SteelComfort

Light Steel Frame Buildings

INTRODUCTION

Steel Comfort aims to be the leading brand in Light Steel Construction industry, registered under Turkey Patent Institute Authority , with ongoing activities since 2005.

Our company is known for its steel structure villa type models that have been created using the light steel in the residential sector,represents a new aesthetic.Steel Comfort steel frame house models can be totally personalized due to customers needs.

Using dip galvanized steel structure, Roll-Form production line technology and light steel structural system obtained by seamless riveting technique , we can construct customers needs accurately. The goal here is to fulfill customers building appearance and special project needs, without breaking advantages of light steel buildings.

Steel Comfort with advantages;

- Seamless weld steel building system,
- Superior insulation and earthquake resistance ,
- Branded and guaranteed material use,
- Short construction time,
- Post-delivery support ,

continues to be a reliable brand of construction industry.

Steel Comfort Houses are offering you the future of construction , an opportunity for your future home:

- Better Price
- Quick to complete and finish
- Consistent and accurate
- Reliable
- Certified Quality
- Earthquake tested and fire resistant

❖ Light Steel Frame Housing Construction

Steel frame usually refers to a building technique with a "skeleton frame" of vertical steel columns and horizontal I-beams, constructed in a rectangular grid to support the floors, roof and walls of a building which are all attached to the frame. The development of this technique made the construction of the skyscraper possible.

Thin sheets of galvanized steel can be formed into steel studs for use as a building material for rough-framing in commercial or residential construction, and many other applications. The dimension of the room is established with horizontal track that is anchored to the floor and ceiling to outline each room. The vertical studs are arranged in the tracks, and fastened at the top and bottom.

Steel framing provides excellent design flexibility due to the inherent strength of steel, which allows it to span over a longer distance than wood, and also resist wind and earthquake loads.Steel framing is surprisingly more energy efficient than wood since you can put insulation into the studs, which you cannot do with wood studs.

Merc Construction which produces galvanized light steel constructions by employing the most skilled manpower and using the latest technology of the world constructs luxurious permanent residences and prestigious buildings for professional use that suit the purpose of use of its customers, cultural demands and the conditions of land and nature in the construction region.

Merc Construction is prominent in Turkey, which carries earthquake risk in almost every region, as a high quality system which can be quickly constructed, with its products that have more aesthetic values and higher heating and sound isolation features than classical construction systems.

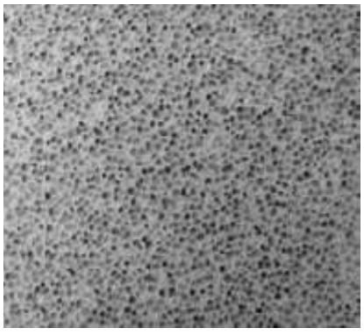
Its corporate objective is not only to produce construction profiles for light steel buildings, but also to ensure a perfect structure implementation with technical standards and details that are arranged in line with the needs of different climatic regions and local architectural concept and to ensure end consumer satisfaction. It has activated all the sector dynamics for correct infrastructure, proper production and proper service.

Light steel structure house technical specs

Structural system	**External walls**	Made from 43x90 mm Light steel galvanised profile.
	Internal walls	Made from 43x90 mm Light steel galvanised profile.
	Roof	Made from 43x90 mm Light steel galvanised profile.
Wall covering & finishing	**External**	12,5 mm Boardex external wall panel, specaial plaster and external paint. Insulation material is 40 mm rockwool.
	Internal	12,5 mm gypsum board, gypsum plaster, plastic paint. Insulation material is 40 mm rockwool.
Roof & ceiling	**Roof**	0.50 mm trapezoidal corrugated steel sheet
	Ceiling	12,5 mm gypsum board, gypsum plaster, plastic paint. Insulation möaterial is 80 mm glaswool.
Windows	**Frames**	60 mm PVC window. Frames are stronged with galvanised support profile
	Glasses	4+10,5+4 mmdouble glasses
Doors	**External**	Steel and door. Painted electrostatic paint.
	Internal	MDF homeycomb panel wooden door.
Bathroom	**Pumbing**	Cold- heat clean water system. Pipes are PVC and PPRC. Pipes are hidden
	Internal	Ceramic closet, Ceramic 50x100 cm sink, Mix taps
Kitchen	**Kitchen Cabinet**	Bootm and Top cabinet with laminated PVC chipboard (18 mm) cabinet
	Top	Kitchen top is artifical marble or MDF+ chorome sink
Electrical system	**Cables**	2x1,5 mm, 3x2,5 mm cables.
	Equipment	Power sockets, TV cable, Phone cable, switches and control switches.
Flooring	**Bathroom porch**	Ceramic tiles
	Rooms	Ceramic

■ **Foam Concrete in the application of light steel structure housing:**

We choose Foam Concrete coating for isolation as it has many advantages to be used with light steel structure housing. Foamed concrete in the application of light steel structure house has the following characteristics:



- High strength with low density
- Rigid, well-bonded body
- No Compaction Required
- High Fluidity
- Rapid Installation

Operational & Cost Efficiencies :

- Settlement Free Construction
- Ease of Removal
- Time Savings
- Cost Savings

STEEL FRAME CONSTRUCTION

Light steel framing uses galvanized cold-formed steel sections as the main structural components. These sections are widely used in the building industry and are part of a proven technology. Light steel framing extends the range of steel framed options into residential construction, which has traditionally been in timber and masonry.

Improved quality, increased use of off-site manufacture, and reduced waste in construction, Llight steel framing combines the benefits of a reliable quality controlled product with speed of construction on site and the ability to create existing structural solutions.

Although the idea of steel conjures up images of a heavy or cumbersome material, the steel used in residential construction is quite the opposite. Cold-formed steel (CFS) is lightweight, easy to handle, cost effective, and a high quality alternative to traditional residential framing materials. CFS offers the builder a strong, dimensionally stable, easy-to-work framing system.

Advantages of Steel Framing:

Cost Effective and Quick to Build

Construction is quick and simple with the FRAMECAD accurate steel frame system components. This means high quality results anywhere, using low-cost, low-skilled labour and shorter timeframes.

Strong and Design-Flexible

Steel's inherent strength enables architectural and design flexibility – allowing long spans and curves to be easily incorporated into functional designs.

Durable and Safe

Thanks to exceptional resistance to fire, corrosion and pests, steel framed buildings are the first choice for extreme environmental conditions. Because steel doesn't need treating with pesticides, preservatives or glues, it's also safer for people handling and living or working around it.

Environmentally Friendly

Steel framing lasts longer, is light and easy to transport and creates minimal raw material waste. At the end of its long life, steel can also be fully recycled.

Fire Resistant

Steel frame housing components have been tested and proven to withstand severe bush fire temperatures of more than 1000°C.

Earthquake Tested

The structural integrity of steel frame houses has demonstrated in full-scale simulations that it stays straight, true and most importantly, safe.

CONSTRUCTION PERIOD

Construction period of a light steel house is shown below step by step.

Day 1 : Excavation

Day 7 : Raft Basement completion

Day 15 : Light Steel Framework completion

Day 30 : Coating completion & Delivery

LIST OF MATERIALS

Foundation;
Steel reinforced concreted flooding BS20 (optional basement)

Light Steel Carrier ;
DIN-EN 10147 according to international standards , millimetric precision machined steel structure

Design Parameters;
Steel Strength (S220 -S350)
Steel thickness (0.80mm -2.0mm)
Profile height (90mm or 140mm)
- Wall uprights, floor, ceiling and roof beams ranges (30cm, 40cm or 60cm)
- Profiles of back to back into the I -section
In - Floor beams beam height (30cm - 40cm)

Determination of the design load ;

To be used by coating and other architectural details , dead loads is determined . According to type of use and the geometric characteristics of the building , moving from the TS- 498 regulations load, snow load and wind load values are taken . According to the seismic zone of the building , seismic loads is determined in accordance with TEC

PAK siding
VİNİL DIŞ CEPHE KAPLAMASI

EGE PEN
deceuninck

boardeX
exterior sheathing

Roof ;

11mm -14mm OSB coatings on mild steel panels , over and above waterproofing shingle coating (optional color tile)

Fronts ;

11mm -14mm OSB (optional BoardEx coating) over a moisture barrier and siding coating (optional siding , fiber cement , fiber cement , plaster + epoxy paint)

Between Steel Wall Insulation ;

8mm- 16mm thick glass wool mattresses

Interior Wall ;

Gypsum board (water resistant green board in wet areas) (optional double layer gypsum)

Mechanical Installation;

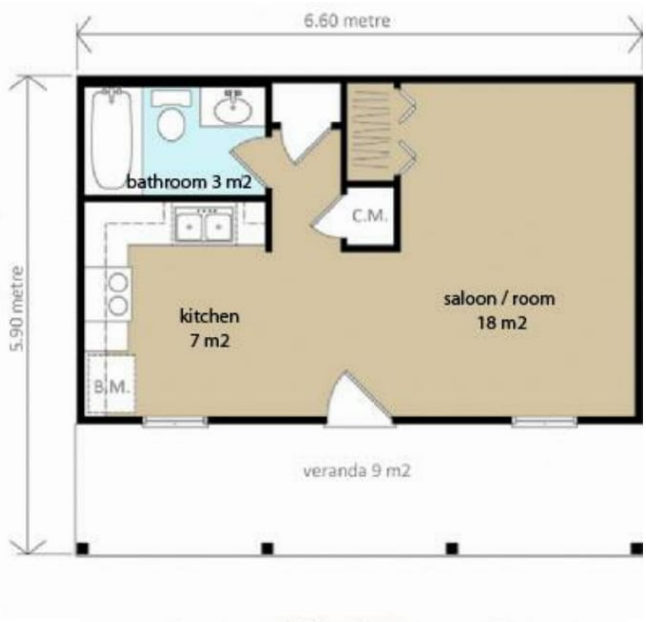
Accordance with the regulations and project silent pvc pipe and boiler + honeycomb installation

Electrical Installations ;

Grounding line made in accordance with regulations and projects , indoor plumbing , cabling and electrical fuses, fuse box is fitted as a delivery

LIGHT STEEL HOUSE MODELS

Model – 1 : 39 m2

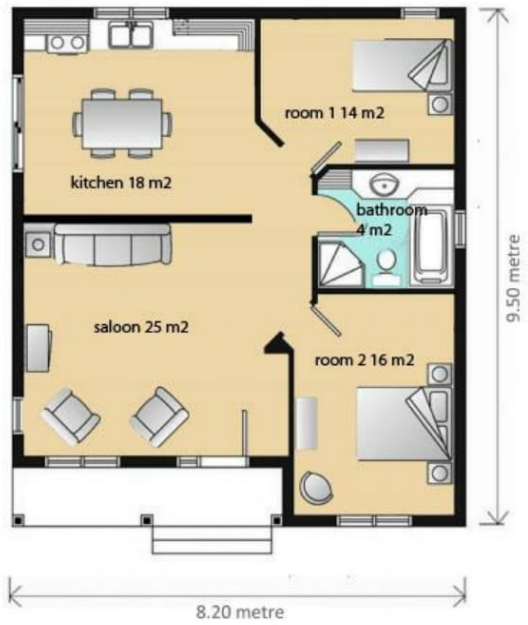


Model – 2 : 42 m2

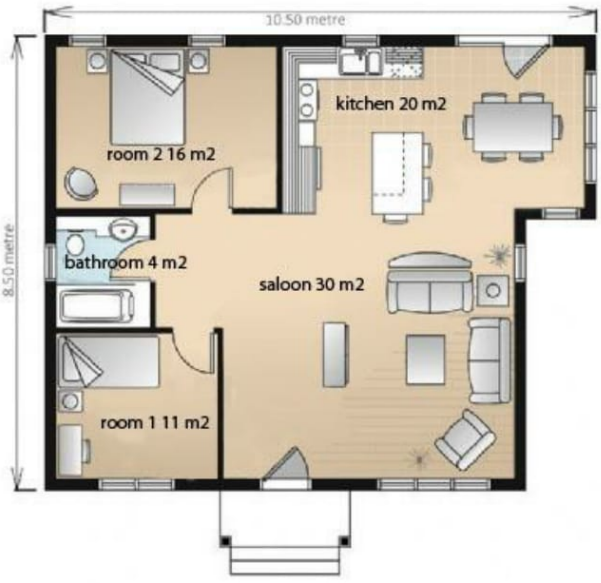
Model – 3 : 53 m2

Model – 4 : 62 m2

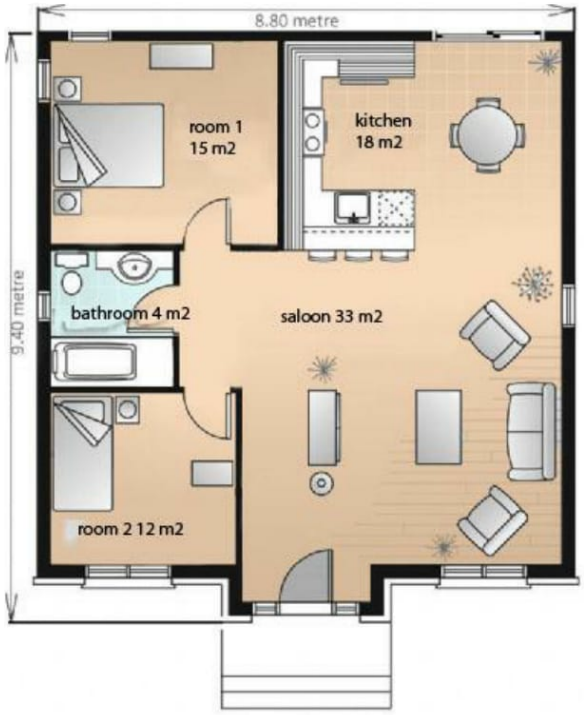
Model – 5 : 78 m2



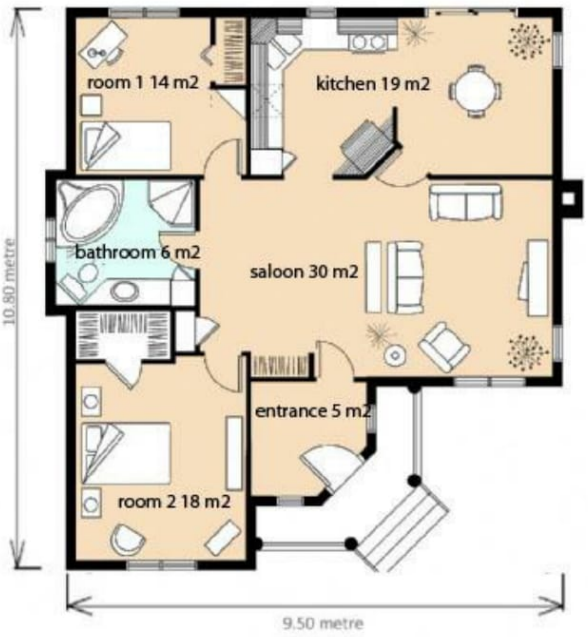
Model – 6 : 82 m2



Model – 7 : 84 m2



Model – 8 : 95 m2



Model – 9 : 98 m2

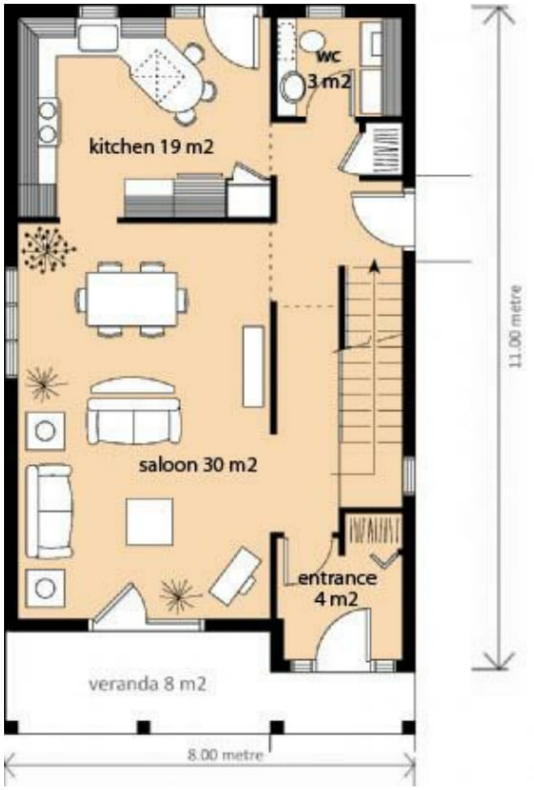
Model – 10 : 100 m2

Model – 11 : 113 m2

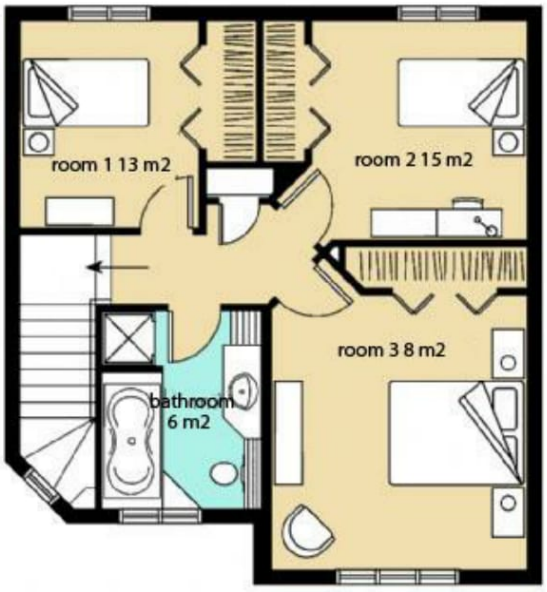
Model – 12 : 115 m2

Model – 13 : 120 m2

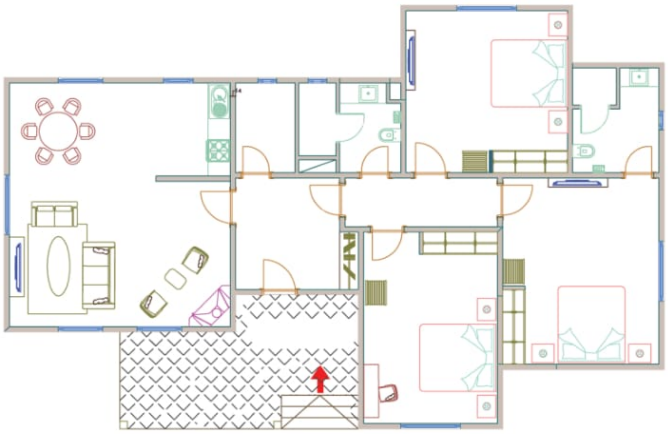
Model – 14 : 122 m2



Model – 15 : 127 m2

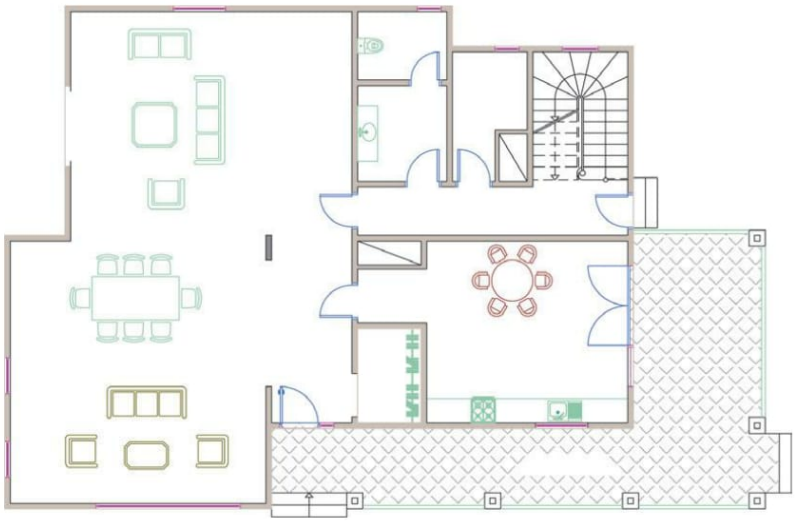


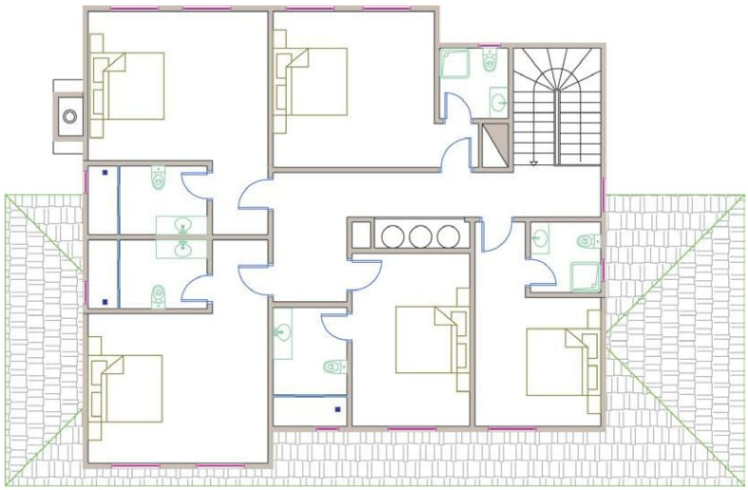
Model – 16 : 162 m2



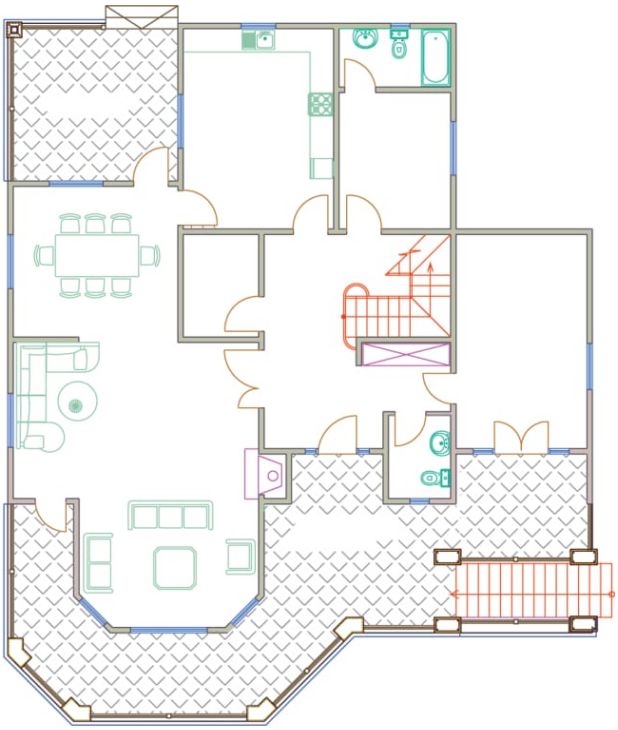
Model – 17 : 208 m2

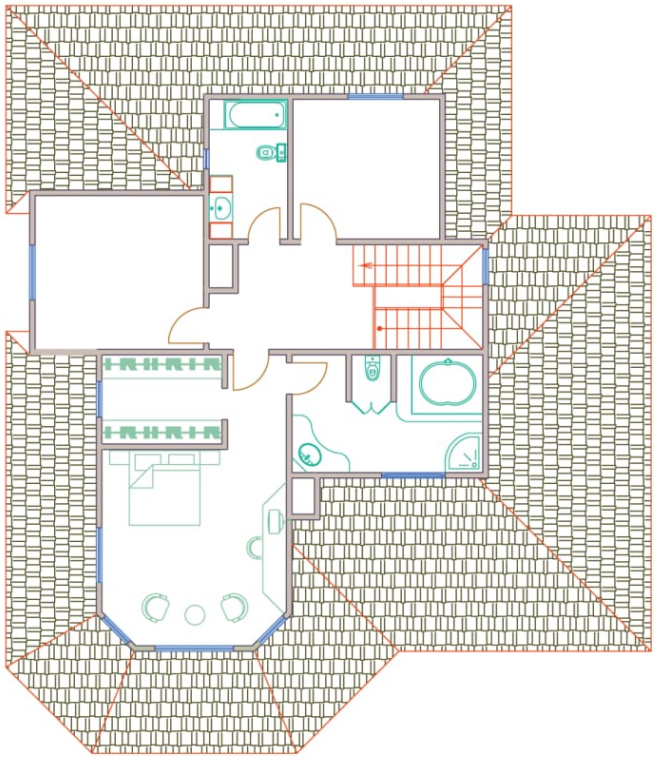
Model – 18 : 343 m2



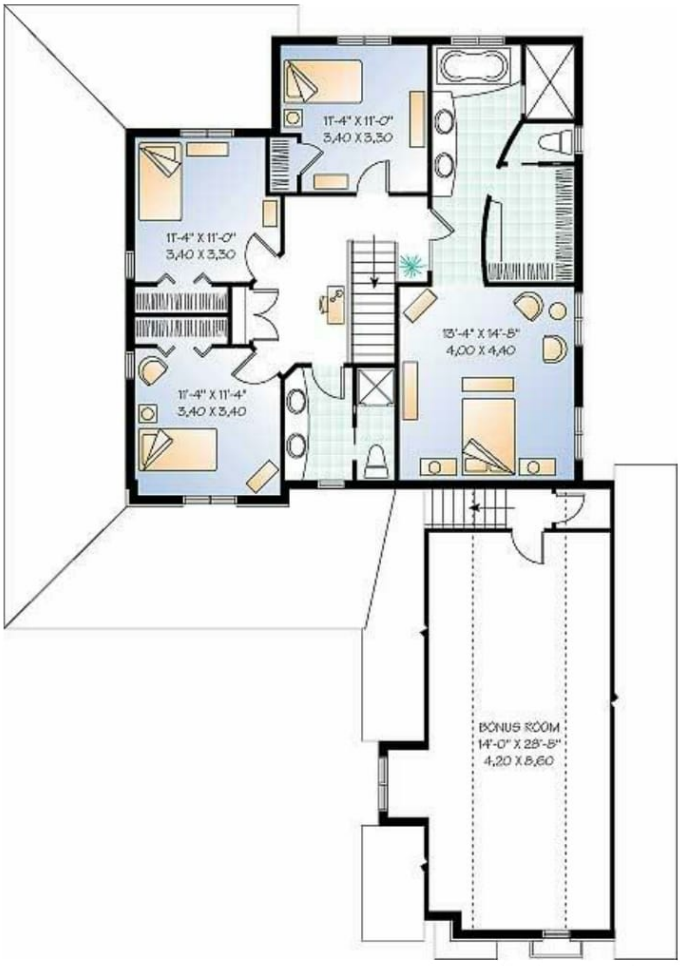


Model – 19 : 448 m2





Model – 20 : 475 m2



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MERÇ CONSTRUCTION

Machinery Manufacturing and Foreign Trade Co. Ltd.

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TQA hereby grants to the above company whose Quality Management System is in conformance with

ISO 9001:2008

Scope

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Ferhuniye Mh. Sultanşah Cd. Belediye İşhanı No:46 / 22 Selçuklu / Konya / Türkiye
Tel: 0332 351 22 04 - Faks:0332 351 22 05
tqa@tqa.com.tr - www.tqa.com.tr

Certificate Of Registration

MERÇ CONSTRUCTION

Machinery Manufacturing and Foreign Trade Co. Ltd.

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Tel: 0332 351 22 04 - Faks:0332 351 22 05
tqa@tqa.com.tr - www.tqa.com.tr

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Tel: 0332 351 22 04 - Faks:0332 351 22 05
tqa@tqa.com.tr - www.tqa.com.tr

CONTACT

SteelComfort

Light Steel Frame Buildings

Phone :
+90 312 230 31 82
+90 312 230 31 85
+90 531 342 48 01 *(Mobile)*

E-mail:
ali.merc@mercglobal.com.tr
merc_ltd@hotmail.com

Web Site:
www.steelcomfort.com

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