Provision for remote LED Indicator
- Ease of maintenance

Dimension details



Technical & environmental specifications

Operating voltage	18 – 26 V
Quiescent current	≤50 μA
Alarm current	≥22 mA
Operating temperature	-10°C~+50°C
Relative humidity	≤95%
Detector dimension	Ø90.5 x 38.0 mm
Dimension including base	Ø91.0 x 45.5 mm
Weight	About 100 g
Colour	White
Indoor use only	



Note

Remove EOL from panel to the last device

Fire alarm

3. Optical Smoke Detector



*Can be powered by the Solar Energy System, see pages 28 & 29

Technical data sheet

Used by architects and engineers

Photo Electric Smoke Detector

Model No: LF-PE-4111



Description

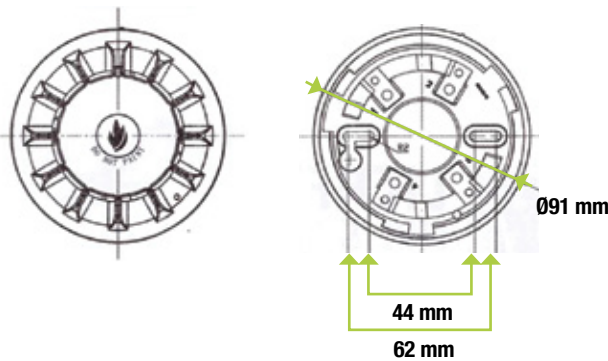
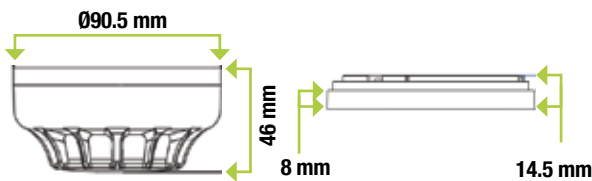
The LF-PE-4111 conventional type photoelectric smoke detector uses a specialised smoke chamber design, which senses the presence of smoke particles produced by fast combustion or slow smoldering fire. Combining fire algorithms stored in its memory with the special three part design of the smoke chamber and given the photo-sensor's viewing angle, the detector can effectively sense both white smoke and black smoke with virtually no false alarms.

Accurate analysis of fire is achieved using its built-in microprocessor and fire data stored in its non-volatile memory. With the detector's automatic environmental compensation settings, it adjusts itself according to its environment or application thus improving the veracity of fire judgment.

The LF-PE-4111 conventional type photoelectric smoke detector also has the provision of connecting a remote LED indicator.

The detector's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.

Dimension details

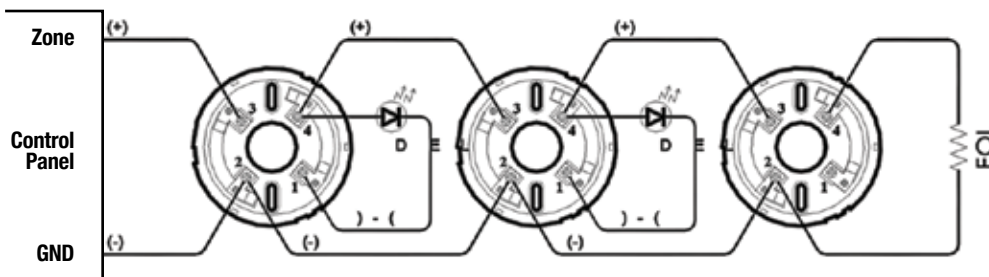


Features

- Microprocessor-based design
- High accuracy fire detection
- Quick fire alarm transfer speed
- Special chamber design
- Polarised wiring
- Provision for remote LED Indicator
- Ease of maintenance

Technical & environmental specifications

Operating voltage	18 – 26 V
Quiescent current	≤65 μA
Alarm current	≥m A
Operating temperature	-10°C~+50°C
Relative humidity	≤95% Non condensing
Detector dimension	Ø90.5 x 38.0 mm
Dimension including base	Ø91.0 x 45.5 mm
Weight	About 100 g
Colour	White
Indoor use only	



Note

Remove EOL from panel to the last device

Fire alarm

4. Siren with Strobe



*Can be powered by the Solar Energy System, see pages 28 & 29

Technical data sheet

Used by architects and engineers

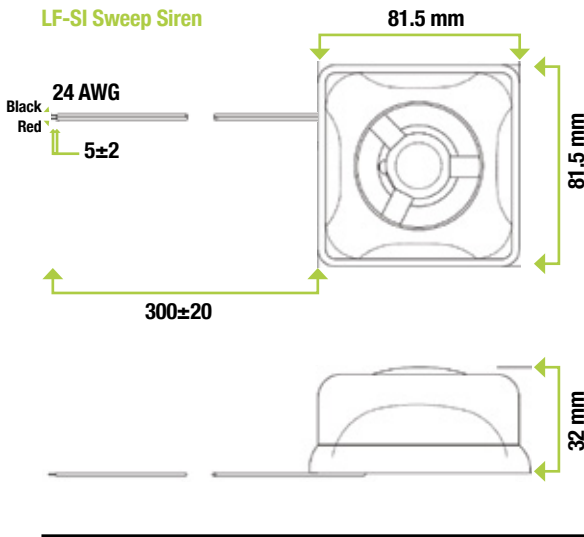
Siren with Strobe

Model No: LF/B10

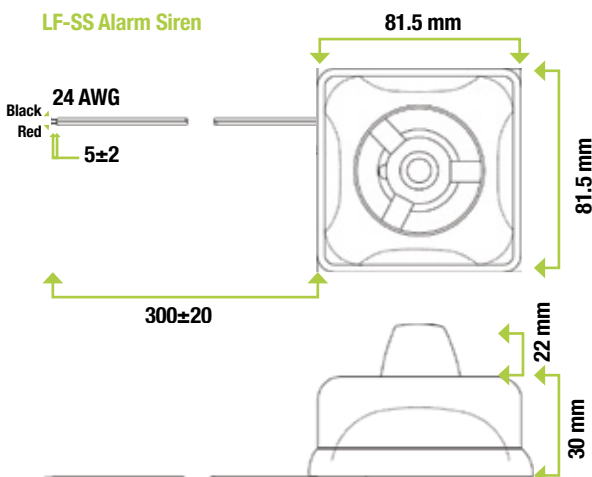


Dimension details

LF-SI Sweep Siren



LF-SS Alarm Siren



Description

The LF-SI/SS siren with strobe is designed for maximum performance, reliability and cost effectiveness. It adopts a built-in integrated circuit, a piezoelectric sounder and high intensity strobe which when combined, produces high energy conversion efficiency for effective output of light and sound while utilising a minimum of power.

The LF-SI/SS can be mounted by opening the front cover and installing the body of the device to a standard 3" square box.

The mounting holes are hidden when the cover is placed. The modern style of the strobe unit and the contour of the device complements any building wall design.

The indicator's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation and configuration.

Features

- Quick response time
- 100±5dB (@24v DC)
- Piezoelectric horn
- High performance at low cost
- Integrated electronics
- High intensity strobe
- Reverse polarity protection
- Easy maintenance
- Easy to install
- 2-wire operation
- Ceiling or sidewall mount

Technical & environmental specifications

Input voltage	24VDC 12~30VDC
Sound output	100±5dB
Operating temperature	-100°C ~ +60°C
Material	ABS / polycarbonate
Relative humidity	≤95%

	LF-SI	LF-SS
Operating current	22~28m A	50~65m A
Tone type	Sweep siren	Alarm siren
Colour	Red	Red

Fire alarm

5. Manual Call Point



*Can be powered by the Solar Energy System, see pages 28 & 29

Technical data sheet

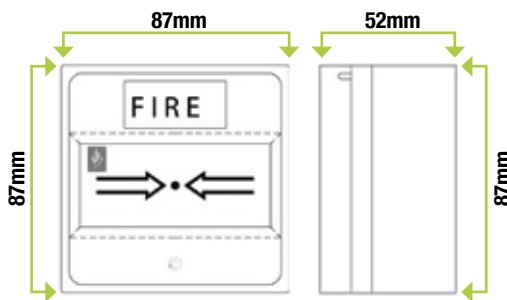
Used by architects and engineers

Call Point Series

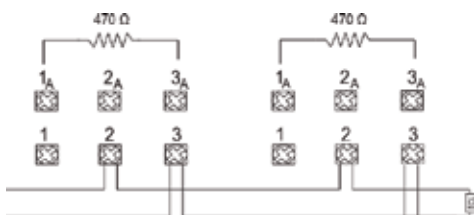
Model No: LF/B10



Dimension details



Wiring details



Note

Remove EOL from panel to the last device

Description

The LF/B 10 call point series satisfies the requirements for a manual fire alarm initiating device. With its sleek and durable design, it is easily observed yet does not hinder building design. It can be fitted along corridors, hallways and exits for easy access to operate in cases where there is a requirement for activating an alarm signal.

The switch inside is kept pressed by the edge of the plastic film. When the plastic film is pushed, the switch is released and causes an alarm signal to be sent to the fire alarm control panel through the panel initiating circuit.

The MCP's design widely applies to all kinds of industrial and commercial constructions with its high resistance to humidity, wide operating temperature range, high reliability and ease of installation.

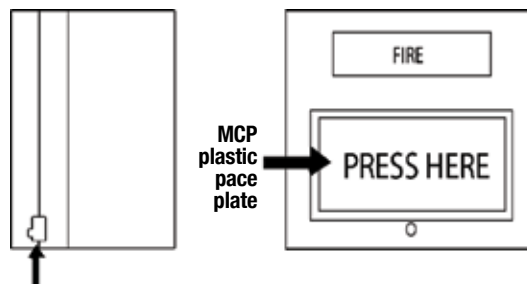
Features

- Arabic and English label
- Quick fire alarm transfer
- Easy operation - push to activate
- No polarity
- Ergonomic construction
- Durable design
- High performance at low cost
- Easy to install
- Semi-flush or surface mount
- With protective cover
- Suitable for indoor use

Technical & environmental specifications

Terminals	Suit 0.28 mm ² to 2.5 mm ² cables
Working voltage	220VAC 50HZ & 60HZ BA 24VDC
Max. current	5A 220VAC 50HZ & 60HZ BA 24VDC
Contact resistance	≤0.1
Working temp	-10~+500C
Max. relative humidity	≤3±2%
Material	ABS plastic
Dimensions	87x 87 x 52 mm
Colour	Red

Testings



- Insert test/reset key to the slot
- Slide down the plastic face plate
- Remove the test/reset key
- In case of fire/emergency press the plastic face plate so that the inside button has been activated

Lighting kit



*Can be powered by the Solar Energy System, see page 28 & 29

Description

Cost saving high performance LED Lighting Systems. Complete sets, including mounting kits, extension cords and power distribution board.

Components



Packing list

	10 x 24 (Type 1)	10 x 32 (Type 2)	6.5 x 8 (Type 4)
A Led light 60W including hanging bracket, 1m cable female plug, 6m cable male plug	10	14	2
B Extension cable, 6 m	5	7	1
C Power distribution board, 4x 16A	1	1	1
D Set of duct tape and cable ties	1	1	1
E Packed in wooden box	800 x 600 x 600	800 x 600 x 800	400 x 500 x 400
Packing volume (m3)	0.288	0.384	0.08
Total weight (kg)	75	100	27



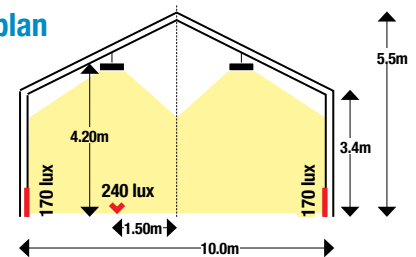
60 W

LED 60 W

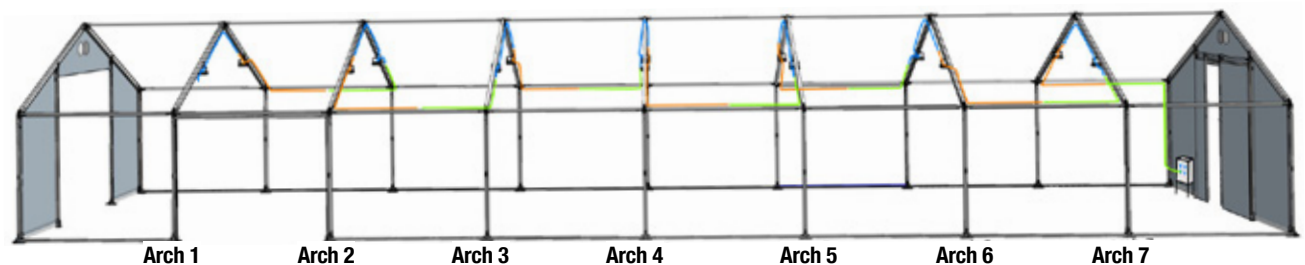
Voltage 85-260 V / 50-60 Hz

IP class IP67

Lighting plan



Assembling and installation



Mechanical ventilation system



*Can be powered by the Solar Energy System, see pages 28 & 29



Electrical forced air exchange ventilation system to enhance and support the natural ventilation of the Rex Hall series.

300 mm Axial Flow Extractor Fan

Voltage	230 V / 50 Hz
Current	0.4 A
Max power	60 W
IP class	IP44
Speed	1300 RPM
Duty at discharge	1400 m ³ /h
Sound pressure level	48 dB(A)
Construction	Galvanised steel sheet, epoxy polyester paint, sleeve bearings self-lubricated
Motor	Thermal protected and self-resetting
Weight	4.8 kg including mounting plate



Electronic multi-speed fan controller

Type	Electronic single-phase speed controller
Fuse protection	32 mm ceramic 3.0 Amp "F" type
Controls	Single on/off and speed regulation control knob
EMC requirements	The unit meets the EMC requirements of: EN 61800-3:1997 and EN61000-3:2006

