



Technical Supplies & Services Co. LLC.



Housing Systems

“Offering comprehensive housing solutions that meet a wide variety of needs”.







Introduction

Duramax is a leading US brand that offers a broad array of building products, including a well-regarded line of modular buildings.

Manufactured by TSSC, Duramax housing systems use the latest technologies in both design and construction. Options range from inexpensive and low cost vinyl housing to high-quality thermally insulated buildings. The product line includes modular insulated buildings, portable cabins and prefab houses that feature creative architecture and high efficiency materials. Duramax housing systems are light and durable, competitively priced, easy to assemble and can be customized to meet any design needs.

The Duramax Housing Systems Range Includes:

-  Affordable Housing
-  Insulated Modular Housing
-  Porta Cabins
-  Pre-Fabricated Houses



Key Features

- Entry Level Shelter Homes
- All-weather, fire retardant, 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
- Double wall panels provide insulation
- Strong steel roof truss carries 20 lbs/sqft snow load
- Galvanized steel foundation kit (included)
- Sturdy steel-reinforced wall columns
- Walk-in housing system (interior ceilings are 1.8m high)
- Wide & tall double doors (1.55m wide x 1.8m tall)
- Wind tested up to 115 mph (when anchored to the ground)
- Door handles provided with padlock eyes for locks
- Air vent for ventilation
- Skylight is available (optional)
- 15 Year Limited Warranty

Affordable Housing

With its expertise in designing shelters, homes and camps, Duramax has developed an innovative and affordable range of housing using vinyl as a key building component. These single-story shelter homes provide safe and secure accommodation and are available in a variety of standard sizes. The assembly is fast, simple, clean and safe, and the shelters can be easily disassembled and relocated as needed.

The Affordable Housing shelters are made with double sheet walls. The exterior sheet, made of PVC vinyl, makes the shelter resistant to rust, rot and mildew, and ensures the shelter will never require painting. The interior wall is made of cement board, MDF, laminated MDF or pre-painted steel sheet. The walls are placed with spacing to provide a pocket of air between them; this air pocket acts as a barrier and provides basic thermal insulation for the shelter.

The shelter's columns are reinforced with steel for additional strength and 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.

The Affordable Housing shelters are designed to handle up to 20 pounds per square foot of snow load and are wind-tested for winds of up to 115 mph.

The most important features to consider when choosing entry-level shelter homes are durability, size and value. Duramax's Affordable Housing from TSSC offers by far the best combination of all of these.



All Weather Durable Vinyl (FireRetardant)



Sturdy Steel Reinforced Wall Columns



Strong Steel Roof Truss Carries 20 lbs/sqft Snow Load



Air Vent for Ventilation



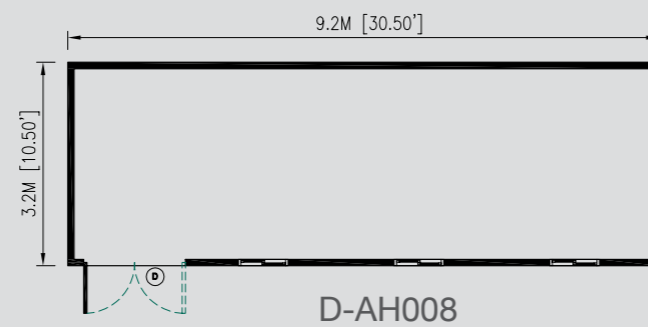
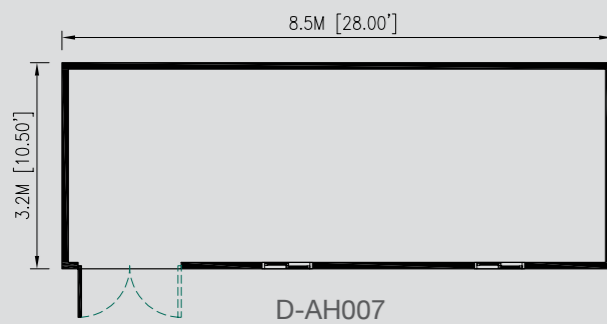
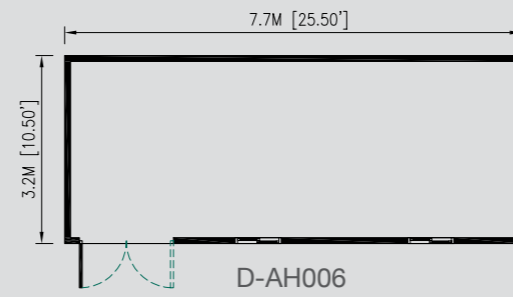
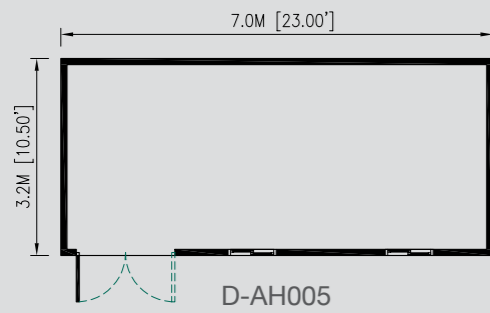
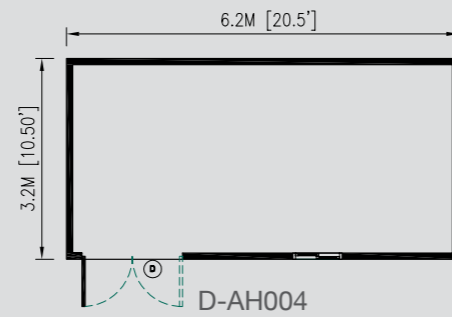
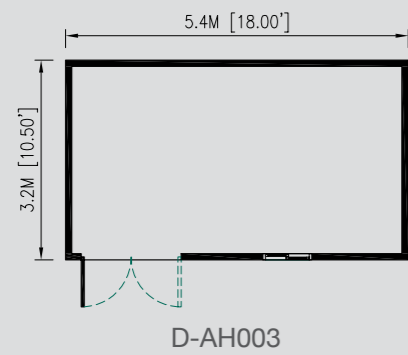
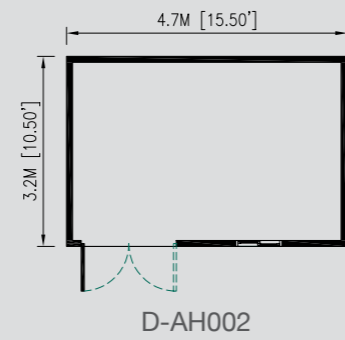
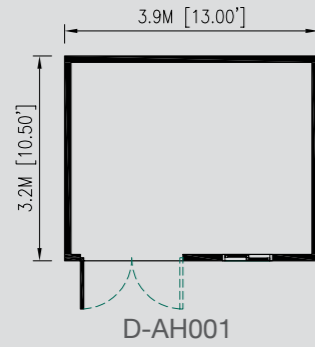
Double Wall Construction



Window



Floor Plans

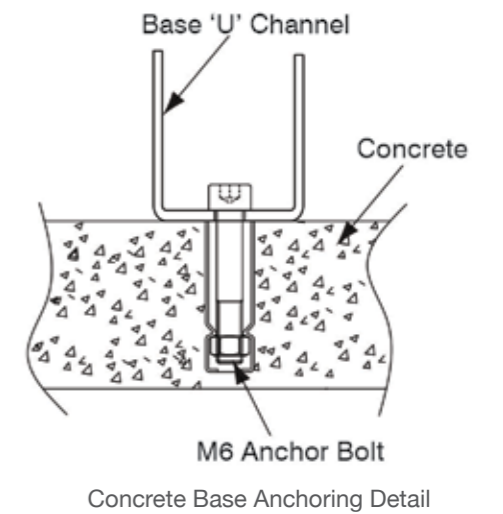
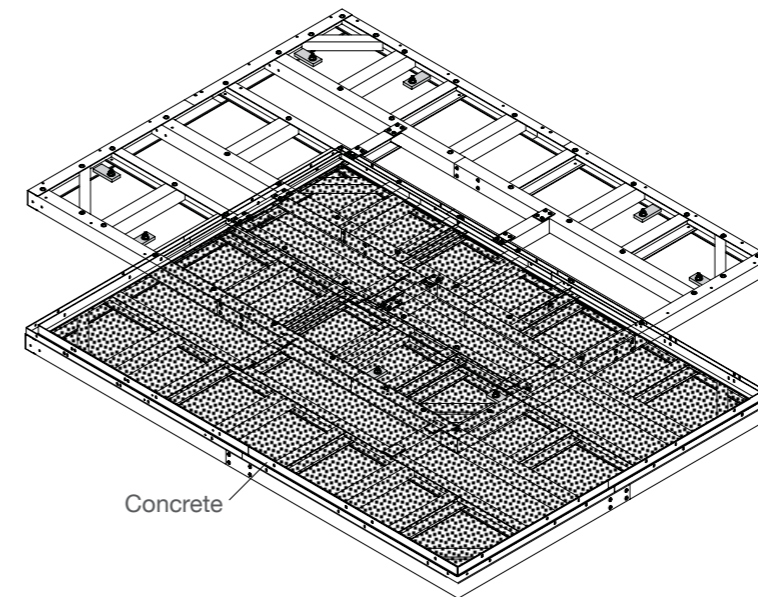


Dimensions

Model Number	Exterior Dimensions			Cu.m of space (m ³)	Door Dimensions	
	Width	Depth	Height		Width	Height
D-AH001	3.2m	3.9m	2.16 m	27.4	1.55m	1.82m
D-AH002	3.2m	4.7m	2.17 m	33	2.23m	1.81m
D-AH003	3.2m	5.4 m	2.17 m	38.7	2.23m	1.81m
D-AH004	3.2m	6.2 m	2.17 m	42	2.23m	1.81m
D-AH005	3.2m	7 m	2.16 m	49	2.23m	1.81m
D-AH006	3.2m	7.7 m	2.17 m	55	2.23m	1.81m
D-AH007	3.2m	8.5 m	2.17 m	60	2.23m	1.81m
D-AH008	3.2m	9 m	2.17 m	60	2.23m	1.81m

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.



Insulated Modular Housing

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

Duramax's Insulated Modular Housing is a line of unique energy-efficient buildings that use galvanized metal panels – manufactured with fire-retardant CFC-free B2 polyurethane insulation, sandwiched between an inner and outer skin – for 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 also be easily disassembled and relocated. The modular design allows for further expansion if desired. The expansion can be done using 1 meter sections.

Duramax insulated modular housing is an excellent choice for affordable housing communities, workers accommodation, refugee camps, schools, clinics, etc. In addition to its affordable price range, the buildings also offer cost-effective ways of saving energy and reducing heating and cooling bills.

Key Features

- Affordable Housing
- Attractive buildings are off-white with brown trim
- Insulated Wall Panels provide good heat and sound insulation
- Termite resistant
- Easy installation; all parts are pre-cut, drilled and numbered for ease of assembly
- Energy efficient
- Standard wall thickness is 25mm; thicknesses of 40mm can also be supplied
- Walls are designed to carry loads; optional shelving can easily be mounted on the walls
- Roof tested to withstand in excess of 13.6kgs (30lbs) / sqft of snow
- Roof is designed with a slight tilt towards the rear 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)
- Additional window is available (optional)
- Window AC kit is available (optional)



Accessories

Building is reinforced with metal columns and beams. Panel walls contain fire-retardant, CFC-free B2 polyurethane insulation (wood flooring not included).



Door Knob and Dead Bolt (Included in Packing)



Galvanized Metal Foundation Kit



Rear Water Gutter System



One PVC / Aluminium window kit included

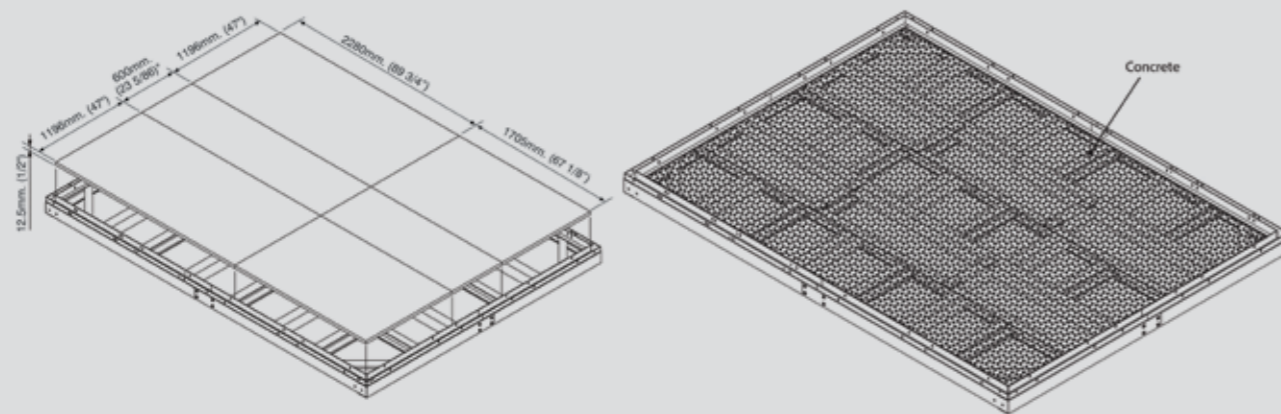
Modular House Extension



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

Foundation

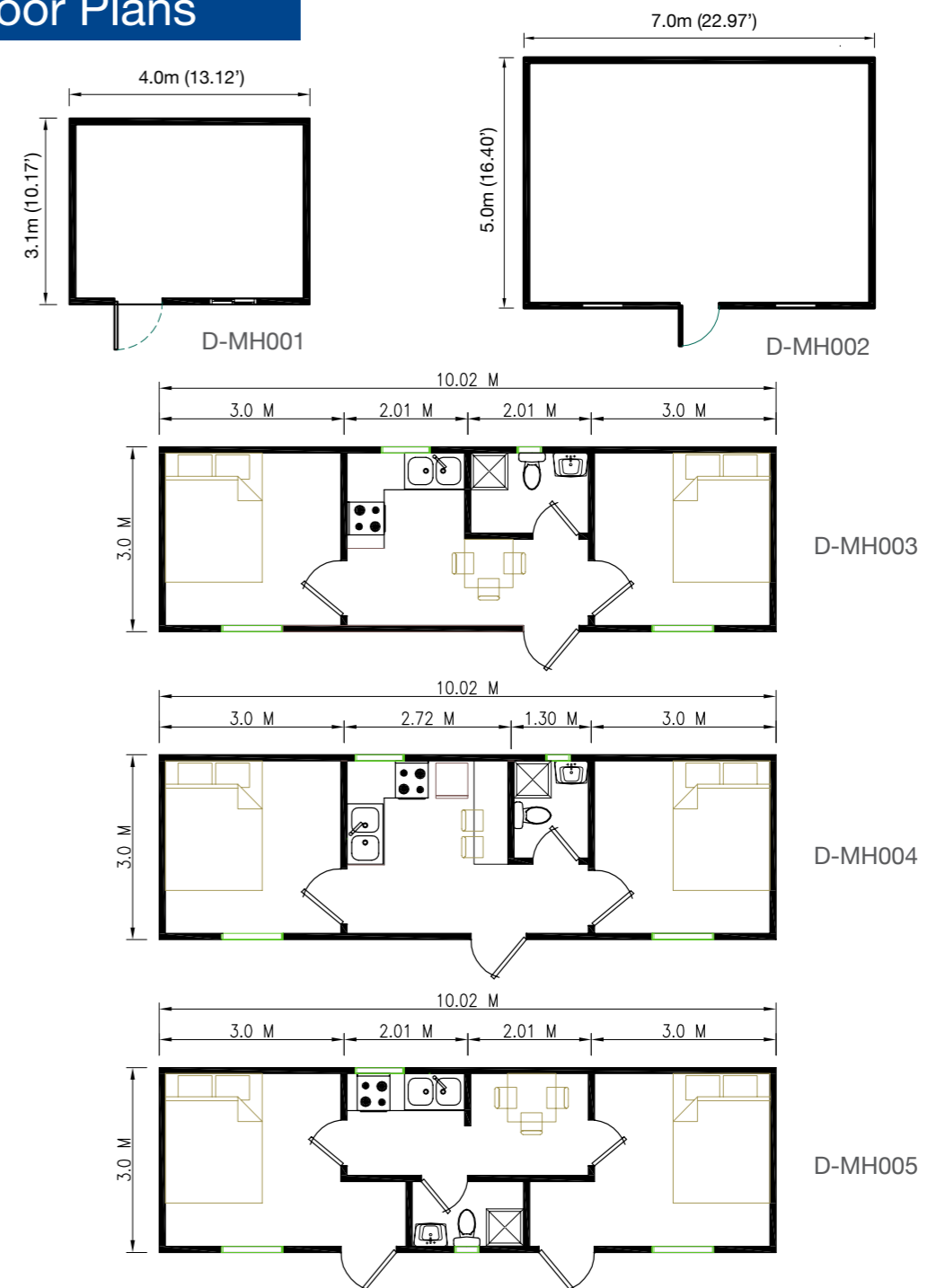
The basic Insulated Modular Housing building package includes a galvanized metal foundation kit and a single window kit. The foundation kit provides a base for installing the building and is pre-drilled to ensure a square and tight fit. The insulated houses are shipped in two crates and all parts are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



Modular House 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 m	0.912 m	2.10 m	0.702 m	0.805 m
D-MH002	35 sqm	5m	7m	2.335 m	0.912 m	2.10 m	0.702 m	0.805 m
D-MH003 D-MH004 D-MH005	30 sqm	10.016m	3m	2.335 m	0.912 m	2.10 m	0.702 m	0.805 m

Floor Plans





Porta-Cabins

Duramax and TSSC are industry leaders in the design and manufacture of pre-assembled or knock down Porta-Cabins that are ready for installation wherever they are needed. These sturdy buildings can be used as permanent units, or can be easily relocated (i.e. lifted and carried from site to site) in knock down condition.

Each energy-efficient Porta Cabin is built using insulated galvanized metal roof and wall panels. These panels feature fire-retardant CFC-free B2 polyurethane insulation sandwiched between an inner and outer skin. While the exterior wall is made of pre-painted steel (standard) or plastisol steel (optional), the pre-painted metal (standard) or vinyl (optional) interior walls give the home an attractive and smooth surface finish.

Strong and sturdy, the one-story Porta-Cabins are adaptable to any environment and provide superior acoustic performance and thermal insulation. Porta-Cabins can also be provided with all amenities (such as bathroom and kitchenette fixtures) pre-installed.

If desired, Porta-Cabins can also be delivered in knock-down form; the units are quick and easy to assemble.

Porta-Cabins are an ideal solution for all types of applications, including housing communities, workers accommodation, offices, clinics, schools and police stations in a mixed development requiring quick and cost-effective permanent or temporary construction.

Key Features

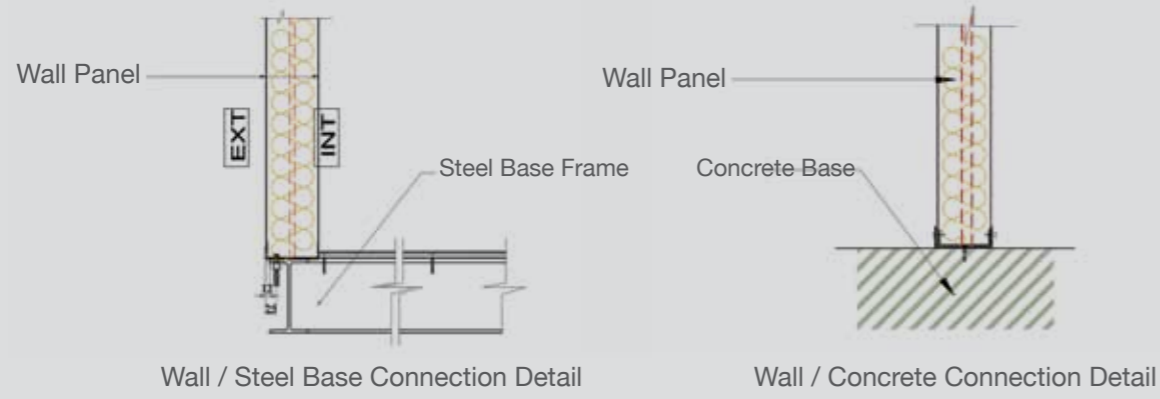
- Highly durable, long lasting and low maintenance
- Delivered factory assembled or in knock-down form (quick and easy assembly nut and bolt connections)
- Pre-painted or Polyster coated galvanized steel insulated walls
- Attractive pre-painted metal interior walls
- Units provide superior heat and sound 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



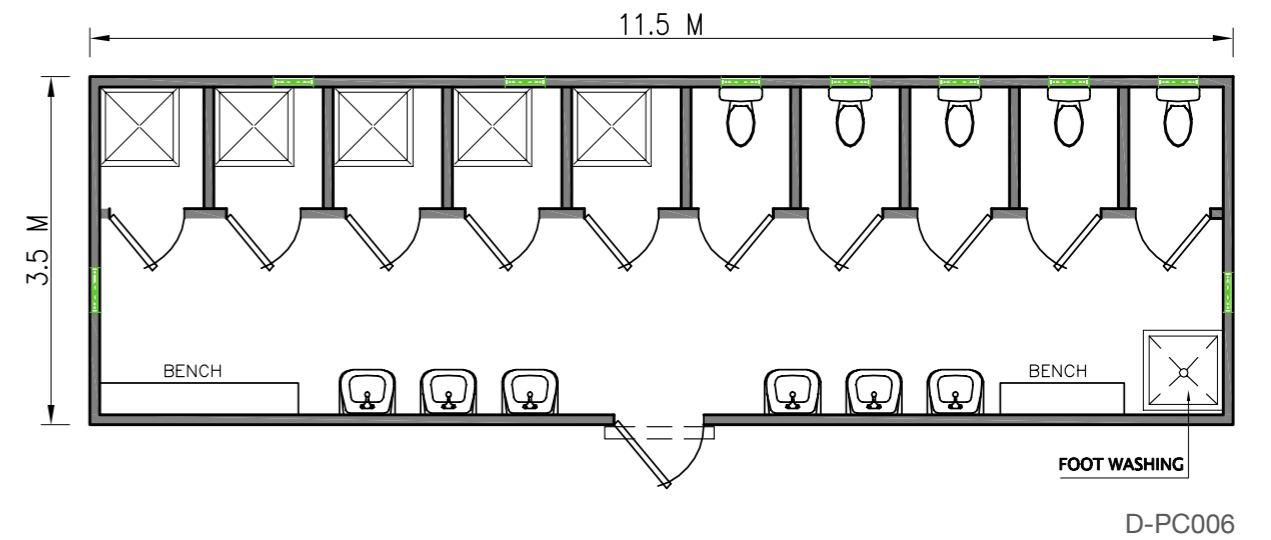
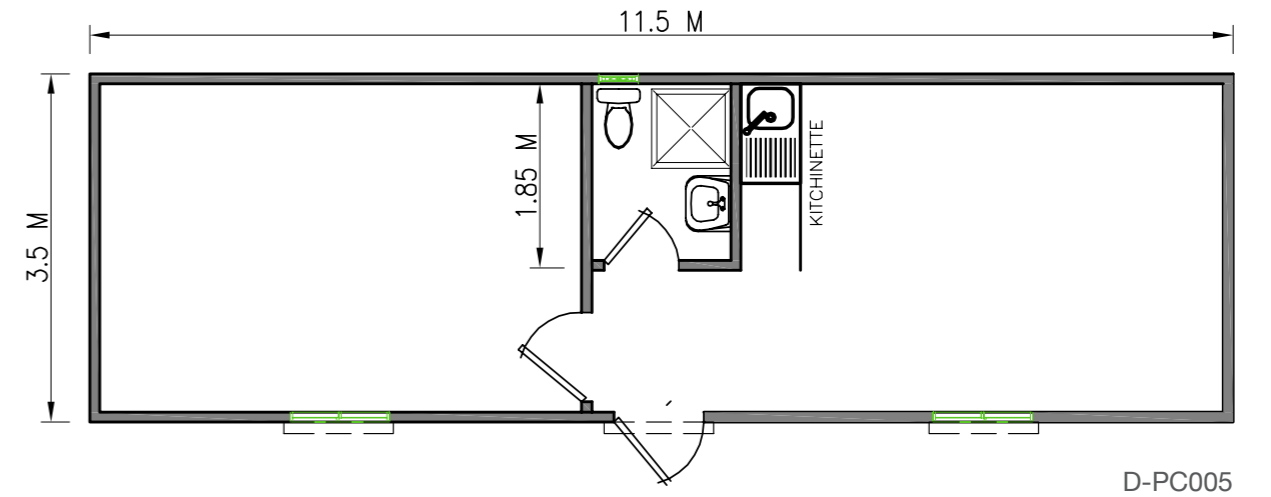
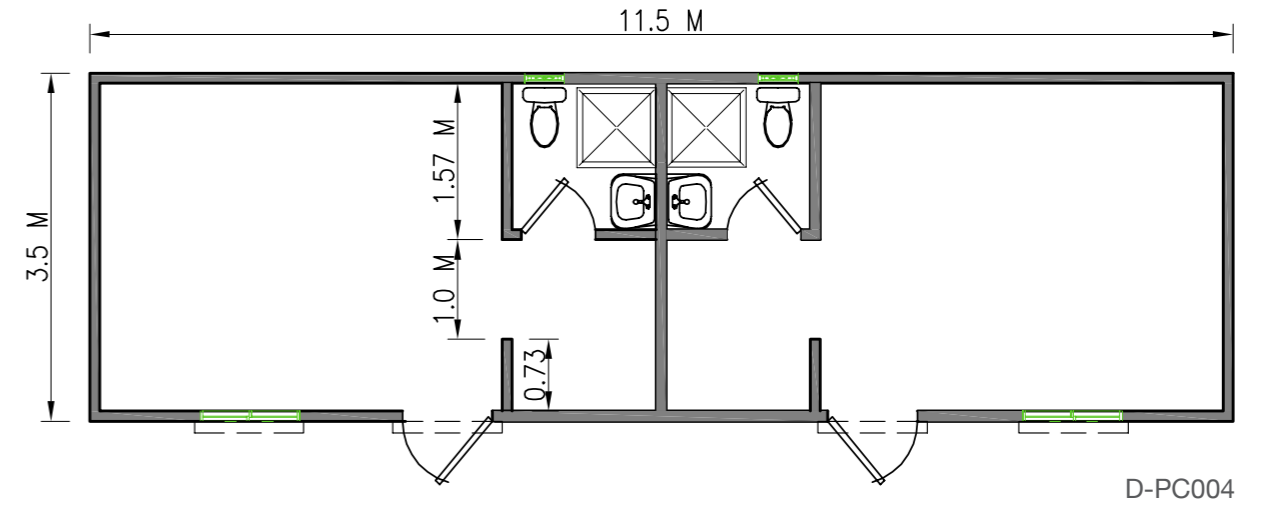
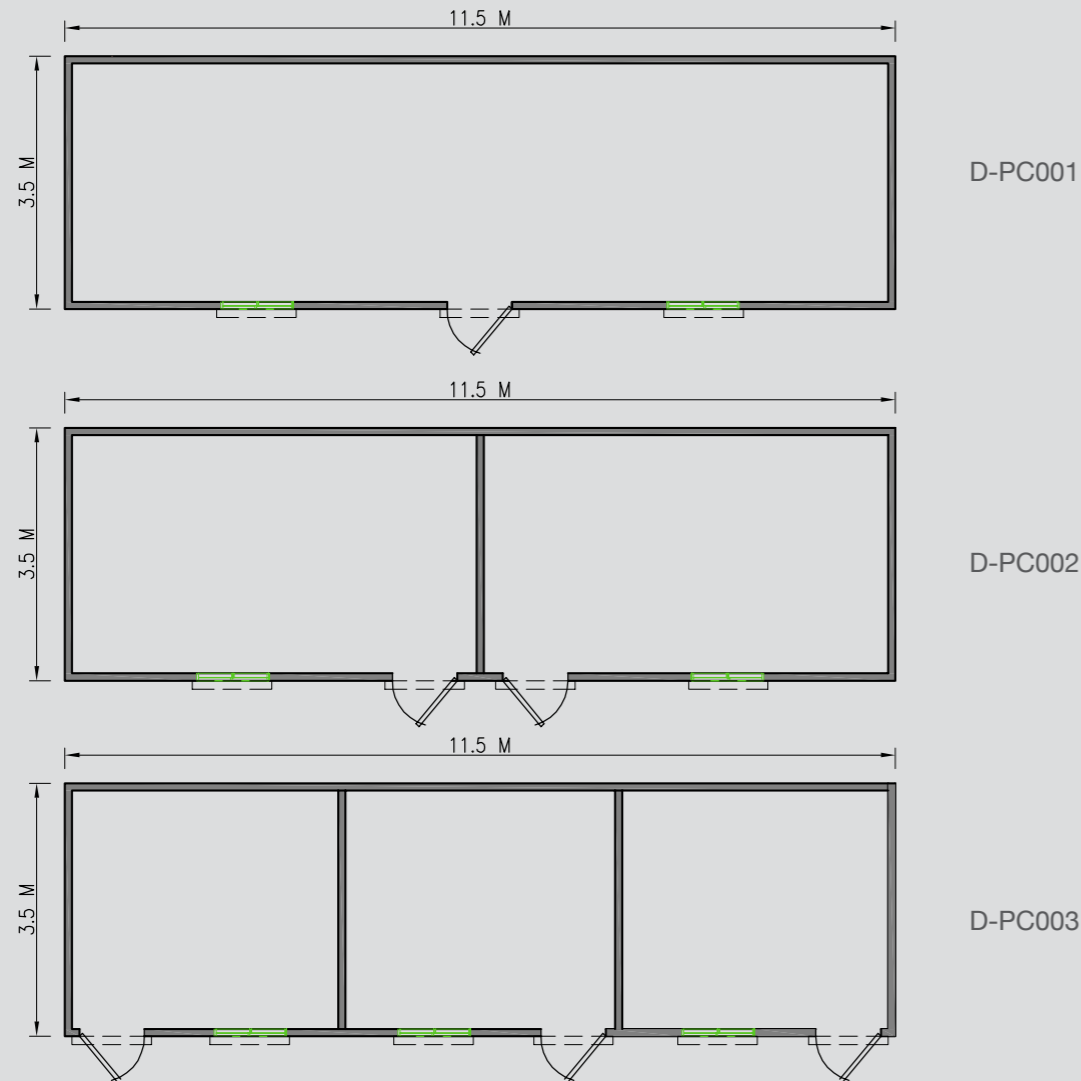
Standard Porta - Cabin Specifications

- Dimensions: 11.5m x 3.45 m or custom dimensions.
- Steel base structure: Built from a panelized system of light-gauge steel with "C" and "U"-shaped profiles engineered with simple bolted connections. Produced by high-tech CNC lines.
- Walls: Durable and energy efficient, the outer walls and partition walls are pre-painted GI (galvanized steel) with polyurethane (PU) insulation at 38kg/m³ density. This fire-retardant insulation provides superior thermal protection and sound absorption. The exterior profile of the panel is low-ribbed and white in color (RAL 9003).
- Wall thickness: Standard wall thickness is 40mm; 50mm thick walls can also be supplied.
- Windows: Standard aluminum windows with single or optional double pane glass. PVC windows are also available.
- Doors: Door panels and frame are made of galvanized steel, injected with polyurethane insulation for durability and proper insulation. Durable stainless steel handles and hinges are included.
- Floor finish: Made from 2 mm durable vinyl sheet rolled over 18mm WBP plywood that is screwed to the steel base.
- Lifting hooks are included.

Foundation



Floor Plans 11.5m x 3.5m





Pre-Fabricated Housing

The Duramax Pre-Fabricated House is the latest concept cement house manufactured by TSSC using innovative building materials. These permanent houses with concrete foundations are designed to suit all weather conditions and offer the best housing alternative to concrete houses. Pre-Fabricated Houses can be delivered either as completely broken-down kits, or pre-built in sections (modules) by TSSC and shipped to the site ready for final assembly.

EASY PANEL, a light weight cement wall panel building system is used to build the Pre-Fabricated Houses. EASY PANEL features cement board on both the interior and the exterior, with a core of light weight cement and polystyrene beads. This combination of material provides flexibility to meet many requirements and delivers rigidity, strength and superior thermal insulation and acoustic performance. Alternatively, panels with polyurethane insulation can also be used for the construction of the walls.

Everything from the dimensions of the Pre-Fabricated House and the layout of the partitions to the placement of the electrical and plumbing inside the walls is fully customizable. They can be designed for a small entry level housing to large family homes and can be built as either one- or two-story houses. Duramax Pre-Fabricated Houses are simple to construct and assemble, thereby reducing manpower and offering a quick completion time. These unique energy-efficient houses also provide flexible finishing surfaces for the external and internal walls using paint, stucco, stone and other variety of materials.

Features

- Light Weight Cement Walls
- Walls are Insulated and Energy efficient
- Attractive appearance
- Durable
- Quick assembly time compared to conventional buildings
- Termite resistant
- Suitable for various climates
- Improved wall finishing time compared to traditional concrete block
- Convenient package for shipping
- Standard wall thickness is 75mm; wall thicknesses of 100mm or 150mm can also be supplied
- **Custom floor plans are available**



Easy Panels

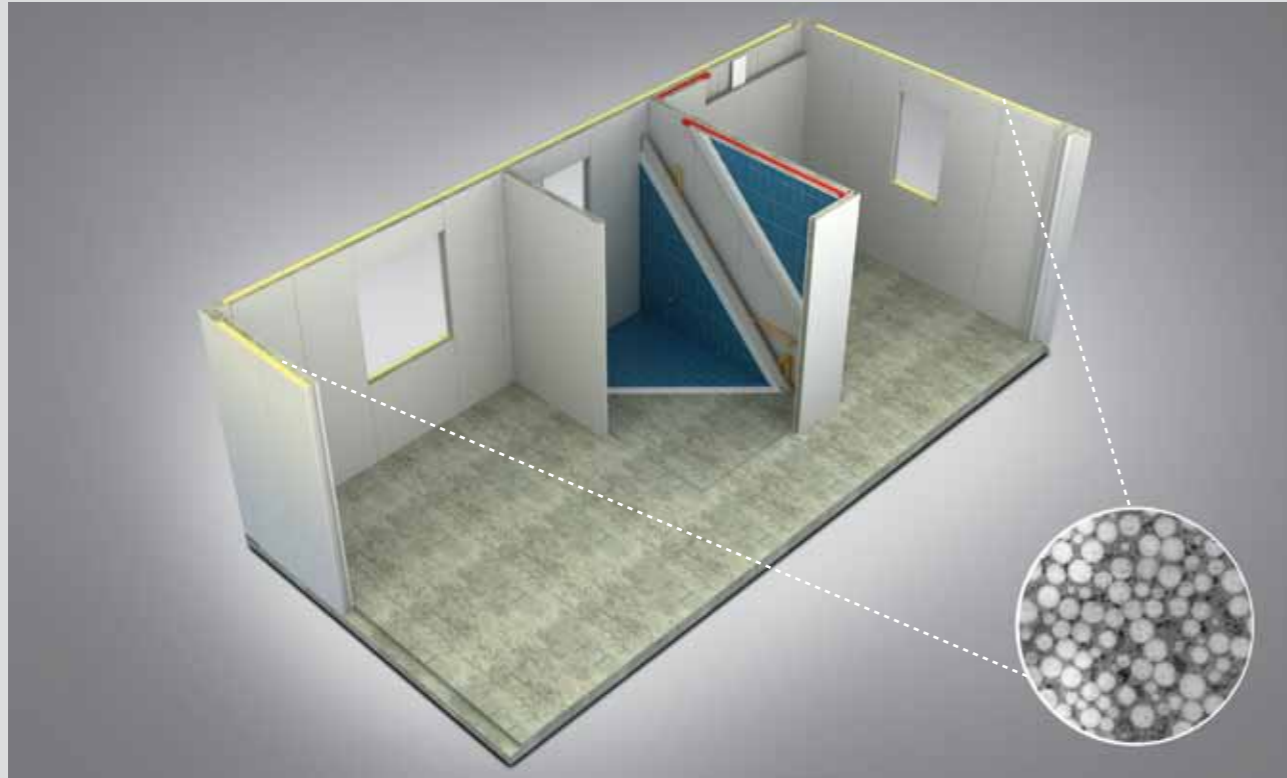
Standard Exterior Wall Panel



Corner profile

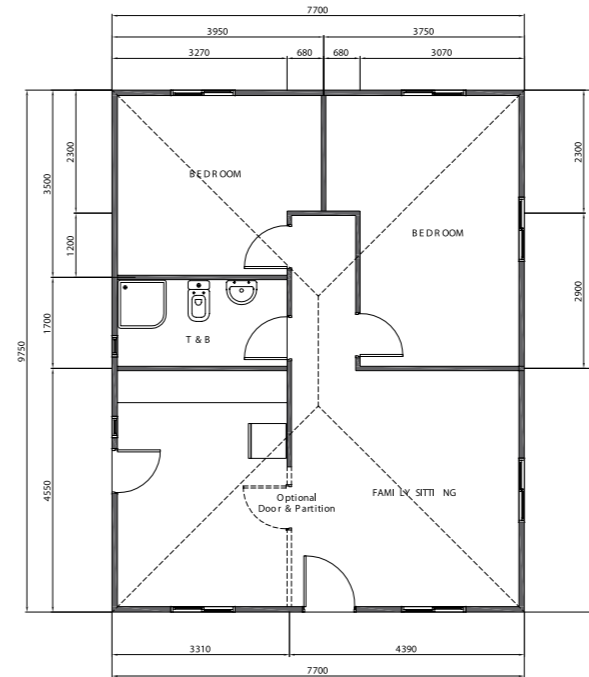
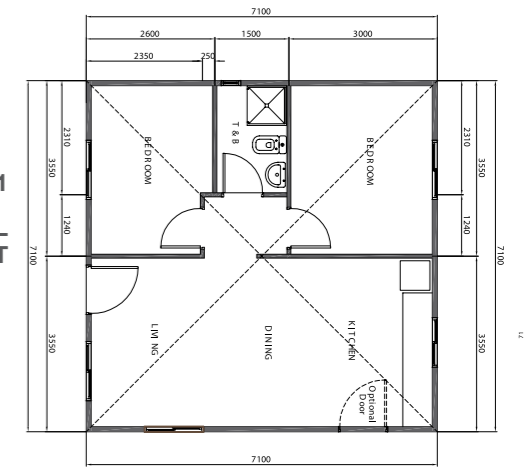
“T” section profile

Installation of Pre-Fabricated Housing

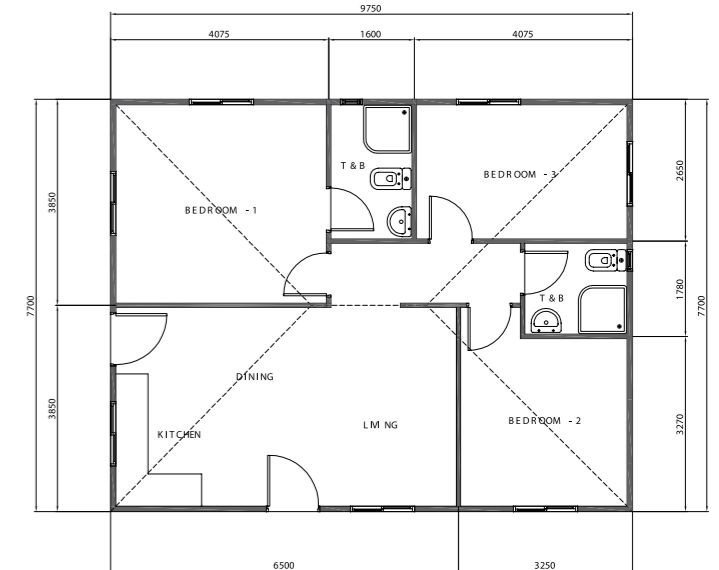


Floor Plans

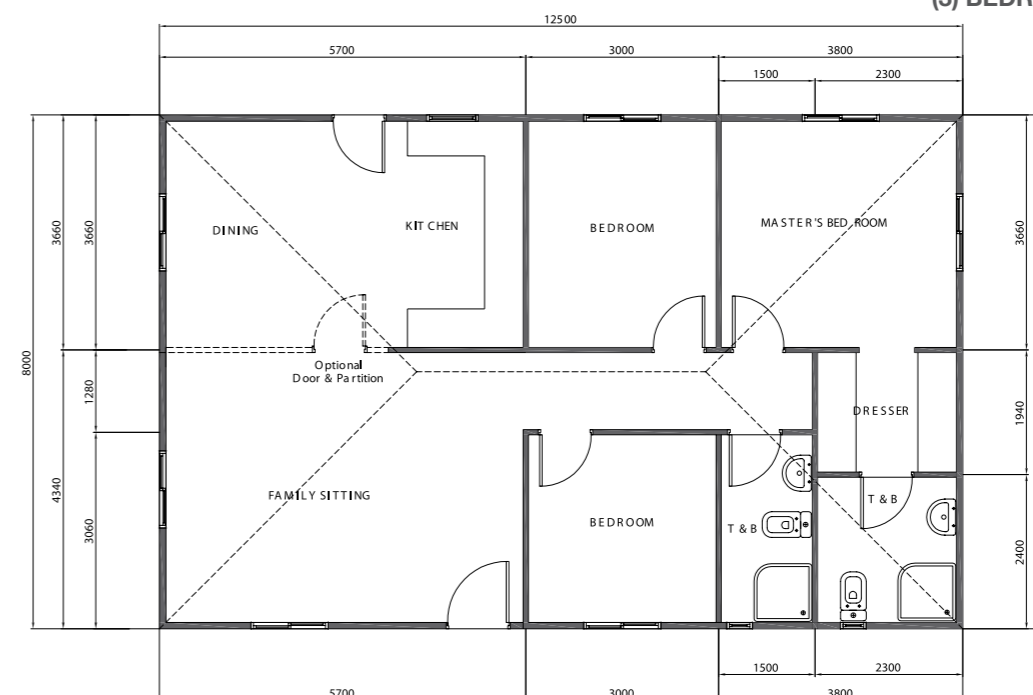
D-PH001
50 SQ. M. MODEL
(2) BEDROOM LAYOUT



D-PH002 - 75 SQ. M. MODEL
(2) BEDROOM LAYOUT



D-PH003 - 75 SQ. M. MODEL
(3) BEDROOM LAYOUT



D-PH004
100 SQ. M. MODEL
(3) BEDROOM LAYOUT

Custom floor plans are available



Applications of housing buildings

Duramax housing solutions offer a wide range of building systems that are suitable for a variety of applications. The building systems 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, the Duramax Building Systems can provide the building needs of an entire community.

Custom floor plans for a variety of applications are available. The applications also can extend to different segments of the market in addition to the housing market; the Duramax Building Systems offers solutions to the construction industry, manufacturing industry, Oil and Gas market, military industry and others.



Comparison Chart

	Affordable Housing	Insulated Modular Housing	Porta-Cabins	Pre-Fabricated House
Product	Entry Level Shelter Homes	Affordable All Weather Housing	Strong Portable Cabins	Rigid Construction Home
Sizes	Various standard sizes	Options 3m x 4m 5m x 7m	3.5m x11.5m standard size (can be customized for large orders)	Custom sizes
Relocateable	Disassembled and relocated	Disassembled and relocated	Units can be Lifted and relocated	Permanent Construction is not relocateable
Foundation	Concrete or Steel base with Plywood, gravel or concrete	Concrete or Steel base with Plywood, gravel or concrete	Steel base with Plywood or gravel	Concrete foundation
Insulation	Basic Insulation	Good heat and sound insulation	Improved heat and sound insulation	Superior heat and sound insulation
Wall Construction	Double Sheets	Insulated Panels	Insulated Panels	Light weight concrete walls
Exterior	PVC	Pre-painted Steel (standard) or Plastisol Steel	Pre-painted Steel (standard) or Plastisol Steel	Cement Board (standard)
Core	Air pocket	Polyurethane	Polyurethane	Light weight concrete (standard) or Polyurethane
Interior	Cement Board, MDF, laminated MDF, or Pre-painted steel	Pre-painted Steel (standard) or Vinyl	Pre-painted Steel (standard) or Vinyl	Cement Board
Installation	Fast and Easy Installation	Fast and Easy Installation on site	Preassembled, Site or Factory erected	Fast Installation on site
Wall Thickness	n/a	25mm, 40mm	40mm, 75mm	75mm, 100mm, 120mm, 150mm
Number of Levels	Single Story	Single Story	Single Story	Single or Double Story
Applications and Images	Shelters, Affordable houses	Housing, Offices, Labor camps, Schools, Clinic, Police Station	Housing, Offices, Labor camps, Schools, Clinic, Police Station, etc.	Housing, Labor camps, Schools, Clinic, Police Station, etc.



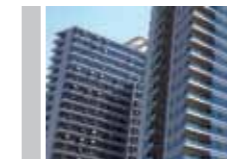
Profile

TSSC, a primary member of Harwal Group is a leading manufacturer of building materials in the Middle East and has been setting manufacturing benchmarks with its engineering excellence. With over 5 decades of manufacturing legacy, TSSC has forged a strong reputation for its quality, dependability and customer service and has partnered in building some of the most prestigious projects in the region. The company follows international standards in manufacturing its diverse range of products, follows ISO 9001:2008 quality management system and the products carry individual product certificates. With state of the art manufacturing facilities spread across Dubai, Abu Dhabi and Sharjah in UAE, Riyadh in KSA and Moscow in Russia, TSSC has one of the largest production capacity in the Middle East and maintains its leadership position with its ability to meet any volume and delivery requirements.

Range of Products Manufactured by TSSC

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



Stainless Steel Equipments

- Laundry & Kitchen
- Hospital



Housing Systems

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



Services

- Galvanizing



Dubai Investment Park - UAE
P.O. Box 77031
Tel: +971 4 8850474, Fax: +971 4 8850343
E-mail: info@tssuae.com

www.tsscuae.com

www.harwal.net