



Harwal Shelters

Emergency Relief Housing in Flat Packs



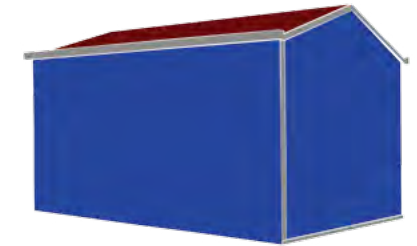
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**Offering Comprehensive
Housing Solutions
that meet a wide variety of needs**
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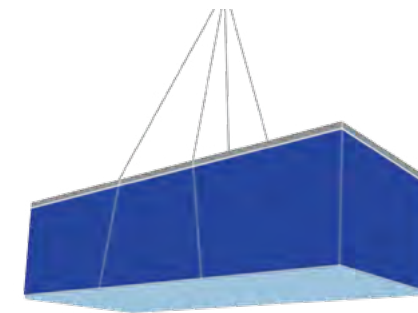
Housing Systems Range



PVC Shelters-Expandable



PIR Houses-Expandable



Modular Houses



Building Structures



PVC Shelters - Expandable

With its expertise in designing shelters, homes and camps, Harwal Group has developed an innovative and affordable range of housing using vinyl as a key building component. These single-story shelter homes provide safe and private accommodation for refugees and are expandable to accommodate different sizes.

The exterior sheet of PVC vinyl, makes the shelter resistant to rust, rot and mildew, and ensures the shelter will never require painting.

The shelter's columns are reinforced with steel for additional strength to allow for easy mounting of shelves. Each shelter is built on a strong steel foundation that can be placed on a plywood, gravel or concrete base. Unlike tents, which may require the entire structure to be changed if any part is damaged, components can be replaced individually.

These affordable housing shelters are designed to handle up to 20 lbs/sq ft of snow load and theoretically can sustain wind loads of upto 90 km/h. The most important feature is its fire retardant property and is Fire Rated as per BS 476 Class 1.

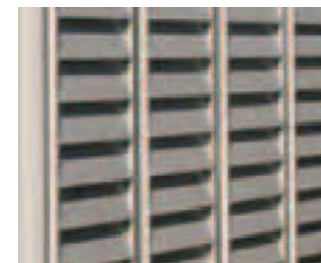
The PVC shelters are delivered in cardboard boxes which can be lifted by four people and also contain instruction manuals. The assembly is fast, simple, and the shelters can be relocated as needed. The PVC shelters provide good thermal insulation and solar panels can be installed on the roof to provide electricity and light during hours of darkness.

Due to its durability, cost- efficiency , and modular size Harwal PVC Shelters offers refugees a better life than those in tents.



Key Features

- All-weather, Durable Vinyl
- Low Maintenance
- Resistant to rust, rot, mildew and dents
- Never needs painting
- Wide variety of sizes to choose from
- Quick and easy installation; with predrilled and numbered parts
- Strong steel roof truss carries 20 lbs/sqft snow load
- Steel foundation kit (included)
- Sturdy steel-reinforced wall columns
- Walk-in housing (interior ceilings are 1.8m high)
- Wind load calculated up to 90 km/h
- Door handles with padlock eyes for locks
- Air vent for ventilation



All Weather Durable Vinyl (FireRetardant)



Sturdy Steel Reinforced Wall Columns



Strong Steel Roof Truss Carries 20 lbs/sqft Snow Load



Window



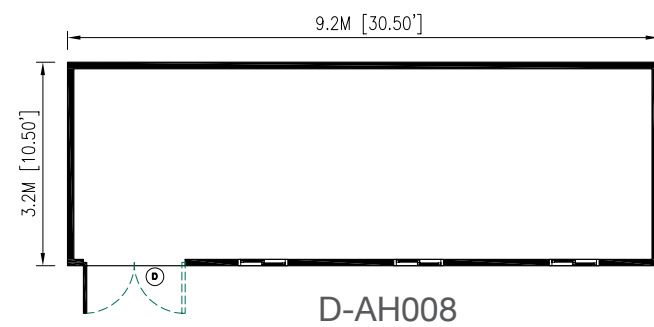
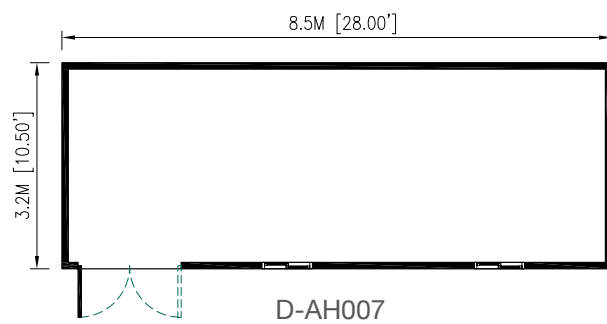
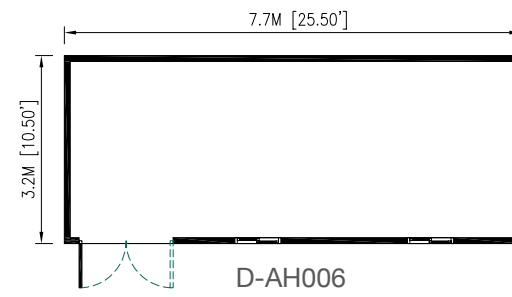
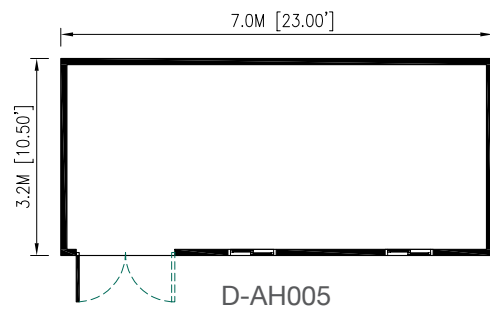
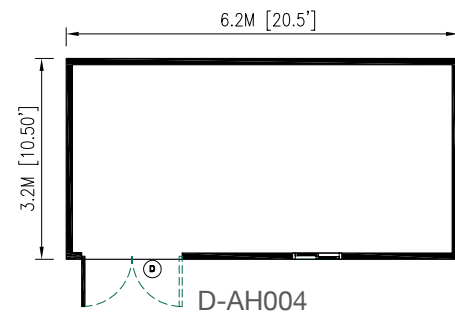
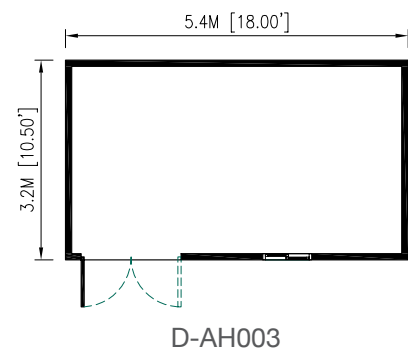
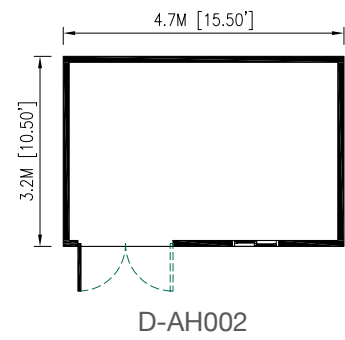
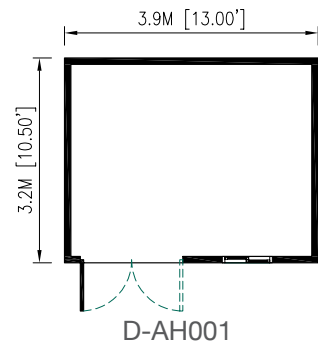
Air Vent for Ventilation



Applications

- Relief Shelter
- Temporary Accomodation
- Construction Site Office
- Equipment Storage

Floor Plans

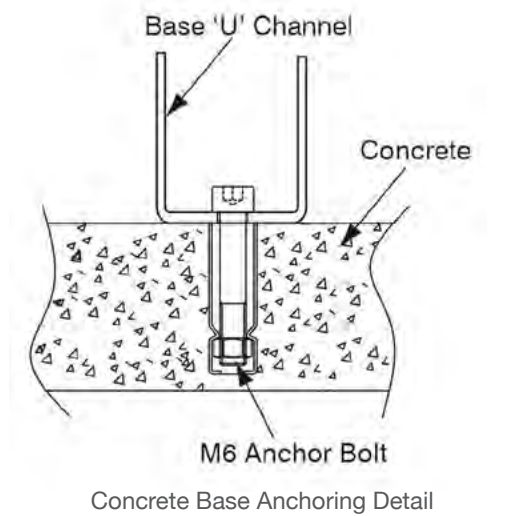
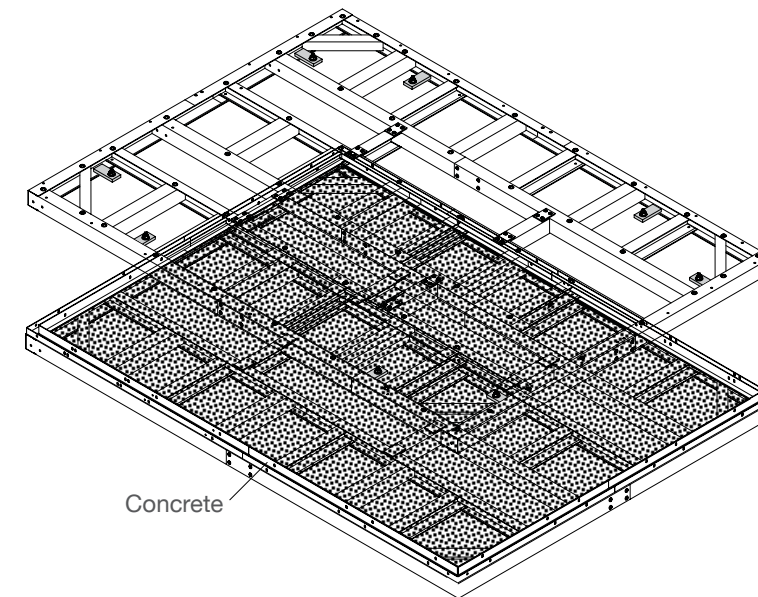


Dimensions

Model Number	Exterior Dimensions			Cu. of space (m ³)	Door Dimensions		
	Width	Depth	Height		Width	Width	Height
					Double	Single	
D-AH001	3.2m	4.1m	2.3 m	29.8	1.5 m	0.75 m	1.8 m
D-AH002	3.2m	4.8m	2.3 m	35.3	1.5 m	0.75 m	1.8 m
D-AH003	3.2m	5.6 m	2.3 m	41.2	1.5 m	0.75 m	1.8 m
D-AH004	3.2m	6.4 m	2.3 m	47.1	1.5 m	0.75 m	1.8 m
D-AH005	3.2m	7.2 m	2.3 m	53.0	1.5 m	0.75 m	1.8 m
D-AH006	3.2m	8.0 m	2.3 m	58.9	1.5 m	0.75 m	1.8 m
D-AH007	3.2m	8.8 m	2.3 m	64.8	1.5 m	0.75 m	1.8 m
D-AH008	3.2m	9.6 m	2.3 m	70.7	1.5 m	0.75 m	1.8 m

Foundation

The shelter can be built on a concrete base or on an optional foundation kit. The foundation kit is made with galvanized steel and can be dirt, gravel or concrete surface.



After assembly of the Base 'U' Channel it can be filled with concrete or dirt / gravel up to the Foundation level.

PIR Houses-Expandable

Harwal Group, is a pioneer in manufacturing insulated panels, has been a leader in building modular houses, shelters, schools, classrooms and clinics for over 50 years.

The PIR Modular Houses are unique energy-efficient buildings that use galvanized metal panels – manufactured with FM approved Fire-Retardant insulation, sandwiched between an inner and outer skin – for the roofs and walls. While the inner skin is pre-painted metal (standard) or vinyl, the outer skin is pre-painted galvanized steel (standard) or plastisol steel, offering excellent acoustic performance and thermal insulation.

These single story modular insulated buildings are available in a variety of standard sizes and are ideal for all weather conditions. Each building is easy to assemble and can be easily disassembled and relocated. The modular design allows for multiple expansions, 1 meter each.

The roofs can hold a snow load capacity of 30lbs/Sq. Foot (146.5kg/sq.m) and the building is wind tested upto 115km/h making these insulated modular houses are an excellent choice for refugee camps, affordable housing communities, workers accommodation, schools and clinics.

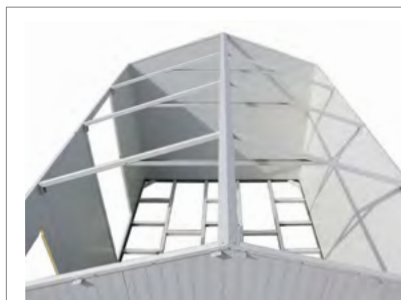


Key Features

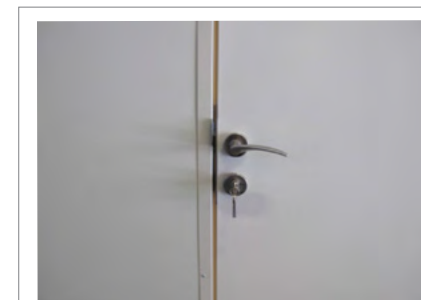
- Good Thermal and Acoustic Insulation
- Termite resistant
- Easy installation; all parts are pre-cut, drilled and numbered for ease of assembly
- Insulated Fire Rated Panels (as per ASTM E/84 Class A)
- Standard wall thickness is 24mm
- Walls are designed to carry loads; optional shelving can easily be mounted on the walls
- Roof tested to withstand (30lbs) / sqft of snow
- Gable Roof design for easy water drainage; a gutter system with a downspout is incorporated to collect residual water.
- Tall walk-in building (interior ceilings are over 2.13m high)
- Solar Panels (optional)



Accessories



Building is reinforced with metal columns and beams. Panel walls contain Fire Retardant insulation.



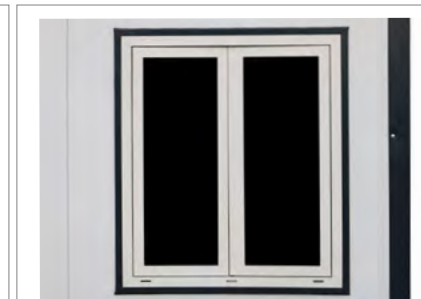
Door Knob Bolt (Included)



Galvanized Metal Foundation Kit



Rear Water Gutter System



PVC / Aluminium window kit (Included)

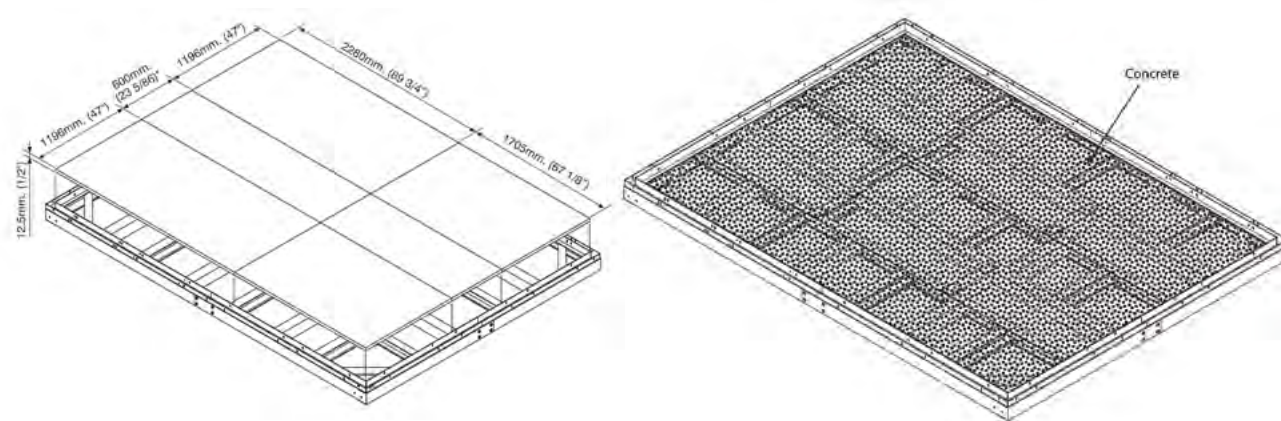
PIR HOUSES Extension



House with optional extension kit added to both left and right sides.

Foundation

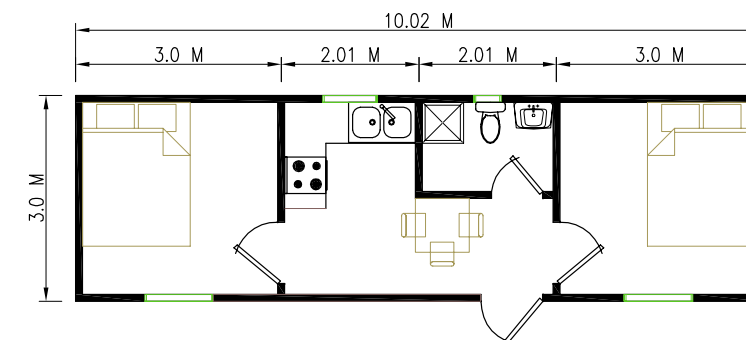
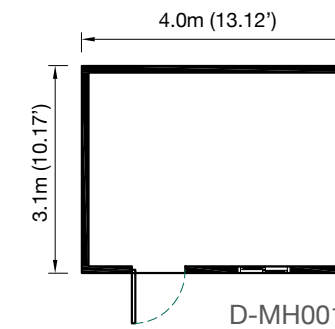
The basic Insulated Modular Housing building package includes a galvanized metal foundation kit and a single window kit. The foundation kit provides a base for installing the building and is pre-drilled to ensure a square and tight fit. The insulated houses are shipped in two crates and all parts are pre-cut, drilled and numbered for ease of assembly.



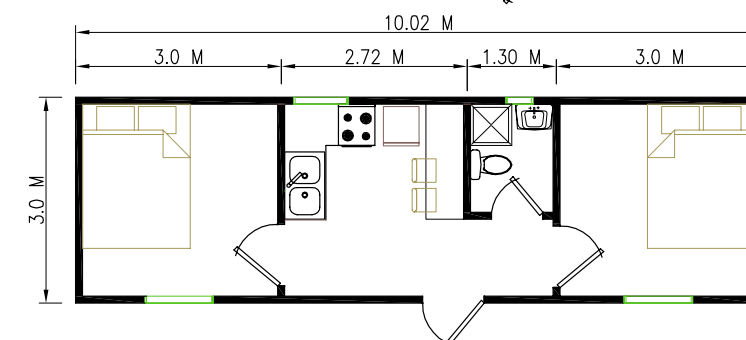
PIR HOUSES Dimensions

MODEL NUMBER	Area	Exterior Dimensions			Door Opening		Window Dimensions	
		Width	Depth	Height	Width	Height	Width	Height
D-MH001	12 sqm	3m	4m	2.335	0.912m	2.10 m	0.702m	0.805
D-MH003 D-MH004 D-MH005	30 sqm	10.016m	3m	2.335 m	0.912m	2.10 m	0.702m	0.805

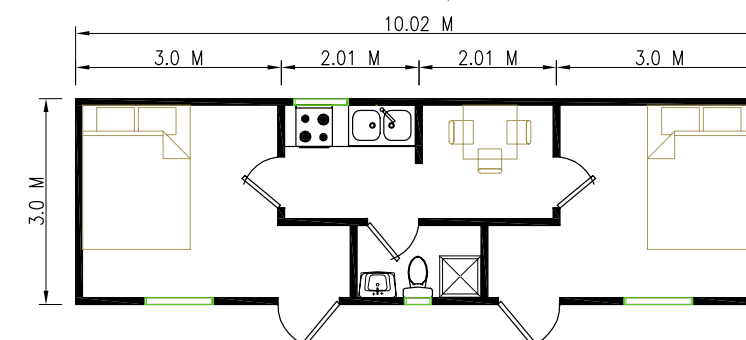
Floor Plans



D-MH003
Shown with optional room partitions and options.
(Not included in basic pricing)



D-MH004
Shown with optional room partitions and options.
(Not included in basic pricing)



D-MH005
Shown with optional room partitions and options.
(Not included in basic pricing)

Modular Houses

With its expertise in designing shelters, homes and camps, Harwal Group has developed an innovative and premium range of durable and cost-efficient flat pack Modular House Containers. These sturdy modular buildings offer excellent insulation, are easy to assemble and present the best solution for refugee camps .

These Flat Pack Modular House Units sets the benchmark for high mobility shelters. Light and easy to transport this shelter is its own shipping container and provides instant redeployable accommodation solutions. Multiple modular buildings can be easily created by stacking and interlinking units together.

In addition to being comfortable our Flat Pack containers are Fire Safe (with Insulated PIR Fire Rated as per ASTM E/84 Class A) and easy to transport. The modular houses come in assorted sizes and internal plans can be adjusted to suit more than one family.

The flat pack modular houses are an ideal solution for schools, healthcare centers, clinics, worship places, laundry areas, recreational areas, toilets and showers, dining halls and other facilities required inside refugee camps.



High Quality Panels



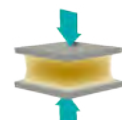
Moisture Resistance



Environment Friendly



Smart Energy Solutions



Structural Strength



Fire Retardant



APPROVED



Key Features

- Highly durable, long lasting and low maintenance
- Delivered factory assembled or in knock-down form (quick and easy assembly nut and bolt connections)
- Insulated Roof & Walls
- Attractive pre-painted metal exterior walls
- Superior heat and sound insulation and are waterproof
- Resistant to mold, mildew, algae, rodents and termites
- Surface-mounted electrical conduits and boxes
- Electrical and sanitary connections ready for plug and play
- Electrical, light fixtures, A/C units and Furniture are available (optional)
- Can be manufactured based on custom floor plans and dimensions

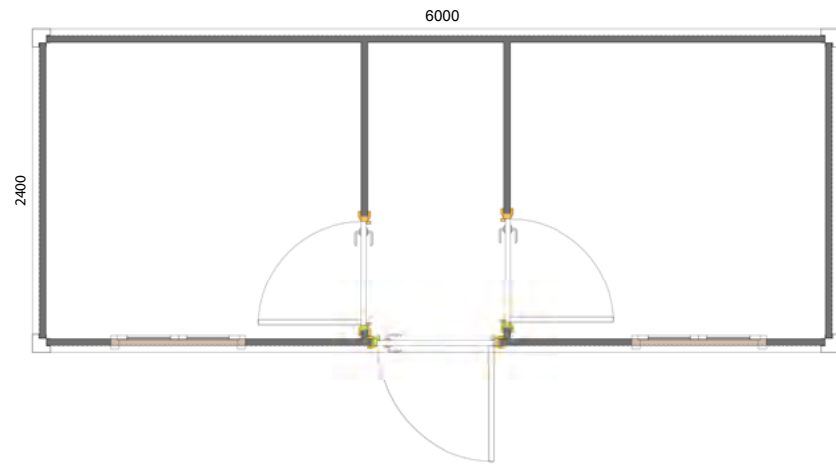


Applications

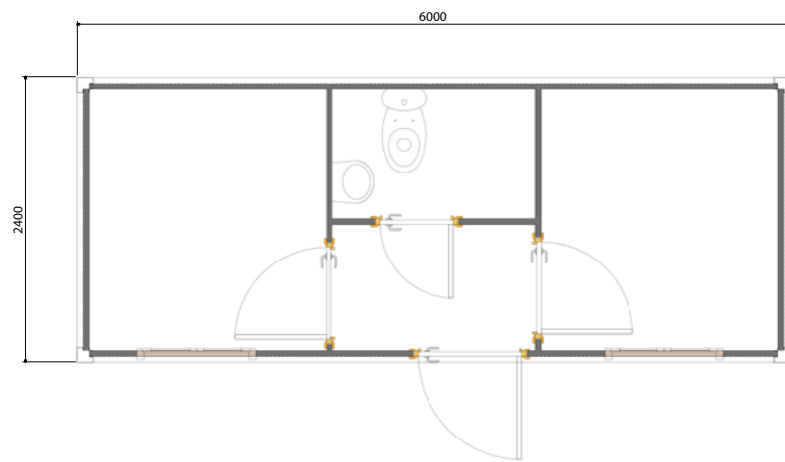
- Housing Units
- Schools
- Clinics
- Storage Facilities



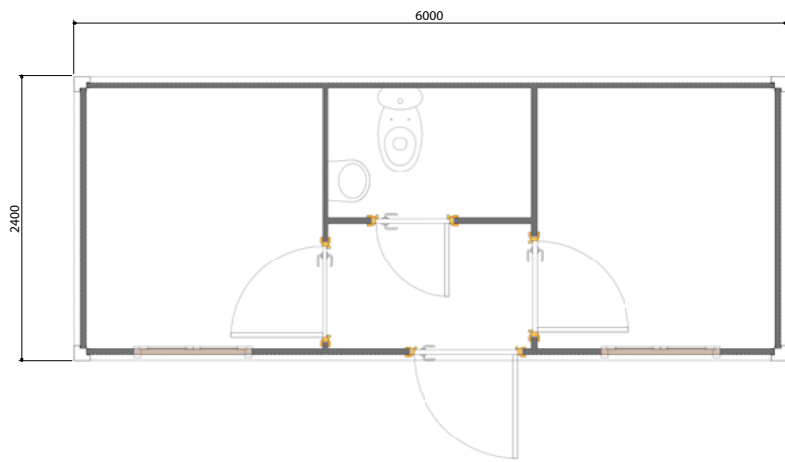
Floor Plans



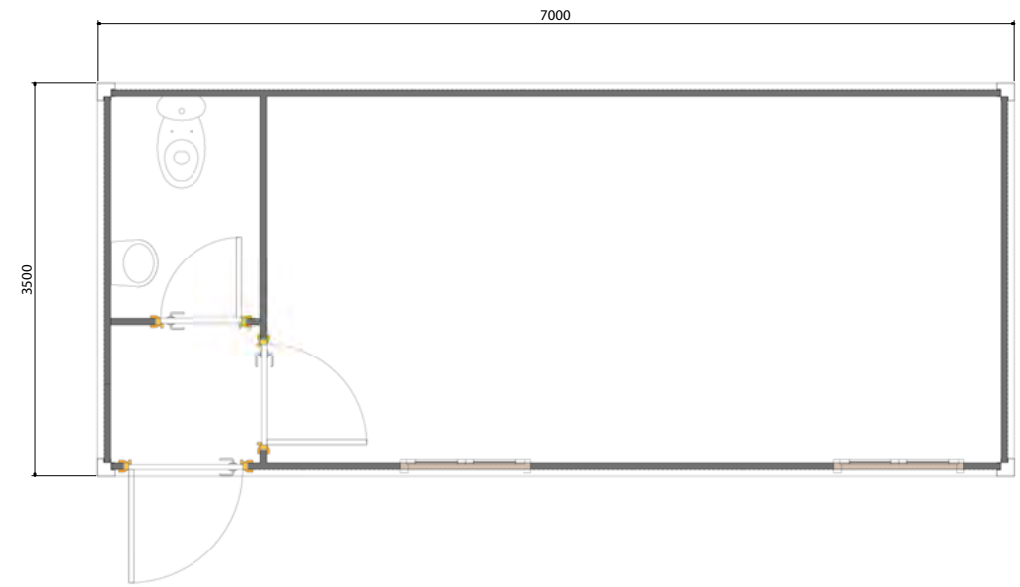
D-PC001



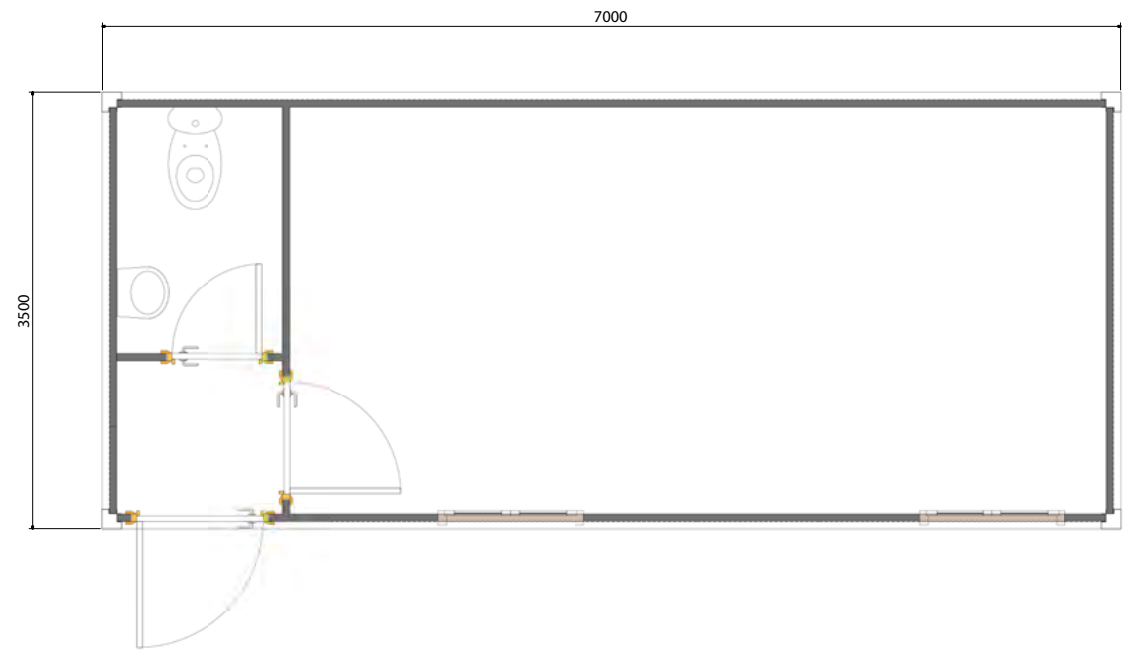
D-PC002



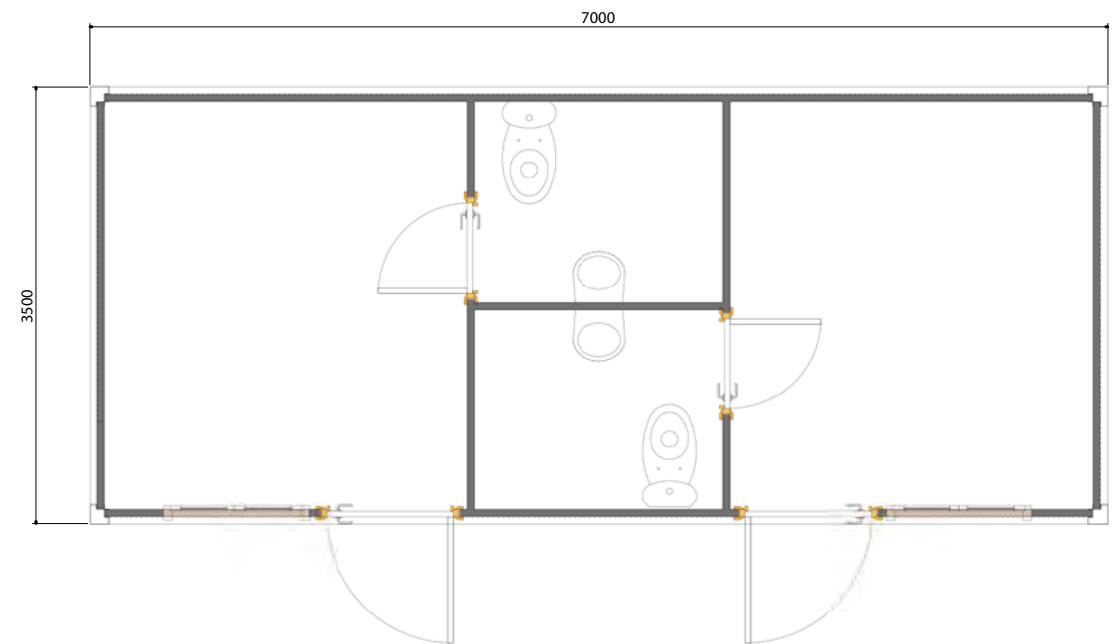
D-PC003



D-PC004



D-PC005



D-PC006

Building Structures

With a wide range of shelters, prefabricated modular houses and container products, Harwal Group also specializes in developing sustainable Building Structures. These buildings are an excellent option for military camps, warehouses, livestock sheds, storage and such. The building structures can be offered as a fully integrated building system including roofing and cladding.

The Building Structures frames are formed of strong galvanized steel and can be assembled using nuts and bolts which allow shorter construction and erection time. It can be bolted to the ground and withstand rain, snow and intense winds. The roof and walls are FM approved Insulated PIR Fire Rated panels (ASTM E/84 Class A) which provide excellent thermal and acoustic insulation. The steel frames are modular and make it adaptable for different applications uses and locations.

With relief agencies and governments facing the challenge to construct facilities for a growing number of refugees in a short span of time these Building Structures provide the best solution.



High Quality Panels



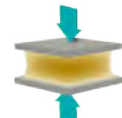
Moisture Resistance



Environment Friendly



Smart Energy Solutions



Structural Strength



Fire Retardant



APPROVED

Key Features

- Long-lasting, durable and safe.
- Frame System designed for different types of cladding
- Faster Manufacturing Time
- Insulated Panels provides excellent heat and water insulation.
- Computerized precise manufacturing provides for faultless production.
- Provides more efficient earthquake performance due to its flexibility and lightness.
- Flexibility in design.
- Reduces construction period due to its easy assembly.
- Galvanized profiles are corrosion-resistant.
- Eco-friendly.
- Cost-effective.
- Construction materials can be recycled.



Applications

- Schools
- Clinics
- Offices
- Workers accommodations
- Civic buildings
- Storage Facilities
- Retail stores and others



Applications of housing buildings

Harwal Group offers a wide range of housing shelters that are suitable for a variety of applications. The housing units can easily be applied to the following (for example):

- Schools
- Clinics
- Offices
- Workers accommodations
- Civic buildings
- Police stations
- Guard houses
- Retail stores and others

Simply, Harwal Shelters can provide the building needs of an entire community.





Group Harwal

Combining innovation and excellence, Harwal Group is the largest plastics converter in the Middle East. The Group converts over 200,000 metric tons of plastic and 100,000 tons of metals every year delivered through its ISO 9001 certified companies. As an award winning organization, Harwal Group combines its technical capability with evolving market trends to bring superior products and services to its valued customers.

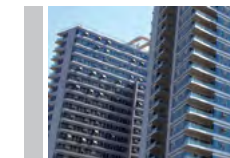
Harwal Group has 28 business units with manufacturing and sales facilities across the globe. Business segments include Building Materials, Building Systems, Electrical Cable Management systems, Switches & Sockets, Pipeline Systems, Prefab Buildings, Doors & Windows, Refrigerated Transport and Storage, Industrial Warehouses and Storage, Refrigerators, Plastic Consumer Products, Packaging Materials, and Furniture. The manufacturing conglomerate operates within 65 countries across the Middle East, Africa, Europe and USA. Providing unrivalled manufacturing capabilities and services across the globe, Harwal Group runs its impressive operations through four main companies - TSSC, Interplast, Cosmoplast and Intermetal.

Founded in 1938, Harwal Group currently operates from its headquarters in the UAE. Harwal's strategy and business model is built around the principles of innovation, quality and sustainability. As an organization, the Group takes pride in its work, the success of its customers and the results they achieve together. Its continued growth and success over the last eight decades can be attributed to an ability to adapt and evolve, enabling it to become the leader in its industries.

Range of Products Manufactured by Harwal Group

Building Materials

- Composite Panels
- Profiled Cladding Sheets
- Seamless Roofing System
- Glass & Aluminum Systems
- Doors & Windows



Metal Storage Solutions

- Racking Systems
- Metal Sheds



Cold Storage & Transportation

- Cold Rooms
- Freezer Rooms
- Refrigerated Vehicles



Refrigerators & Coolers

- Visi coolers & Freezers
- Water Coolers
- SS Refrigerators & Freezers



Housing Systems

- Affordable Houses
- Modular Houses
- Portacabins
- Prefab Houses
- Telecom Shelters
- Container Converted Units



Stainless Steel Equipments

- Laundry & Kitchen
- Hospital



Furniture

- Educational Furniture
- Hotel Furniture
- Office Furniture



Harwal Shelters

Emergency Relief Housing in Flat Packs

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