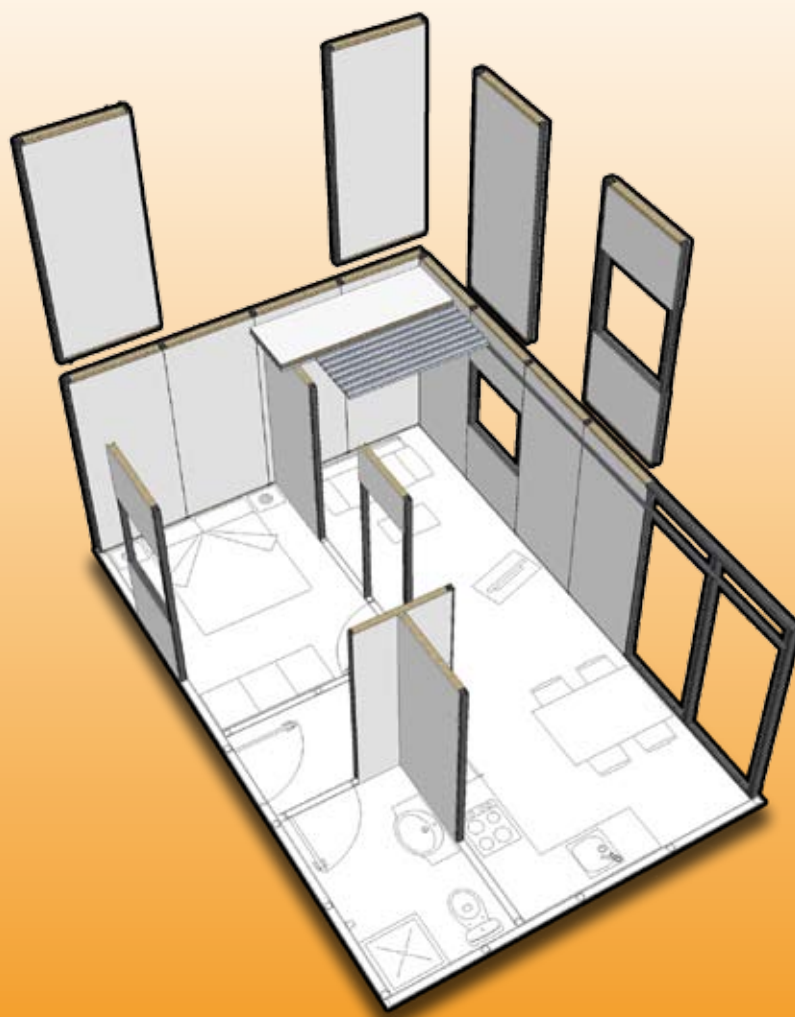


# House Kit

*autoconstrucción  
l'auto construction  
do-it-yourself*



**All materials necessary to build  
a home with structural panels.**

## The Idea:

*“Provide the first kit that includes all construction materials”*

## House Kit

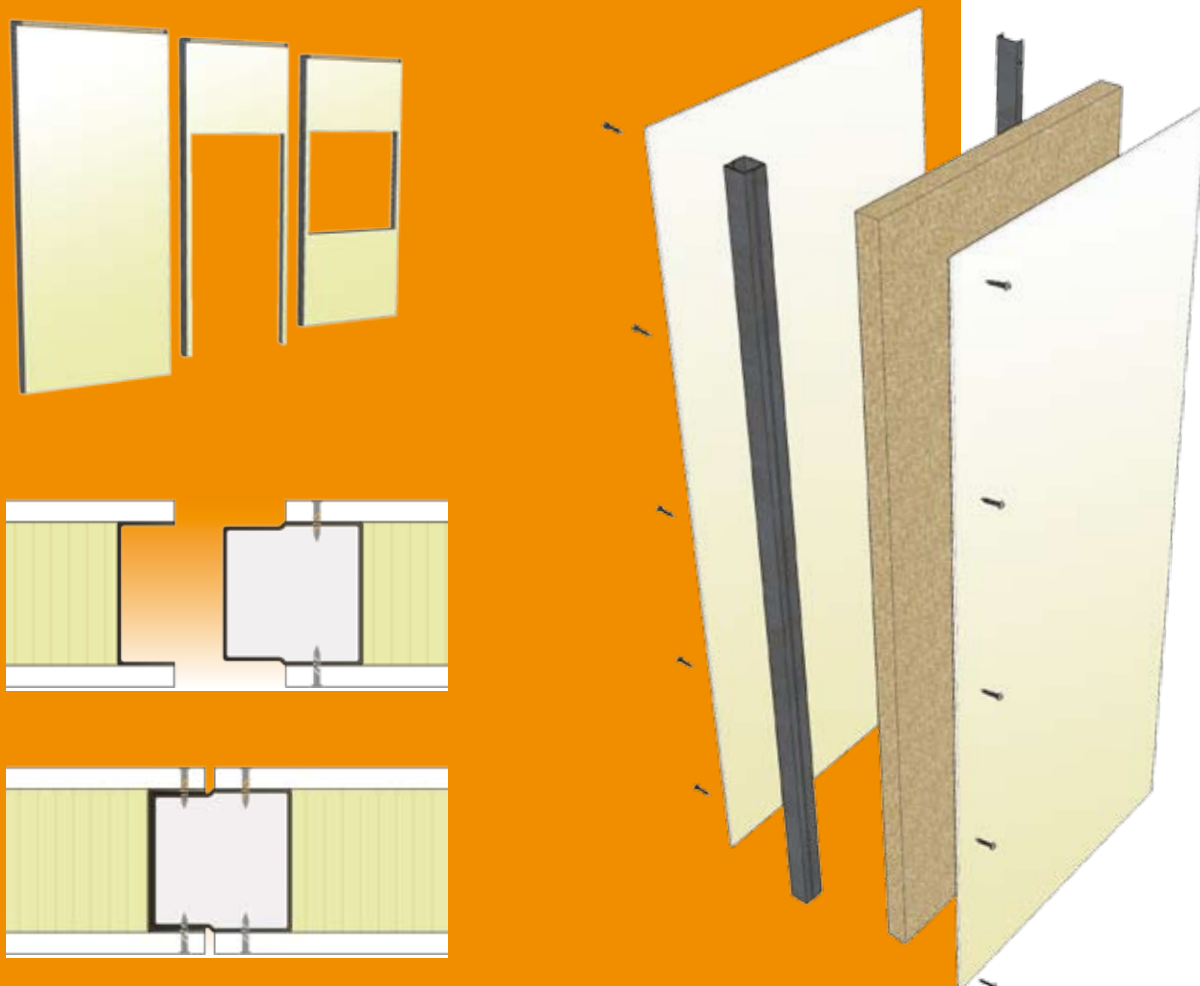
### A new concept in Do-it-yourself construction.

**Quality, ease, speed and economy** are the four pillars of the dry building method that allows you to do-it-yourself. Based on the lattice structure of the walls are light cargo and are built as we assemble the various sections-panels. The sections are comprised of three basic materials; a) internal metal sections join each other setting up a solid and stable structure, b) external and internal plates are very hard, support their use in wetlands, ensure a high resistance to fire and allow traditional finishes (paint, one coat ...), c) inner core of high density insulation that gives strength to the panel, thermal insulation and the electrical pre-installation lag. Supplied with all necessary elements for assembly and it requires no mechanization in work or expertise. With House-Kit you can build small warehouse buildings, bungalows, schools, medical centers or homes that require accommodated Technical Building Codes.

The advantages we get with the House-Kit make it a benchmark for **Sustainable Construction**.



House kit is intended for the construction of warehouses, bungalows and houses, but we can also perform medical centres, schools, offices ...depending on the number of units, our Technical Department will also make “customized” projects.



# Sustainable Elements



## Objective improvements on sustainability parameters:

1. **Lets adapt housing to the cultural specificities of each region.**
  - a. No limit on the distribution of housing.
  - b. The finishes can accommodate the traditional houses in the vicinity.
  - c. In one story homes structure is dimensioned to build a second plant in the future.
2. **The cost of housing is cheaper.**
  - a. We reduce construction costs by allowing it to invest in quality and sustainability
  - b. Projects in which a significant amount of housing is required are set to additional savings.
3. **Does not require skilled labour for construction.**
  - a. No need for skilled labour which allows even the “self”.
4. **Improved insulation and this increases the comfort for people and decreases the energy cost of housing.**
  - a. We increase the external wall insulation to reach a thermal transmittance of 0.22 W/m2, improving the standard 4-fold (0.82 w/m2 CTE).
5. **Decrease the duration of the work.**
  - a. You can make housing in a quarter of the time than a conventional promotion with the obvious advantages that this feature brings to reduce workplace accidents, and forward delivery dates.
6. **No water is needed for construction.**
  - a. . We saved 90% of the water needed to execute the work to accomplish the same with dry construction techniques.
7. **It reduces energy consumption.**
  - a. By increasing the insulation to reduce energy consumption and CO2 consumption by over 40%.
8. **Improves performance in relation to earthquakes.**
  - a. The structure shared by load bearing walls around the perimeter of the walls
  - b. The construction carried out by mechanical joints gives greater security and flexibility to the buildings.
  - c. Buildings are less heavy.
9. **With regard to fire protection.**
  - a. We increased fire protection to the exterior and interior walls using specific materials to prevent fire.
10. **Does not generate waste to work.**
  - a. . All materials come to the preparations for construction work without having to manipulate them on the spot and minimizing waste and wastage
11. **Good performance in relation to noise pollution.**
  - a. It reduces noise pollution during construction
  - b. Important values are achieved with sound insulation in exterior and interior walls.



**House Kit** follows sustainable construction parametres



# Characteristics of the materials composing the wall CONFORTWALL

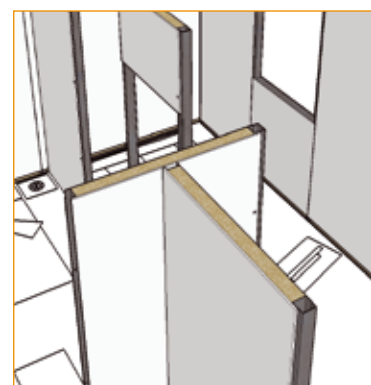
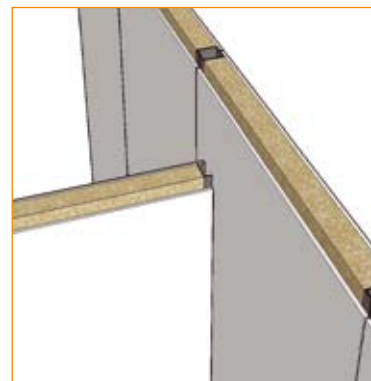


**CONFORTWALL** consists of high-quality components used routinely in the traditional construction and in industry for its qualities that ensure maximum performance, strength and durability.



## Inner core characteristics: Isolation

Density : 50-60 kg/m<sup>3</sup>  
Compressive strength: 1.18 N/mm<sup>2</sup>  
Thermal Conductivity: W/m°C 0026  
Sound Insulation : 15-28db  
Fire classification : B3



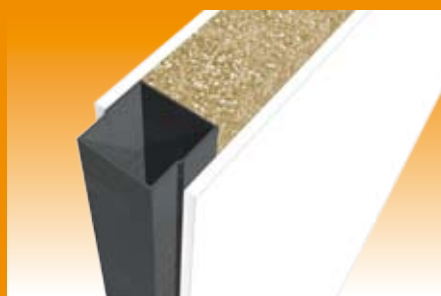
## Characteristics of interior and exterior plates

	Dry Density	Thermal Conductivity	Fire Reaction	Water Absorption	Flex Resistance (Mpa)
Nord-Panel MG interior	1080 Kg/m <sup>3</sup>	0,24	A1 -s1 - d0	21,20%	7,4
Nord-Panel FC exterior	1300 Kg/m <sup>3</sup>	0,30 W (m.k)	A2 - s1 d0	32,00%	11,70 Mpa



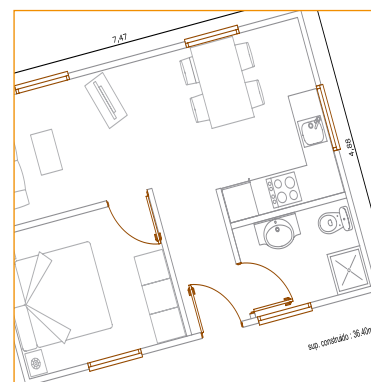
### Nord Panel MG (interior)

It is a panel composed of silicate, fiber and mineral compounds which can be used for dry constructed partitions and ceilings for its strength, its hydrophobic properties and excellent insulation against fire.



### Nord Panel FC (exterior)

This panel is composed of mineral fibres and cement, extremely hard and tough, indicated for intensive and external use.

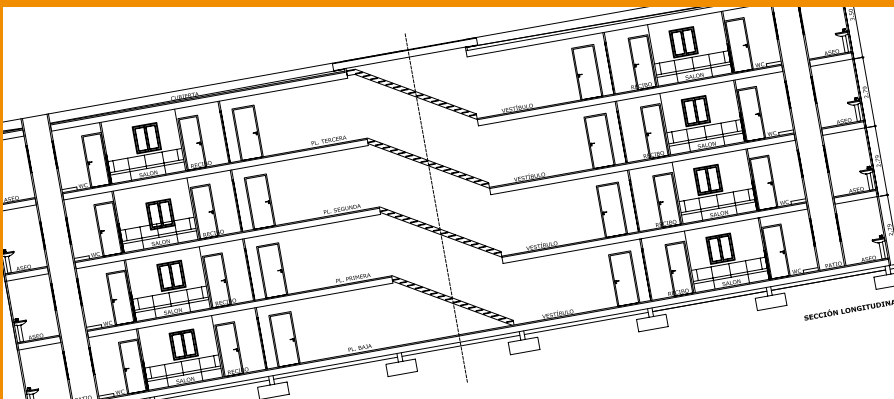
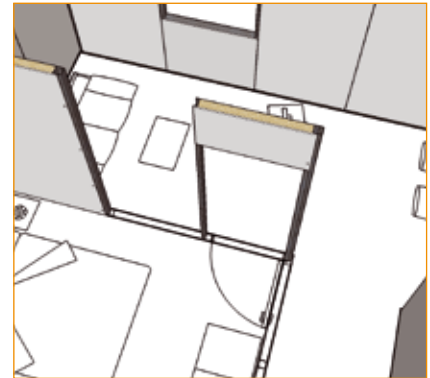


# Lightweight truss structure features



## Characteristics

The **lightweight truss structure** is one of the most used methods over the whole world, an internal metal skeleton makes all the walls and partitions into load-bearers, adding two new advantages to the dry-construction: Decreasing the section of the foundation and increasing its stability against earthquakes. Mechanical connections link all elements of the S.275 metal structure of 3mm thickness using self-tapping screws.



**House Kit** is calculated for ground floor +1 houses with clear spans upto 4m, so any structure that differs from these parametres will require additional structural calculation. Dimensioning the CONFORTWALL structure achieves building typologies of ground floor + 3

Mechanical connections link all elements of the S.275 metal structure of 3mm thickness



Through simple joints the metal profiles operate as a spatial structure.





## Steps for storage and pre-assembly.

The panels are stored on a flat surface and should be protected from the rain before proceeding with assembly.

Handling, although the weight of the panels permits manual manipulation it is more convenient to use a smaller crane for panel assembly as is also necessary to use drills (350W power)

Foundation: recommended to use is a concrete slab base, (drawings and specs are found in each assembly manual), although it is also possible to conduct a sanitary forge in cement or steel or wooden beams.

It is essential to check that the construction surface is perfectly flat and level.

## Steps for building-kit-roofed House "two span" (\*)

### 1. Placing the base profile

a. Marked in accordance with a ruling pen drawings axes of partitions and metal lanyard profiles recommended using concrete screws.

### 2. Mounting wall

a. They fit-sections and panels according to sequence manually using self-drilling screws. Temporary shoring shall be made to ensure the safety (using materials supplied).

### 3. Placement of the upper profile

### 4. Placing trusses

a. Once assembled the trusses are positioned according to manual and fixed at the upper profile metal

### 5. Roof Mount

a. Place the sandwich plates and metal acoolda the tile with the screws provided, they are used butyl sheet metal ridge to ensure watertightness.

### 6. Montaje of the ceiling

a. Using the base of the trusses are bolted ceiling plates leaving the spaces required to run the wiring.

### 7. Electrical

a. Be used in vertical tubes that already have the panels, with a crown made holes for mechanisms and use the false ceiling to make the connections.

### 8. Finishes

a. Treatments were performed together, the placement of rugs, painted and processes where the placement of stoneware or application of external monolayer

## Considerations and advice

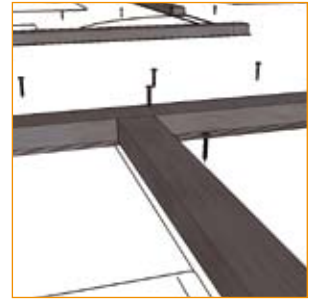
**Flat roof;** (\*) In homes with flat roof trusses are replaced by collaborating sheet steel and metal tiles with a layer of waterproofing.

Treatment of joints; a) plates with straight edges were used special glue that will stand out a bit of the rubber (estimated consumption 25ml / m together. B) plates with songs previously discounted should stick tape gun. Paste should be used together and paintings springy

Placement of stoneware; be fixed directly to the plates by mounting paste.

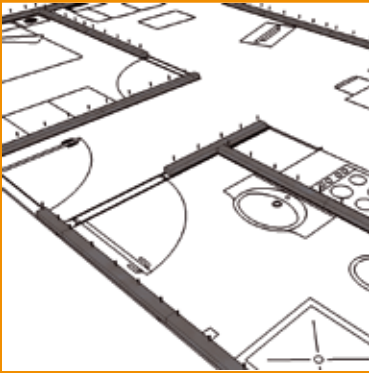
Plumbing; embedding is not recommended installation.

Exterior plaster, external plaster to be used to waterproof polymer solution and give elasticity to them.



The dry construction and automated prefabrication requires less skilled workers, while the labor items are also divided and all this affects the lowering of the final cost of the work

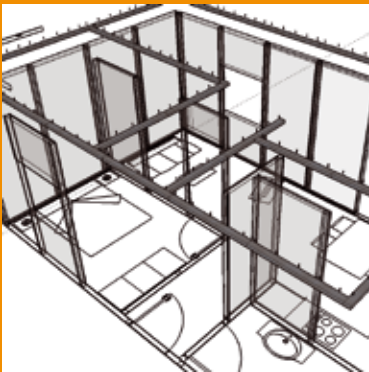




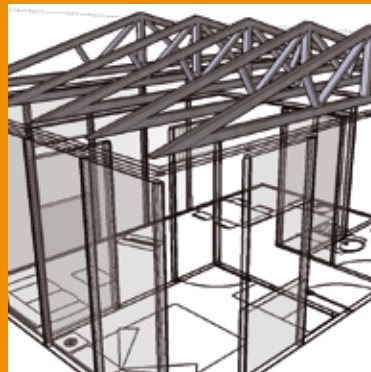
step 1



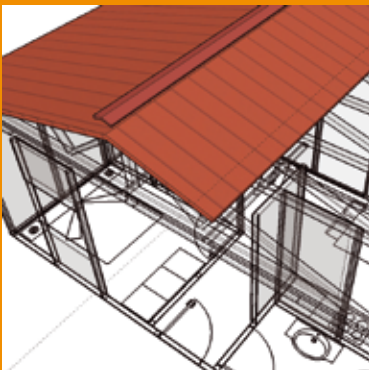
step 2



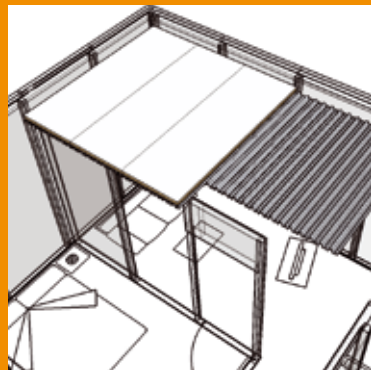
step 3



step 4



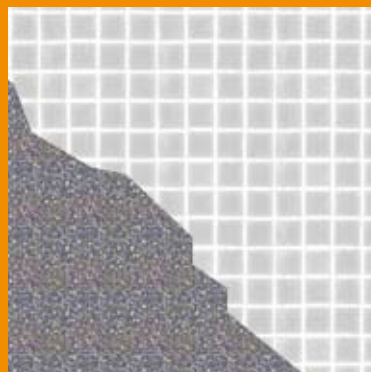
step 5



step 6



step 7

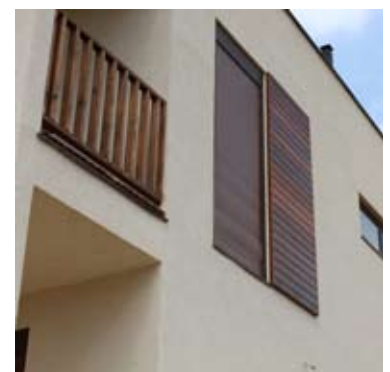


step 8

Following in the instructions steps you can easily perform the assembly without special tools.



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do it yourself





- Blind panel section is available through two electric pre-installed internal vertical conducts through crown drill holes inserting the plugs, switches and junction boxes.
- The door panel section is provided with an outer door sheet metal and wood interiors along with the corresponding area rugs
- The window pane section comes with a sliding window of two sheets of white aluminium, double glazing and interior mats



Item	Blind	Puerta 1	Window
alto int/ext	2600-2900 mm.	2600-2900 mm.	2900 mm.
ancho	1200 mm.	1000mm.	1200 mm.
grueso	102,4 mm.	102,4 mm.	102,4 mm.
peso	133 kg.	98 kg.	102 kg.
carga estructural	6KN/m2	6KN/m2	6KN/m2
conductividad termica	12/80/12=0,34	12/80/12=0,34	12/80/12=0,34
REI	60'	60'	60'
zona humedas	si	si	si



Structural interior and exterior walls for houses, bungalows and all kind of constructions.







## Kitchen Kit

This includes the provision of the following items

1. 3 inferior cupboards
2. hob with 2 rings
3. Sink faucet with one tap

## Bathroom Kit

This includes the provision of the following items

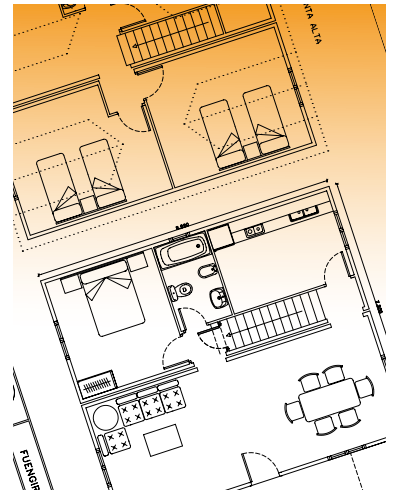
1. Shower cabin
2. Washbasin with wooden furniture
3. Faucets
4. Toilet with cistern



## Electrical kit

*This includes the provision of the following items*

1. Afumex hose cable 25ml per room
2. 4 splice boxes per room
3. 1 switch per room
4. 3 outlets per room
5. Overview under the protection of low voltage regulation



additional kits allow installations of the kitchen and bathroom with smart quality furniture and sanitary or the performance of electrical installations using materials tailored to low-voltage regulations.



## Basic Project and Execution of the Work

In buildings that need a building permit we can additionally perform the Basic Project and Execute the supervision of the Local Community. This requires that the client provide us the geotechnical and topographical survey of the land on which construction is to be realized and with a certificate confirming the viability of the construction project.



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habitania social foundation

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