



## PRODUCT DESCRIPTION AND GENERAL SPECIFICATION

FEATURE	DETAILS
Type of Structure	FLATTS HR (Hard Roof model) is a unique collapsible folding building system with rigid walls and roof, designed specifically to meet the challenges of the remote area constructor and adaptable to a wide range of applications. Open planned, well ventilated, highly energy efficient and ready for HVAC, FLATTS are extremely easily erected within an hour without complex tools or experienced labour .
Size of Structure - what's in the container?	One container pack of FLATTS provides <b>three</b> individual buildings with a combined total 780 sq ft or 76m <sup>2</sup> . Each building can accommodate up to eight people in bunk beds. The container itself is usable secure facility also when deployed. Build all buildings to habitation readiness in three hours using three men and a light crane.
Energy Efficiency and Fire Safety	FLATTS walls and roof are made from 50mm / 2" thick steel skinned sandwich panels with a core material of PolyUrethane @ 40kg/m <sup>3</sup> density (PU) These panels have a rating of approx R15.
Structural Integrity	This product has been engineered from the outset and an Engineers Structural Certificate is supplied. The structure is designed to withstand winds of approx 40m/s Non Cyclonic, however can be upgraded with relatively simple and cost effective solutions in the field by the addition of screws.
Air-Infiltration Prevention – ability to seal the shelter from air circulating through	Multiple compression gasket seals are installed into each connecting joint face in the folding system geometry. The modules are bolted together for structural integrity and sealing to prevent air infiltration.
Moisture Absorption Resistance	The complete structure is resistant to moisture absorption.
Testing and Deployment	The FLATTS Rapid Construction System has been tested at the US Army Aberdeen Proving Ground in Maryland USA, and deployed into the Middle East under trials with US Army. The product has been deployed with great success into Oil and Gas Pipeline projects in Mozambique and projects in the Democratic Republic of Congo.
Recovery and Redeployment	A key benefit of FLATTS. The system is designed for multiple deployments after asset recovery in the supplied sea containers.
Relocatable on site as whole buildings?	Can be relocated simply by removing the ridge cap assembly beam, unbolting four bolts, and using a light crane to move each independent half of building.
Shipping and Handling	Each FLATTS Pack comes supplied in its own standard 20 ft ISO container (1CC ... 8'6" high), can be handled by all intermodal transport and handlings systems worldwide and stored indefinitely without degradation.
Electrics in buildings?	Each building (two modules face to face) is pre-wired, with eight x double power outlets, four to each long side. Electrical outlets are double pole according to Australian standards for mobile or transportable structures. Power points are CE rated and are multinational. There is a power inlet at the end of each module for feed supply of safe regulated energy from whatever Master Distribution panel would be applied (by others) depending on the needs of project. We do not supply electrical components beyond the perimeter of the product, to allow for differing layouts and building applications across a broad range of deployments.
Electrical Grid compatible and able to interface with a military or other generator	We do not supply electrical components beyond the perimeter of the product, to allow for differing layouts and building applications across a broad range of deployments.
Lighting in buildings?	Lighting is low energy LED strip lighting delivering min 250 lux for all uses.

**Collapsible to minimize transportation cube allowing for multiple assemblies**

FLATTS HR product is very durable and can be erected and collapsed possibly hundreds of times always depending on the care in physical handling during such operations.

**Product lifespan**

With a minimum of maintenance, probably much longer than ten years. FLATTS can also be converted at any time into permanent structures, as the product has been designed for this from the outset.

**Modes of transportation (marine, highway, rail, and fixed and rotary wing aircraft)**

Designed to be transported within the supplied sea container, alternatively can also be handled and lifted either as a single module, several modules at a time, or as a full pack of six modules, depending on available MHE assets

**Ruggedized to withstand rough handling and inclement weather to include operating temperatures as low as 20 degrees F to 125 degrees F and storage temperatures of minus 60 degrees F to 145 degrees F.**

FLATTS is designed for ruggedness in long term storage, and for short or long term deployments. The materials used throughout the entire structure are industry proven through commercial application and deployment in all areas of the world.

**Corrosion resistant materials**

All materials used throughout the entire structure are industry proven through commercial application and deployment in all areas of the world. External steel surfaces are protected by factory applied polyester coatings to panel systems, and SC4 rated ElectroGalvanized Plating to all steel components including baseframes. All other materials are extruded aluminum alloys and stainless steel fittings.

**Erection of buildings on semi-prepared surfaces (cleared and basically level).**

FLATTS buildings are supplied with square section hollow tube rails as noted in presentation materials. The rail system is required to ensure a common and level interface for the two halves of the structure to meet and seal as needed. To meet Engineers Structural Certification however it is mandatory that foundations be prepared according to individual site design requirement and accepted by the issuing Engineer as being adequate to meet the design wind speed of the completed structure.

## **Specification Data**

Steel in Product	Australian Standards Grade 350 steel, Electroplate Galvanized after fabrication to SC4
Floor sheeting	Formaldehyde Free 18mm Structural Grade Plywood, glued and screwed to steel RHS joists
Floor Covering	2mm thick Vinyl
Glazing	Aluminium Casement style windows, six per building, fitted with Safety Glass
Door	Milspec 900mm wide opening, no trip edge. Three way Assa Abloy Security Door furniture
Fittings	Three Stainless Steel hinges per door, c/w Stainless Steel heavy duty hook back assembly
Wall and Roof Panels	PolyUretane SIP, .6mm Steel facings, Polyester paint finishes, White in colour
Lifting and Handling	Inbuilt Lifting Eyes to perim. of each module, Drag eyelets on every chassis corner
Electrical	16 x Multinational Power outlets per building, CE rated, accessible from exterior plinth cover
Structural Integrity	Designed and checked to the relevant Australian Standards, including: AS/NZS 1170.0, AS/NZS 1170.1, AS/NZS 1170.2, AS/NZS 1170.3, AS/NZS 1664.2, AS 4100, AS 4580, AS/NZS 4600
Notes to Design Check	Floor loading can be upgraded to 3mpa by the use of an additional support bearer Design Wind Speed of 40m/s can be upgraded by the use of additional screws after erection



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**7 October 2014**

Good morning Steve

I have reviewed the FLATTS building plan in regards to compliance with the National Construction Code 2014.

***Where non-Temporary or otherwise building code compliance is required***, the building would comply with the NCC 2014 *Class One* as a 'stand alone' building in conjunction with a separate building that complies to the NCC 2014 and Australian Standards for Kitchen & Wet Area, and WC building ***where such amenity is required or included***.

The following certificates are required:

1. Form 15 Engineer Design & Wind Loads to Australian Standards;
2. Form 15 Glazing Certificate to Australian Standards;
3. Form 15 (Design) and Form 16 (Install) for Electricians to Australian Standards;

Also, a smoke alarm (per building) must be installed - Form 16 Smoke Alarms to Australian Standards must be supplied.

**\*\*Please Note:** if multiple building units were erected in close proximity to each other, a reassessment for compliance to the NCC would be required.

**If you have any further queries regarding the services offered by The Certifier Pty Ltd, please do not hesitate to contact our office on 3821 8777.**

**Yours sincerely**

**for Alan Greet  
MANAGER**