idealmod®

PREFABRICATED BUILDING QUOTATION

idealev®

LIGHT STEEL PREFAB BUILDING TECHNICAL SPECIFICATIONS

CALCULATION CRITERIA

- Manufacturing based on considering 80 kg/m^2 snow load, 102 km/hour wind speed, first-degree seismic zone and three climatic zones.

LOAD-BEARING SYSTEM

- H (carrier) and U (Roof Truss) profiles produced in roll forming machines are made from galvanized steel. They make up building's main frame. In order to join trusses and make the building rigid. Omega purlins produced also in roll forming machines are used

STRUCTURAL STEEL

- On SAP2000, material cross sections are designed and AutoCAD is used to draw building plans. All load-bearing system consists of special H, C, U model galvanized profiles.

PLAN

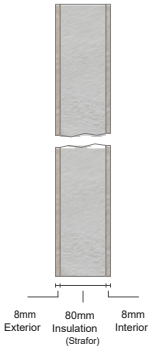
- Width and length of pre-produced prefabricated buildings are estimated as multiples of 125 cm. Prefabricated buildings are composed of the modulation of 4 different panels including filled, window, transom and door. Heaviest panel is the one with exterior door (90 kg). All architectural drawings and calculations are done by Villa Yapı's technical staff with using AutoCAD and SAP2000.

PREFABRICATED BUILDING QUOTATION

EXTERIOR WALL (H:2500 MM THICKNESS: 100 MM) PRESS PANEL

Outer Surface	8 mm thick Cementboard & Fibercement
Inner Surface	8 mm thick Cementboard & Fibercement
Fire Resistance(Euro. Standards)	Fire: B - Smoke: S1 - Falling particles : D0
Heat Insulation	0.21W/mk (8mm)
Fire Endurance Period	TS 1263 (DIN 4102-2)

Junction Components	Galvanized, formed by roll forming machines (1 mm - 1.5 mm)

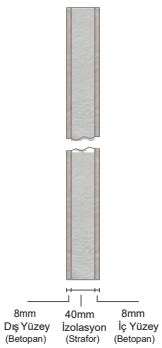


Insulation	EPS Styrofoam
Size	80mm x 1250mm 2500mm
Compressive Strength(En 826)	80 Kpa
Bending Strength	125 Kpa
Apparent Density	(EN 1602) : 16Kg/m^3
Heat Conductivity	(EN 12667) : 0.039w/mk

INTERIOR WALL (H:2500 MM THICKNESS: 60 MM) PRESS PANEL

Outer Surface	8 mm thick Cementboard & Fibercement
Inner Surface	8 mm thick Cementboard & Fibercement
Fire Resistance(Euro. Standards)	Fire: B - Smoke: S1 - Falling Particles :D0
Heat Insulation	0.21W/mk (8mm)
Fire Endurance Period	TS 1263 (DIN 4102-2)

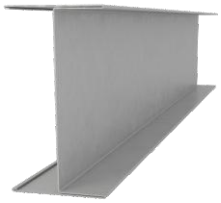
Junction Components	Galvanized, formed by roll forming machines (1 mm - 1.5 mm)



Insulation	EPS Styrofoam
Size	40mm x 1250mm 2500mm
Compressive Strength(En 826)	80 Kpa
Bending Strength	125 Kpa
Apparent Density	(EN 1602) : 16 Kg/m^3
Heat Conductivity	(EN 12667) : 0.039 w/mk

PREFABRICATED BUILDING QUOTATION

WALL JOINT



- Galvanized components such as U and H profiles are bent and joined with each other.

CEILING

Plasterboard

Covering	Dry Area	12mm thick Plasterboard

Betopan

Covering	Wet Area	8mm thick Cementboard & Fibercement

Plasterboard Joining H

Plasterboard Joining	Painted sheet produced in roll forming machine
	Junction components: Elektrostatic painted galvanized sheet

Mineral Glasswool

Knauf - Mineralwool	100 mm thick, 1200 mm wide, 8000 mm long
Heat Conduction Coefficient	0.044 (W/mK)
Heat Conduction Resistance	2.27 R(m²k/W)
Reaction to Fire	Euroclass A1 (TS EN 13501 - 1)

ROOFING

- 0.50 mm. Trapez Steel Sheet or Trapez Metal Tile Sheet (EXTRA)

+

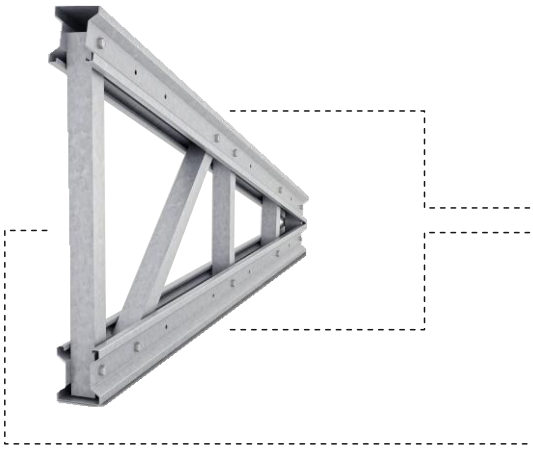
- 12 mm. OSB (EXTRA)

+

- Membrane or Tyvek (EXTRA)

- Single Layer Panel

TRUSS

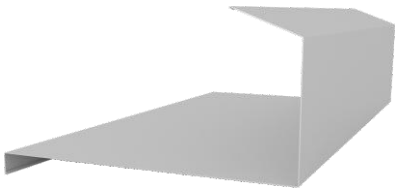


- It is a truss system designed using specially designed profiles made of DX51 or S320 galvanized sheet metal.

PURLINS - EAVES - EAVES TROUGH

Purlin Omega

- Purlin omega is covered with 25-30 cm wide special formed painted galvanized sheet



Eave Sheet

- Covered with 25-30 cm wide special formed painted galvanized sheet

Frontal V

- Covered with 25-30 cm wide special formed painted galvanized sheet

DOORS

Steel Door

- 90x198 cm steel door, (TSE standards)

American Panel Door

- 80x198 cm, metal frame, American panel door

WINDOWS - GLASS

120/140

4+12,5+4 mm
Double-glazing

40/60

Windows	120/120 cm PVC (TSE standards)
Transom	40/60 cm PVC (TSE standards)
Window Frame	1,2 mm thick galvanized sheet.
Window Profile Width	60 mm - 3 Cells

PAINT DYO OR POLISAN

DYO Interior

- Double layer plastic. (TSE standards)

DYO Exterior

- Double layer acrylic (TSE standards)

DYO Ceiling

- Double layer plastic. (TSE standards)

ELECTRICITY INSTALLATIONS

Wire

Socket

Switch

Lighting

Wires	3*2,5 Nym (TSE Standards).
Socket and Switch	With TSE Certification
Lightning	Round Glop
WC-Bathroom	Round Glop
Doors	Glop Lightning Above Doors

- *Electricity installations are made flush mounted.*

STAIRS

Framed Structure	Bearing frame made from box profiles or steel carcass
Covering	16 mm thick Cementboard
Fire Resistance (Euro Standards)	Fire : B - Smoke: s1 - Falling Particles: d0
Heat Conduction	0.21 W/mk(16 mm)
Fire Endurance Period	TS 1263(DIN 4102-2)
Paint	Double layer primers and double layer oil
Railing	Iron wrought

MEZZANINE FLOOR (FOR TWO-STOREY HOUSES)

Mezzanine C

Mezzanine C

Framed Structure	Formed by joining special bent galvanized sheet
Thickness	2. mm. galvanized sheet
Topping	16 mm thick Cementboard
Ceiling Floor	12 mm thick Gypsum board
Insulation	80mm thick Glasswool
Load-Bearing Capacity	Min. 200 kg/m²