

# REFUGEE HOUSING UNIT

CREATING BETTER HOMES FOR EMERGENCY RELIEF AND BEYOND

The Refugee Housing Unit RHU is an innovative shelter resulting from a partnership between UNHCR, the IKEA Foundation and the Refugee Housing Unit, designed to improve the living conditions of people displaced by natural disasters and conflicts.











The Refugee Housing Unit (RHU) is composed of three individual parts – RHU Frame, Panels and PV System. All RHU components can be assembled on site without additional tools and equipment.

Prototypes have been tested and evaluated by UNHCR with respect to the personal, social and cultural expectations of the people that it aspires to rehabilitate, the environment that it is designed for, and the critical logistical and financial aspects of a large scale production and deployment, so as to deliver a dignified and viable end user experience.

Currently the design and engineering is finished and will be made ready for production.







# Modular Design

The Refugee Housing Unit is composed of a modular design to make it a viable solution in the most shifting contexts. The RHU Frame is filled with pre-manufactured panels to create a temporary home. An included Photo Voltaic system can be attached to provide energy for the supplied light or to charge a mobile phone. Moreover, many Refugee Housing Unit• can be connected together to create bigger structures suitable for larger families or other functions. Additional winter and hot climate kit• are under development to make the Refugee Housing Unit even more suitable for different climate types.

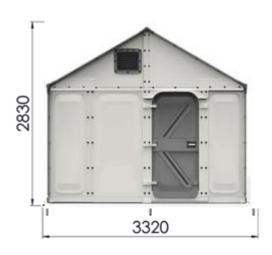
## **Better Living Comfort**

The design of the RHU was derived using the regulated European building codes. As a consequence, it provides a high standard of living comfort and safety. The spacious volume offers good ergonomics with full standing height, which also provides useful storage space.

#### **Logistic Friendly**

The RHU is optimised to meet high volume production conditions and flat pack logistic demands required to be cost efficient in the long run. Due to the materials and processes used, manufacturing and packaging of the RHU is suitable for global production.



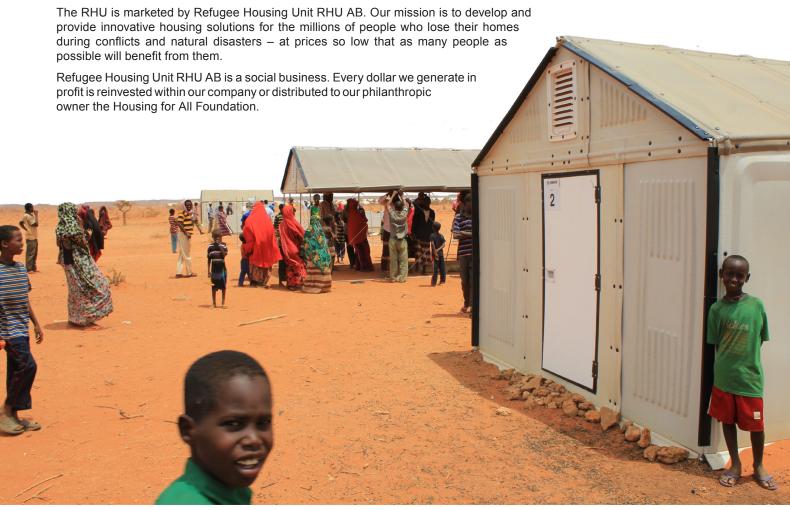


774	1
Floor area	17,5m <sup>2</sup>
Windows	4 pieces (620cm2 each)
Ventilation openings	2 pieces (800cm2 each)
Door	1 piece (740x1690mm)
Sphere compliant	Yes
Minimum ceiling height	1840mm
Expected lifespan*	3 years
UV	2700 UVA – 100% functionality
Wind speed (frame)	18 m/s (EC1)
Snow loads	10 kg/m2 (EC1)
Modular	Yes
PV system	4h light/day and USB power
Package Weight	140 kg
Package Volume	1.04 m3
Package A	1960x1100x240mm (70kg)
Package B	1960x1100x240mm (70kg)
Pallet dimensions	1960x1100x140mm
Container 40 feet	36 RHU shelters
Container 40 feet HC	48 RHU shelters

 $<sup>^*</sup>Expected\ lifetime\ without\ maintenance\ 1,5\ years,\ with\ maintenance\ 3\ years$ 

### **REFUGEE HOUSING UNIT - A SOCIAL BUSINESS**

The RHU is a groundbreaking example of collaboration, technical innovation and practical application. Tested by some of the worlds most vulnerable families, putting their experience and needs at the heart of the development process.



Above: Kobe Refugee Camp, Dollo Ado, Ethiopia

Below: Kawergosk Refugee Camp, Erbil, Iraq

