

INDEPENDENT HOUSE - CASTELVETRO DI MODENA

A NEW PRIVATE HOUSE IN PLATFORM FRAME

In Castelvetro di Modena Sistem Costruzioni has just completed a new single-family private house on two levels, for a total area of 175 square meters. The platform frame structure made it possible to create a building with classic and welcoming lines, equipped at the same time with exceptional anti-seismic characteristics and comfort. The exposed laminated and solid wood elements give a warm and elegant style.

PRODUCT SPECIFICATION

- Single-family Residence
- Localization:** Castelvetro di Modena
- Intended use:** Detached or Duplex homes
- Architeturale and structural design:** Ing. Massimiliano Gazzotti
- Total area:** 175ft

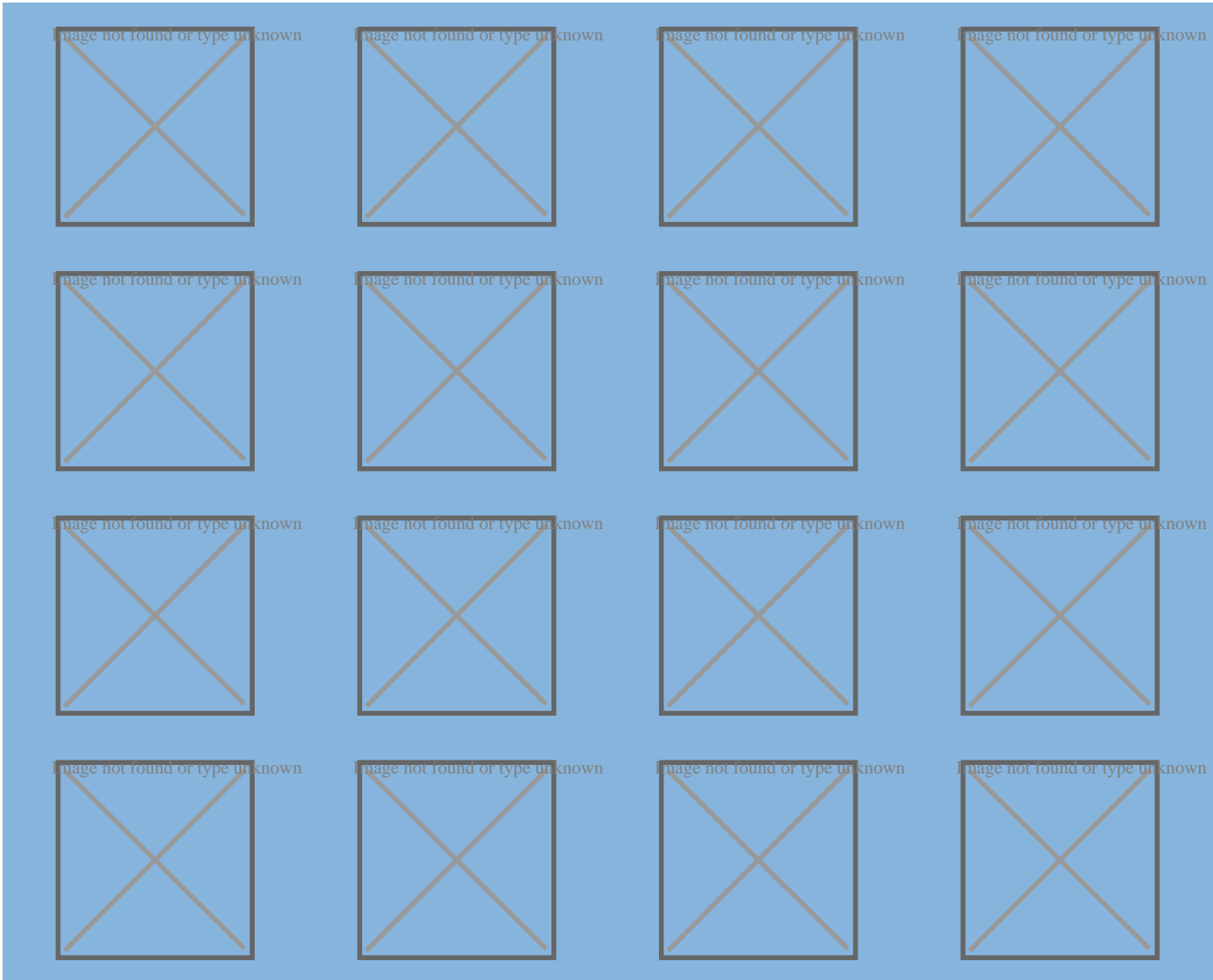


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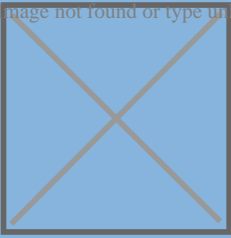


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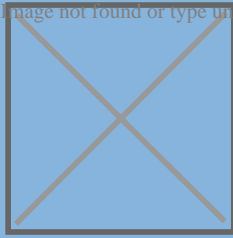


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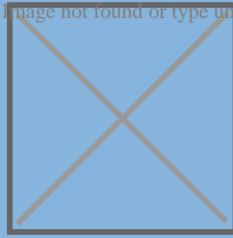


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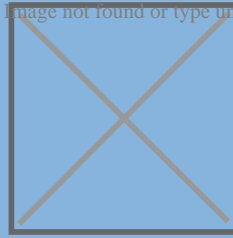
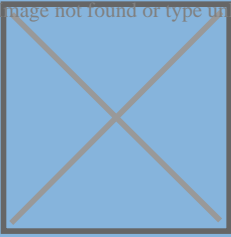
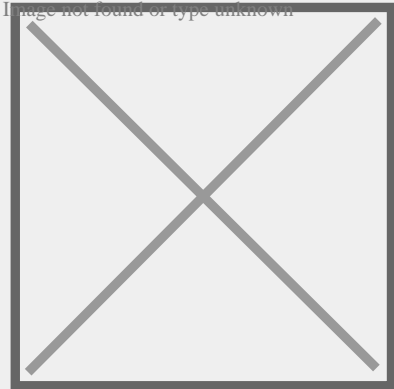


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BUILDING SYSTEM

Platform-Frame



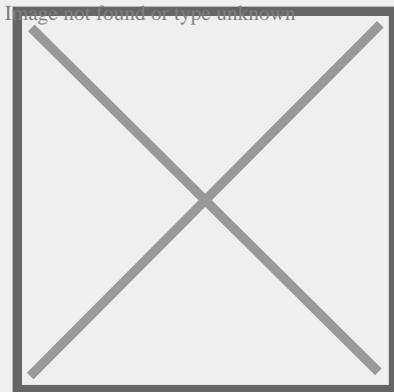
Reasons for choosing the Platform-Frame system

The Platform-Frame system is ideal for building prefabricated multi-storey homes and other types of timber buildings. This system can be used to create single residential units and condominium buildings of up to four floors in elevation. That explains why this construction technique is especially suitable for **timber buildings for social housing needs:** structures for emergency accommodation needs and shared community spaces. The system also offers excellent **insulation and antiseismic properties:** it offers the highest structural coefficient of all timber construction types. It's also an **economical and easy to erect system.**

About the Platform-Frame system

In the Platform-Frame construction system each floor of a building functions as a platform to support the floors above. Although developed in Northern Europe, the Platform-Frame system is widely used in North America. **Each wall or floor is composed of evenly spaced laminated wood or KVH structural timber studs.** The building frame is covered on the exterior side by OSB structural cladding, fixed by means of ring-shank nails and metal angle brackets. The Platform-Frame system is generally built on a reinforced concrete plinth. The connection between timber building and foundations is assured by threaded steel bars or expansion anchors.

Laminated and Solid



Reasons for choosing the Laminated and Solid system

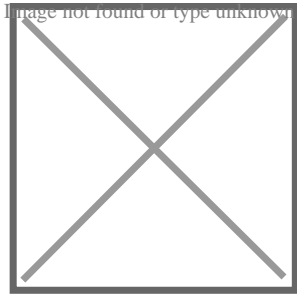
This construction system guarantees **the creation of timber roofs of various sizes and of different levels of complexity** in compliance with specific static loading calculations and transferring vertical and horizontal loads to the foundations by means of conventional building elements, in certain cases.

A durable and versatile timber roof

The unique characteristic of laminated wood and the connections between the various elements make it possible to create roof spans of more than 30 metres and **to build roofs of very large surface areas without having to break up the ground plan of the building with awkward intermediate pillars.**

High levels of insulation and strength

Depending on the thermal requirements, the **roof** can be completed with an insulating package and outer covering. The joists of the web roof structure can be designed in accordance with a very diverse range of geometries: the ridge beam establishes the shape of the roof while the wall plate beam can be adapted to match architectural, static or application requirements. The nodes of the web support structure can be created with metal plates fastened to the wood with screws and pins, with wood to wood joints, or by means of direct fastening with normal screws or full-threaded screws. Because they are extremely slender elements, timber joists or rafters must be braced with timber or steel elements designed to prevent the occurrence of lateral out-of-plane instability.



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