



TECHNICAL SPECIFICATIONS OF INSULATED MODULAR STEEL PANEL SYSTEM BUILDINGS

1. General Descriptions:

This specification consists of a fully prefabricated and easy-to-erect building system with the following properties:

- The system is a completely dismantlable system of which the components are manufactured at the factory.
- The main advantages of design are easy shipping, easy handling, easy assembly, good insulation values and physical durability.
- The building components are designed and manufactured to withstand to worst weather conditions and can easily be dismantled without any losses or damages in material for multiple re-assembly.

2. References for standards:

References standards are:

- TS 498 - Design loads for the buildings
- TS 648 - Construction code for the steel structures
- TS 3357 - Building code for the design and execution of the welded connections in the steel construction
- TS 11372 - Light weight steel structures composed of cold formed steel members design rules
- TS 1904 - Door frames are made of steel sheet

(* TS refers to the abbreviation of "Turkish Standards"; released by Institute of Turkish Standards.)

3. Description of the details of the design:

Main system is load-bearing panel system. Rafters are trusses which are factory made sheet steel. Steel purlins are primary structural steel profiles supporting roof cover and designed according to the roof load.

Design Criteria:

Wind Load : 50 kg/m²

Snow Load : 150 kg/m²

Building Dimensions:

Outer main frame span can be 7.78, 9.09 & 12.84 m., etc.

Clear height from floor to eave is 2.40 - 2.80 m.

(All units can be changed according to your request)

3. 1. Walls:

External Walls (Load bearing wall panels): Thickness of the external walls are 61 mm.

External Cladding : Trapezoidal galvanized steel sheets, 0.75 mm in thickness and 13 mm. in depth.(First quality)

Framing Structure : The framing structure of the external wall panels is made of steel box profiles, all joints are welded and covered with corrosion protective epoxy coating.

Internal Cladding : 8 mm. thick cement bonded particle board or melamine coated chipboard.

Insulation btw : The cavity between external and internal cladding is filled with 40 mm. thick polystyrene foam (Styrofoam) or glasswool insulation, 10-11 kg/m³ density.(All units can be changed according to your request)

Internal walls: The total thickness of interior partitions are 56 mm.

The interior partition walls have principally the same structural as the external walls. The only difference is that both faces of the steel inner frame grid is covered with 8 mm. thick cement bonded particle board or melamine coated chipboard. In wet areas, cement bonded particle board will be used.

- *Insulation btw :* The cavity between coverings is filled with 40 mm. thick polystyrene foam (Styrofoam) or glasswool insulation, 10-11 kg/m³ density.
(All units can be changed according to your request)

3. 2. Suspended Ceiling:

All cement bonded particular boards are supported by factory made profiles and these profiles are supported by trusses.

This system has an advantage of rapid ceiling erection and isolation for both heat and sound.

Insulation : Glasswool roll, 50 mm. thick, 18 kg/m³ density.

(All units can be changed according to your request)

3. 3. Roof Covering:

0.55 mm. thickness trapezoidal galvanized steel sheet (First Quality) are secured to the steel purlins by means of special screws. Roof slope is 6-7 %. Rain gutters can be constructed optionally.

3. 4. Doors and Windows:

External doors are pre-assembled at factory with complete hinges and lock sets.

Door Frames: Door frames are produced from 1.5 mm. thick DKP steel sheet.

External Door Wing: 1.2 mm. thickness custom-made steel sheet and glasswool insulation (40 mm.) in between. Lock set and door handle shall be provided.

Internal Door Wing: 4 mm thick plywood cladding and constructive honeycomb filling in between.

Windows: Windows are made of PVC based hard plastic. 4 mm single frosted glazing is used with 600 / 400 mm Transom type window; whereas double glazing (4+9+4) is used with 1100 / 800 mm Transom type window. Windows are supplied with complete accessories.

3. 5. Paint Works:

External Painting: External wall surfaces will be painted with epoxy filler priming + synthetic semi-dull alkyd resin based (high filling properties and corrosion resistance) paint in factory.

3. 6. Optional Items:

Electrical installation, plumbing, internal painting, floor covering, heating, air-conditioning items are optional.