



S.H. IMPIANTI
Smart House

Light steel framing

www.sfimpiantigroup.com

S.F. IMPIANTI
GROUP



advantages of a light steel framing

Light steel framing technology, also known under the name of cold-formed steel structures, is a construction technique that is already widely used in numerous countries. In Europe, steel constructions are gaining in importance. This method undoubtedly has many advantages.



quick

A light steel framework gives a significant time-saving on site.



lightness

beSteel offers a light gauge construction solution.



strength

Light gauge steel gives the material which gives the highest resistance/weight ratio in the world.



accuracy

The profile sections are made within an accuracy of 0.1mm.



sustainability

A considered and sustainable choice for the generations to come.

Great architectural flexibility

- Large spans
- Variety of cladding and roofing systems
- Reduced wall thickness

Highest resistance/weight ratio in the world

- Strength and rigidity of the steel
- Reduced foundations
- Non-degradable and rugged materials
- Easy to handle
- Reduced transport costs
- Seismic resistance

Steel quality

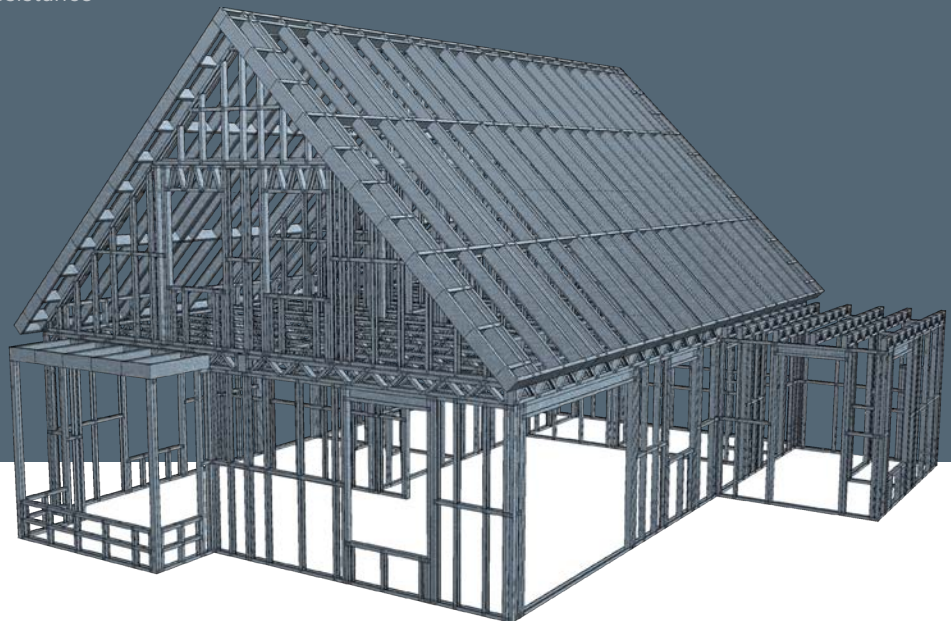
- Termite-proof
- Does not rot
- High resistance to corrosion
- Non-combustible

Prefabrication

- No delay on the work site
- Reduced construction time
- Clean worksite

Sustainable construction

- 100% recyclable steel
- Allows excellent insulation values to be obtained
- Dry construction, no waste into the environment





Cold Formed Steel

SH IMPIANTI is a producer of cold-formed steel profiles for all types of construction projects. Building using light gauge steel is an innovative solution for numerous applications.

We design different sizes and thicknesses of steel profiles. All our projects are produced to order and made according to precise specifications.

- Cold-formed profiles
- Custom-made production
- Profiles available in different widths: from 75 mm to 250 mm
- Steel gauge: 0.70 – 2.00 mm
- Excellent protection against corrosion

flat packed

fabricated



Design according to your drawings	✓	✓
Calculation according to Eurocodes	✓	✓
Production on roll formers	✓	✓
Assembly plans	✓	✓
Equipment for assembly	✓	✓
Assembly in 2-D panels	—	✓
Construction drawings	✓	✓

FLAT PACKED



The profiles are numbered during production and are supplied unassembled. Using assembly plans, you can easily assemble the profiles into 2-D panels.

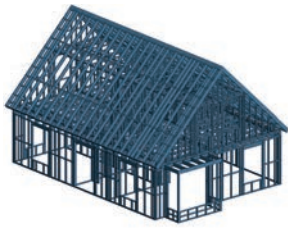
FABRICATED



We take care of assembly of the profiles into 2-D panels. The assembled panels are delivered to the worksite, ready for erection.

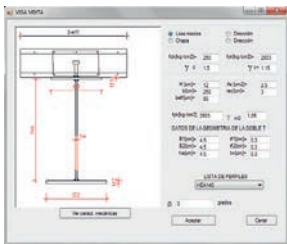
timeline for a SH IMPIANTI project

The aim of any contractor is to complete a construction site as quickly as possible. The Cold Formed Steel construction method is based on prefabrication and therefore can be rapidly implemented.



1. Design

The design is produced using Computer-Aided Design (CAD) software directly connected to the roll former. The project is drawn entirely in 3-D based on architect's drawings which we get from our clients. This is then broken down into 2-D panels with a view to preparing production files.



2. Dimensions and calculations

The stability study as well as the connection and cold-formed steel structure nodes technique form two challenges for this construction technique. beSteel takes care of all of this part.



3. Production

Cold-form rolling is an operation to shape sheet steel in order to obtain a profile. This shaping technique consists of passing the sheet metal into several roll-forming heads. The roll former is fed with a coil of steel. The profile sections are made within an accuracy of 1/10 of a millimetre.



4. Assembly

The profiles are assembled into 2-D panels in the factory according to an assembly drawing.



5. Transport

All the beSteel panels are loaded on to a vehicle. The transport of materials and staff onto the work site is greatly reduced since the panels are prefabricated in workshops. Energy consumption is therefore also reduced.



6. Assembly on the work site

Because the panels are supplied "just-in-time" and they can be assembled rapidly, work site and logistics organisation costs and construction time are reduced.

Erection is usually carried out by our customers. If, however, you are a private individual, or you do not have any experience with this construction method, we will put you in contact with an experienced partner.



who are beSteel's frames aimed at?

private customers

Are you looking for a sustainable construction method?
Choose for light steel framing from SH IMPIANTI

You are already working with a contractor/architect:

Ask them to contact us in order to discuss practicalities with us.

You don't have a contractor/architect yet:

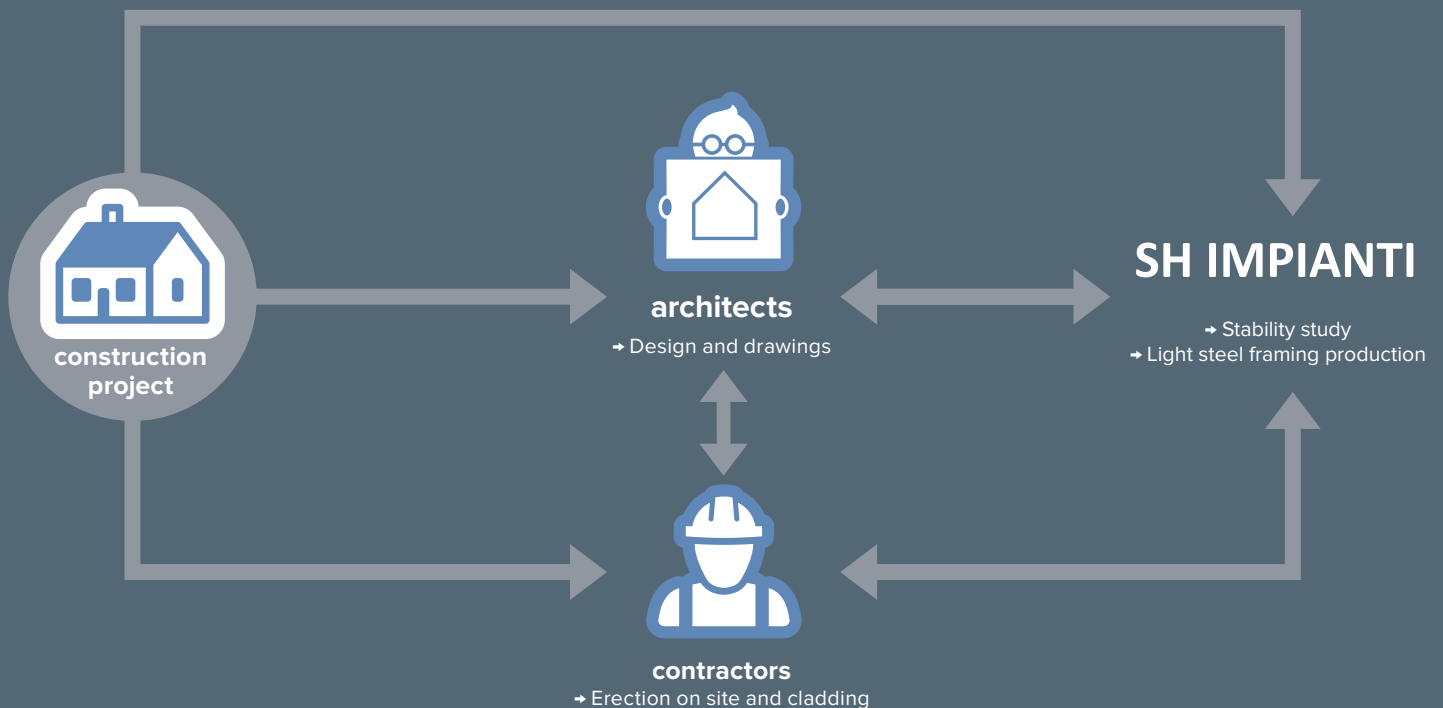
We can put you in contact with one of our partners in your region.

contractors

We supply our steel frames to contractors and construction companies. We send requests for information from private customers regarding a construction project to our partners.

Would you like to become our partner?

Please ask us for more information.



applications for light gauge steel profiles

Your imagination is your only limitation. Building with steel means making the choice of greater architectural freedom. Cold-formed steel frames are excellent solutions for residential, industrial and commercial buildings.

Residential buildings

In Europe, the requirements concerning the quality of buildings, their energy performance and adaptability are ever-increasing. This sector represents 25% of construction in the European Union. SH IMPIANTI steel frames are particularly suited to the construction of such accommodation.

Extensions

The architectural accuracy of steel frames is perfectly suited to house extensions. These extensions adapt to the style of the house. Construction time is also reduced.

Industrial buildings

Light steel framing is an ideal solution for producing industrial buildings. They enable large spans to be obtained without posts, which can be useful for warehouses, storage spaces, production plants, etc.

Modular solutions

The prefabrication of steel panels is perfectly suited for producing modules directly in the factory. They can be used on their own or together in order to form the framework of a building. If necessary, they can be prefinished in the factory to include all the desired fittings and installations.

Apartment buildings

The use of light steel framing is an ideal solution for the construction of multi-storey buildings. Buildings with more than 8 floors can be produced. Steel is characterised by its elastic behaviour with high resistance and rigidity. Steel can withstand very significant tensile stresses, like compression.

Frame for solar panels

The steel that we use is particularly suitable for frames for solar panels, thanks to its high corrosion resistance. The frames are produced to order and are easy to fit. The steel used has a magnesium and zinc coating. It is 10 times more resistant to corrosion than galvanised steel.

Adding storeys

Thanks to its lightness, the SH IMPIANTI system is particularly effective when adding a storey to a building. In some cases, adding an additional floor is too great a load. Using cold-formed steel is therefore an ideal solution.

Renovations

Cold-formed steel is particularly suitable for renovations. Prefabricated in the factory, the panels and meshes are light and therefore easy to fit, even in places with poor access. The choice of dry construction gives the advantage of easy installation and a reduction in the weight of the assembly.





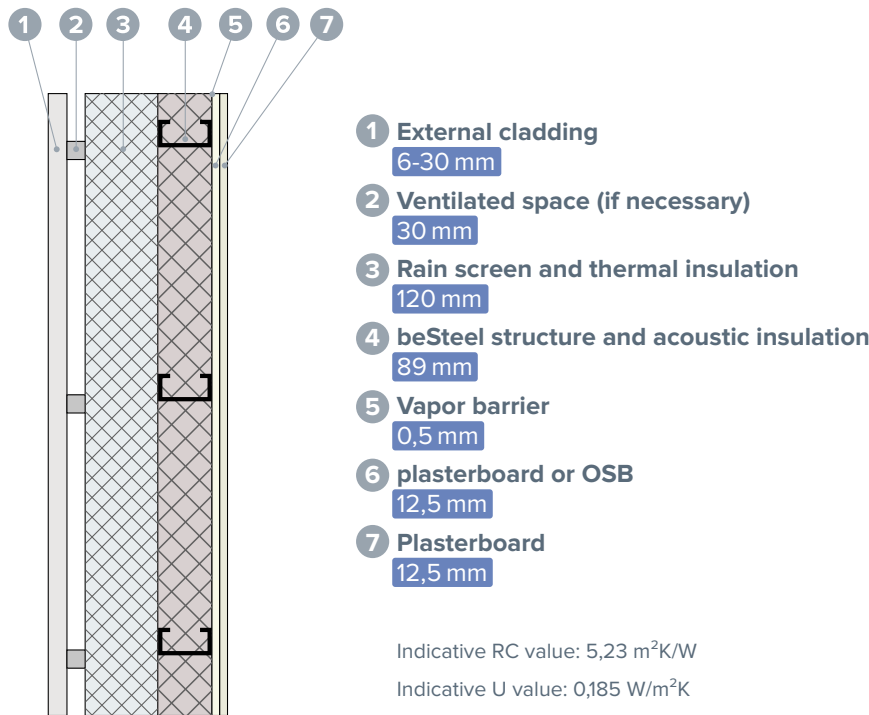
energy performance

Light steel framing enables you to build while outperforming all the standards in force!
A steelframe, by its nature, avoids any thermal bridge, restricting energy loss and avoiding internal condensation.

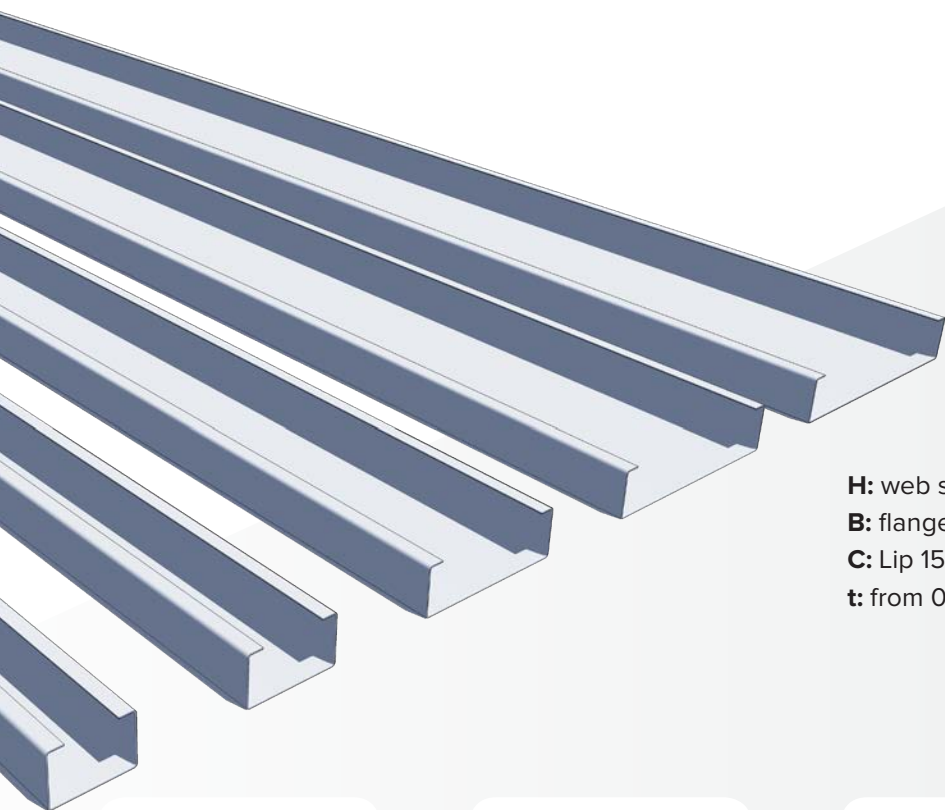
Numerous solutions are available for various architectural details which comply with the regulations and energy requirements.

Depending on the brands/materials chosen and the desired performance, these details can therefore be adapted to match each situation.

Cross-section view of wall with a SH IMPIANTI metal framework



SH IMPIANTI profiles

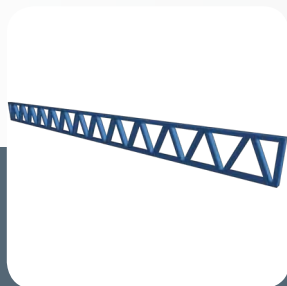


H: web size: 75, 89, 150, 200, 250 mm

B: flange 50 mm

C: Lip 15 mm

t: from 0.7 mm to 2.0 mm



truss



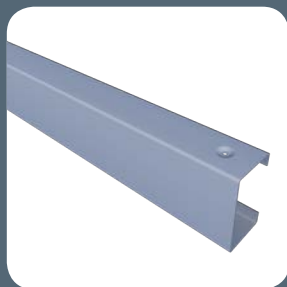
truss



wall panels

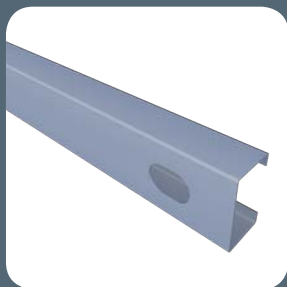


EPB



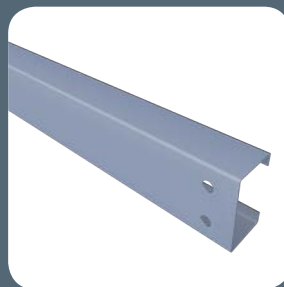
Screw hole

for quick, easy and accurate assembly



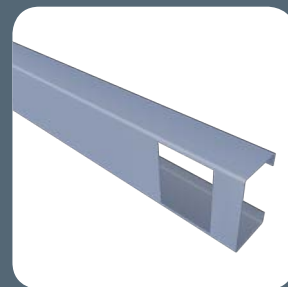
Service hole

for electrical utilities and domotica



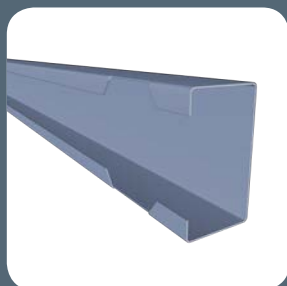
Index hole

for bolted connections



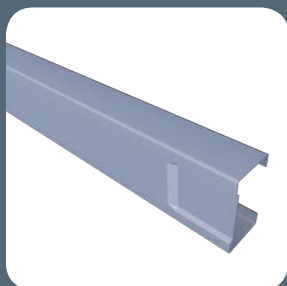
Web notch

studs pass through horizontally



Lip notch

for easy fixing of studs



Swage ends

for accurate fixing of studs



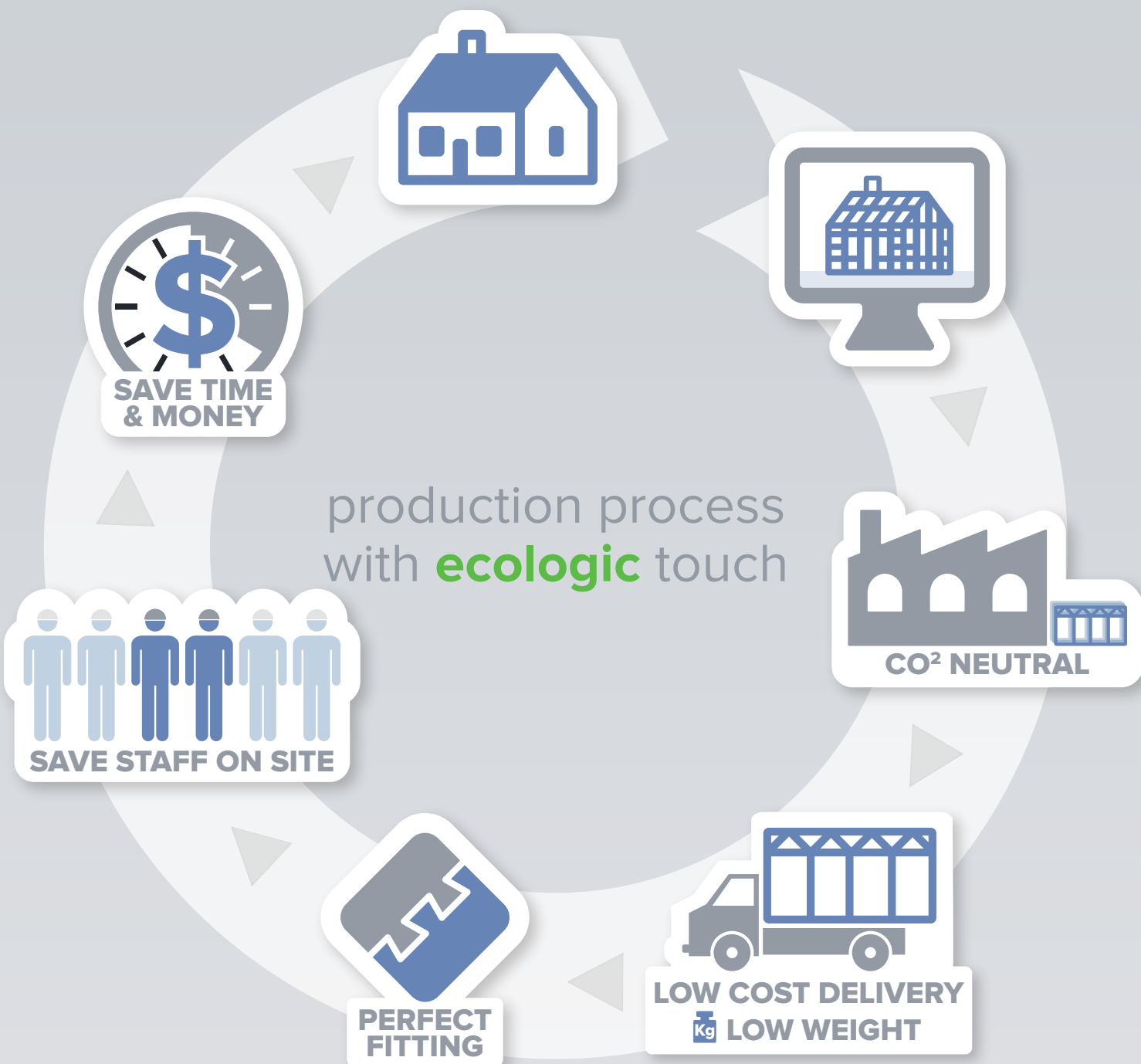
Printing ID label

for quick and easy assembling with accuracy



Utility service hole

for plumbing and ventilation



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PERFECTLY FITTING STEEL PROFILES

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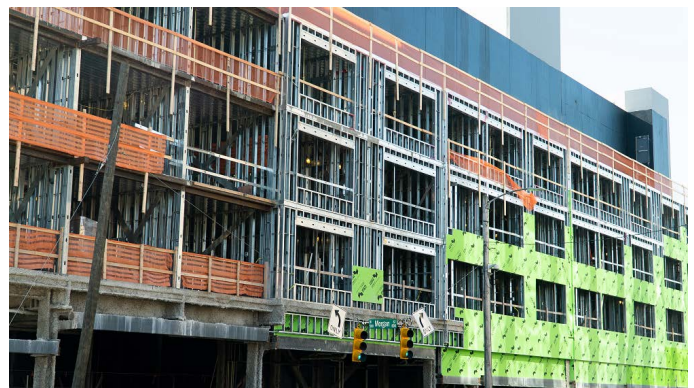
the SH IMPIANTI



SH IMPIANTI is a brand of the SF IMPIANTI GROUP Ltd that has specialised in the processing of composite materials and in construction.

The company's main activities are:

- Buildings of residential centers
- Buildings of villas
- The production of light gauge steel profiles



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