



# Rapid Deploy Shelters

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# Safeframe<sup>®</sup> Decontamination Shelters

## 1. SAFEFRAME® SHELTERS GENERAL FEATURES & BENEFITS

The SAFEFRAME® range of shelters has been designed for ease and speed of deployment, coupled with the reliability and durability to meet emergency challenges whenever the need arises

The SAFEFRAME® is a truly modular system, available in a range of sizes, which can be connected together to form a 'village' set-up.



- Lightweight, yet robust aluminium frame system
- Unrivalled rapid deploy system requiring minimum personnel for set up and strike down
- No external power or Manual Handling Equipment (MHE) required
- Designed to be deployed in high winds
- High resistance to rain, snow and extreme weather conditions
- All materials used are easy to wash/repair or decontaminate, ensuring high levels of infection control
- Minimum maintenance required due to robust design
- Modular doors facilitate a village set-up
- Compact pack down size for easy transport and reduced manual handling
- Uniform set-up for different shelter sizes to minimise training requirements
- Personalised logo print
- Reinforced, integrated flooring to prevent water ingress
- Systems are provided with a staking kit, but can be freestanding or ballasted on soft or hard ground without the need for guy ropes

- Technologically advanced:

Feature: **All-in-one frame (legs attached to roof frame)**

Benefits:

1. Less components to consider during set-up and transportation
2. Reduced packed dimensions

Feature: **Telescopic Legs**

Benefits:

1. Drastically reduced pack down volume
2. Simpler and quicker deployment and strike down
3. Less manual handling and no overhead lifting
4. No minimum height requirements for operatives

## 2 SF SHELTER MODEL

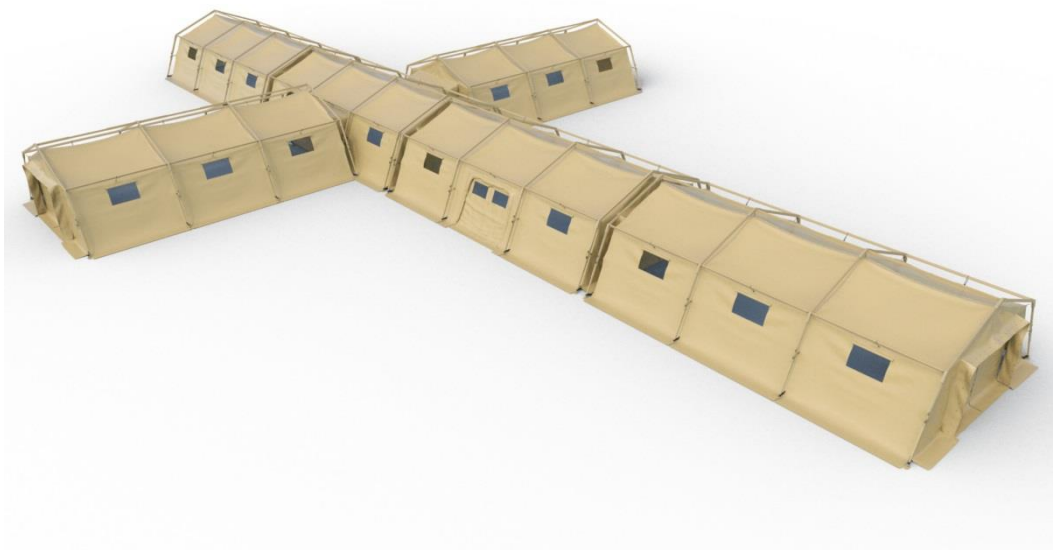
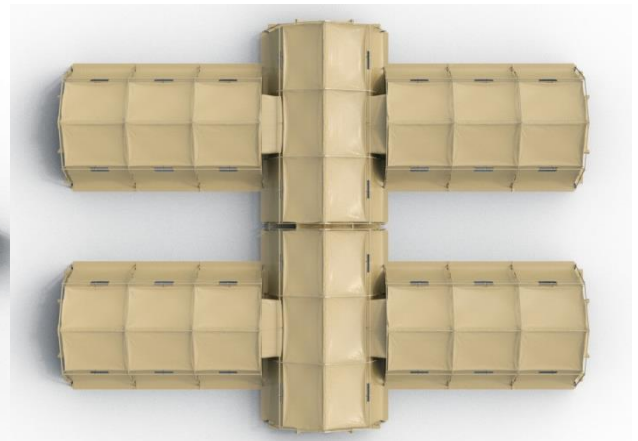
The SF – type shelter is conceived to offer versatility for a range of applications, multi-purpose work volumes and modular assembly from one uniform design

Each SF shelter consists of an aluminium frame and a hanging canvas. The shelters can be used for early entry or longer term deployment, offering complete flexibility.

## 3 SHELTER MODULARITY

All shelters can have multiple door openings on the side or on the end. This facilitates any variety of modular set-up: I, T, H or +

All shelter doors are the same dimensions, so shelters doors can be connected end to end, side to side or side to end. Consequently, to build a small or large system takes a fraction of the time compared with currently perceived rapid deploy shelters



## 4 SF SHELTER MODELS

### SF18D



Set Up Time:

Less than 4 minutes with 2 people

<b>Deployed Length:</b>	<b>3m</b>
<b>Width:</b>	<b>6m</b>
<b>Footprint:</b>	<b>18m<sup>2</sup></b>
<b>Height at Apex:</b>	<b>2.85m</b>
<b>Canvas and decon cell Weight:</b>	<b>130kg</b>
<b>Frame Weight:</b>	<b>59kg</b>

**Packed Dimensions:**

<b>Frame</b>	<b>L 2.3m x W 0.4m x H 0.6m</b>
<b>Canvas</b>	<b>L 2.1m x W 0.6m x H 0.6m</b>

## SF36D



Set Up Time:

Less than 5 minutes with 3 people

<b>Deployed Length:</b>	<b>6m</b>
<b>Width:</b>	<b>6m</b>
<b>Footprint:</b>	<b>36m<sup>2</sup></b>
<b>Height at Apex:</b>	<b>2.85m</b>
<b>Canvas and decon cell Weight:</b>	<b>161kg</b>
<b>Frame Weight:</b>	<b>90kg</b>

**Packed Dimensions:**

<b>Frame</b>	<b>L 2.35m x W 0.7m x H 0.6m</b>
<b>Canvas</b>	<b>L 2.35m x W 0.7m x H 0.7m</b>

## 5 Frame

- Every SafeFrame® has a unique and robust **patented “All-in-One”** aluminium frame that can be erected by a minimal number of personnel in a matter of minutes
- The frame is packed into a single compact transportation/storage carrying bag. It has ergonomically placed handles and is marked with Health and Safety labelling
- The unique design means that the frame sits externally to the canvas, and as a result, the frame is a rigid structure without central supports which would otherwise compromise or intrude into the interior volume of the workable space
- The frame is an **all-in-one structure** whereby the legs or base beams are permanently connected to the roof and pitch beams; this creates an inherent durability and strength enough to support heavy loads. It also means that the various elements (side beams, roof beams and plates) are already connected and the component parts of the structure do not have to be separately assembled by field operatives
- The patented frame design incorporates **telescopic legs**. This drastically reduces pack down volume compared to other shelter designs; it has simpler and quicker deployment and strike down; there is less Manual handling and no overhead lifting for operatives; there is no minimum height requirements for operatives
- The frame extrusion is made of aluminium alloy EN AW 6082 T6
- Components are machined completely in an aluminium 2017 mass (AFNOR – EN 573 standard) and machined from solid blocks for increased strength
- Base plates/feet are steel S235
- The treatment of the surface for a resistance in a saline environment is made by anodisation
- The whole of the screws and bolts are made of stainless steel
- Designed to be deployed in high winds (the frame can be fully anchored before the canvas is hoisted). The Safeframe® range has been tested using a jet engine in winds of up to 80mph.



## 6 Canvas



- The canvas is packed separately from the frame to **reduce combined packed volume dimensions** and to facilitate transportation and manual handling requirements when transporting the shelters to the disaster area
- The canvas is a **capsule with integrated side walls and reinforced flooring**, all of which are made from high quality plasticised PVC polymer direct coated onto both sides of a polyester substrate
- The canvas is mildew resistant, UV stabilised, M2 fire resistant and cold repairable
- Temperature resistance is -30°C/ +70°C
- The joints and assembly of the canvas are sealed through a high frequency welding process made according to the UNI 8544 standard
- All stress points on the canvas are reinforced to withstand repeated use in field conditions
- The fact that the floor is welded to the side walls means that there is **no water ingress** and the tent has better insulation
- The integrated flooring is manufactured from heavy-duty reinforced PVC so offers a resistance to uneven or rocky ground
- The colour of the canvas can be any RAL colour

## 7 Decontamination Configuration

A removeable decontamination cell is suspended inside any of the SafeFrame shelters. The cell creates a 3m x 6m decontamination zone. Larger shelters are configured to have a disrobe and re-dress area, whereas the SF18 shelter is entirely devoted to decontamination. The cell can remain attached during set up and strike down so that the system is quicker and simpler to set up and is immediately established as a decontamination shelter system.

This unit, without any change of structure, can be adapted for walking or non-ambulant casualty victims by merely installing a casualty conveyor to allow for stretcher/slides

The decon unit can be composed (according to the type of casualty) of:

- two lines for ambulant casualties
- two lines for non-ambulant casualties
- a mixture of ambulant and non-ambulant casualty lines





## ***Decontamination cells***

The decontamination cell, measuring 6 metres x 3 metres, is a one piece liner constructed from yellow PVC with a translucent roof section for natural light ingress. It is removable in the event of gross contamination or if the user wishes to deploy the shelter as a stand-alone structure/shelter for other applications (eg. For Casualty clearing/medical shelter/staff accommodation).



The decontamination cell provides 6 mounted, separate, automatically isolating water outlets to connect up to 4 switchable/detachable shower guns with supply pipes of a minimum length of 2 metres. The pipes are constructed of non-kinking, non-heat sensitive material.



Each showerhead is capable of delivering 10 litres per minute. The showerheads have a fixed drench spray pattern.

The sidewalls of the decontamination cell are integral to the bund to prevent accidental leakage / run off.



Each decontamination cell is split into two compartments of 3m x 3m

The decontamination cell offers 2 entrance and exit doorways for access into 2 compartments. These doorways are marked with "ENTRY" and "EXIT" signage with velcro covers to be used as required.

The entrance and exit routes to the decontamination cell are clearly marked with a hazard warning – "STEP" at either side of the 2 doorways. Furthermore the entrance and exit routes have a yellow/black chevroned area to increase hazard awareness

The supply piping within the cell is lay flat non-kinking type.

There are 2 x male cam-lock fitted water inlets (connecting to 10m supply hose) on the decontamination cell – 1 for each side of the decon cell. The aim is to allow water access from EITHER side of the decon cell once erected without the need for movement of the Unit.

The bunding (flooring containment area) is constructed via HF welding to ensure it remains watertight during operational use and is assisted by the use of heavy duty zips with PVC material flaps that are able to be folded inside the decon cell

## **8 Integrated Protective Floor Sheet**

There is a protective floor sheet which is fixed to the canvas. It prevents the shelter from deformation, punching and tearing due to rocks or gravel or due to feet of any equipment in the shelter.

The flooring is attached to the side walls to prevent any weather ingress.



## 9 Doors



As standard, the Safeframe® Shelter has 2 doors (one at each end). Each of the doors can be easily rolled up or down depending on operational requirements, and each door has a hook and strap with eyelet to keep it in place

The doors are sealable by heavy duty weather resistant zips to ensure modesty and protection from the elements.

Each of the SF doors is exactly the same size and so is inter-connectable with any other SF unit. To create a modular connection, there is a connecting flap around the door of each tent. To connect 2 shelters, simply overlay the 2 connecting flaps and attach using the toggle system. This creates a seal to prevent any water ingress between shelter connections. The connection

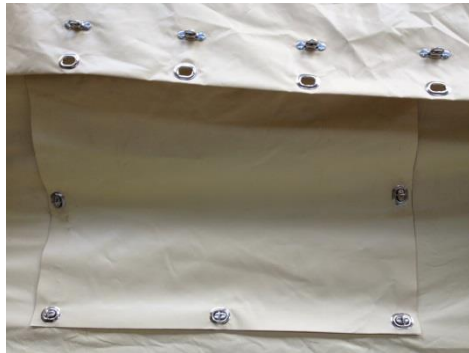


## 10 Windows

Each window consists of 3 layers:

- 1) Mosquito netting
- 2) Transparent PVC window
- 3) Solid PVC shutter.

Any combination of these layers can be utilised



For example, in warmer conditions, the PVC window and shutter can be rolled up to allow additional ventilation, but the mosquito netting can remain as a cover to the window



Alternatively, if the PVC window is rolled down, light ingress is permitted without allowing heat to escape.

The use of the shutter allows for modesty.

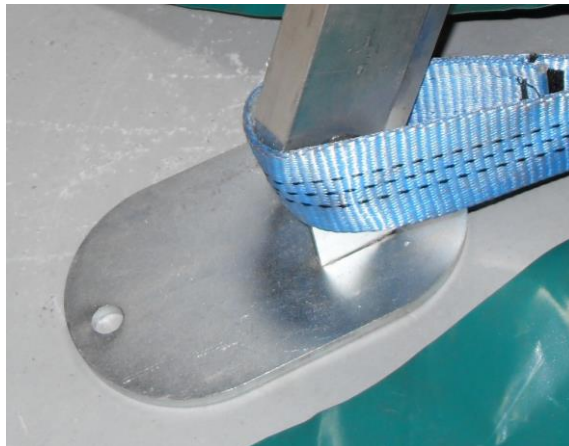
## 11 Sleeves

The canvas has 4 sleeves/ ports (0.35m x 0.35m) allowing the passage of the flexible devices, cables or the ducts of Air Conditioning Units.



## 15 Anchoring

Each leg is anchored using steel base plates which can be anchored by metal bars. As the frame sits externally to the canvas, the frame legs can be anchored before hoisting the canvas. As a result, the metal structure is already securely anchored before the canvas becomes susceptible to strong winds, etc.



The structure can be further stabilised with the use of an anchor kit and guide ropes which are included as standard. The canvas has a skirt which can also be weighted with ballasts, weights or even an on-site vehicle.

### Soft Ground

Ropes and stakes are provided with each tent. The stakes can be fixed to each foot of the frame as well as using guy ropes.

#### SF18 Components

- 4 x Corner staking pegs
- 4 x Small leg staking pegs
- 4 x Guide ropes
- 1 x Mallet
- 1 x Anchor Kit bag



### 13 Liners and Cells

The Safeframe® shelters have an ingenious feature whereby liners, decontamination cells, containment pods can be left, attached, inside the shelter during set up and strike time. This means that shelters for a variety of applications can be deployed and ready for operation in a matter of minutes. Furthermore, it means that one shelter can, with the simple addition of curtains, liners, water systems, filtration units, etc, be used for a variety of applications:

Field Hospitals, Surge Wards, Mass Decontamination, Casualty Clearing, Colpro, Staff Accommodation, C3 Containment.

