



ELEVATIONS WITH LIGHT
STEEL FRAMES

01 THE SOLUTION

Why elevate?

Elevating doesn't mean over-occupying, concreting or constructing high-rise buildings, but rather optimizing the space available to us. Above all, it's an advantage for homeowners, residents and urban planners.

HOUSING SHORTAGE

We are currently going through an unprecedented demographic crisis. In large cities, the housing shortage is a growing concern.

By raising the height of the existing housing stock, we relieve pressure on the housing market and preserve the last bit of green space in cities.

ELEVATING FOR SUSTAINABLE URBAN HOUSING

Compared to building new structures from scratch, raising existing buildings can save time, money, and resources.

Moreover, elevating buildings can also bring a unique aesthetic to urban landscapes. With creative architectural designs, elevated buildings can become iconic landmarks that add to the city's identity and character.

ADVANTAGES OF ELEVATIONS

1. An economic advantage

This allows you to create new living spaces that meet the latest environmental and energy standards, with lower land charges in areas with high prices per m2 and increased property value. Raising the height of a building will also reduce your energy costs.

2. An ecological advantage

30% of heat loss occurs through the roof. Raising the height of an existing building therefore enables it to be better insulated, while at the same time creating new space.

3. An architectural advantage

In addition to elevating your building, you can also modernize your infrastructure, fill a "gap" in the landscape and rethink a building to enhance its value.



02 ALL THE STEPS

How to elevate your building?

There are a couple of steps you need to keep in mind when deciding to increase the height of your building.



1 **OBTAIN NECESSARY PERMITS AND APPROVALS**

Before any work can begin, you will need to obtain all necessary permits and approvals from your local building department.

3 **CHOICE OF CONSTRUCTION METHOD**

beSteel will carry out a feasibility study for your project. Our expert team of architects and engineers will support you by defining the compositions for your walls, roof and floors taking in account all fire, acoustics and thermal requirements. And defining the structural demands of you project.

Our trained and certified contractors will create a tailor made price for the execution on site.

2 **CO-OWNERSHIP AGREEMENT**

(if applicable). When multiple parties share ownership of a building, it is important to ensure that everyone is on board with the plan to elevate the building.

4 **TRANSFORMING THE EXISTING STRUCTURE**

Opening of the existing roof (if necessary) and construction of the new elevation by our certified contractors.

03 ADVANTAGES

Why elevate with a lightweight steel frame?



LIGHTWEIGHT AND STRONG

It is the lightest system with the best structural performance/weight ratio on the market. It can therefore be raised more easily and in most cases without reinforcing the structure of the existing building.



SPEED OF INSTALLATION

It allows the shell of the building to be erected quickly and efficiently, keeping to schedules with dry construction and reducing disruption to occupants, neighbours and roads.



SUSTAINABILITY

Our production process is based on the cradle-to-cradle philosophy. All materials can be fully recycled and reused. We also provide bio based hybrid solutions.



DURABILITY

Light steel is resistant to corrosion, termites and mold. It does not expand or contract with temperature changes, which can reduce the risk of cracking in walls and floors.



DESIGN FLEXIBILITY

Light steel framing can be customised to meet the needs of each project, allowing great design flexibility. Architects and engineers can work together to create lightweight, elegant and efficient structures.



04 OUR EXPERTISE

Why elevate with beSteel?



+10 YEARS OF EXPERIENCE



+11 COUNTRIES



+600 PROJECTS



+30 PARTNERS

POINT CLOUD EXPERTISE

Our steelframe solution for elevations are tailor-made. We use point clouds for an accurate representation of the existing situation.

CONNECTIONS, ENGINEERING AND DESIGN

beSteel works 100% in BIM! Our architects and experts digitally monitor each project in our 3D BIM portal. In this way we ensure that your project meets the strictest technical requirements and rules for stability.

DEDICATED LOGISTICS SERVICE

Taking into account the requirements of the project (environmental characteristics and features of the building), we custom-make the transport according to the size of delivered panels.

OUR NETWORK OF PARTNERS

At beSteel we surround ourselves with reliable, high-quality and experienced construction partners. Together we make steel frame construction stand out!

05

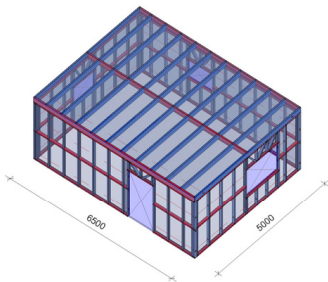
STEEL, WOOD, CONCRETE

Let's compare structure weight.

WHY THE METAL FRAME?

In 75% of the cases, raising the height of the buildings is impossible using other construction methods because the point loads are too high. With light steel, the weight is no problem: the steel frame avoids the need to reinforce the existing foundations.

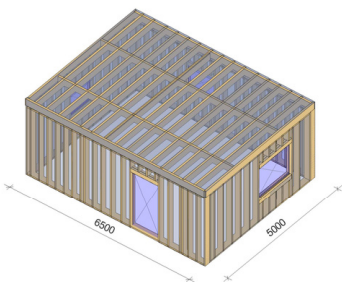
LGS FRAME - STRUCTURE



8,10 kg/m²

Light steel framing is 4.4 times lighter than wood and 40.7 times lighter than concrete. It is just the lightest building material you can find.

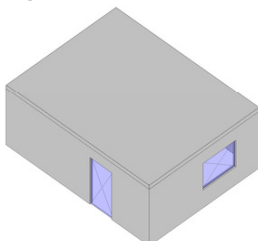
WOOD FRAME - STRUCTURE



35,62 kg/m²

Wood is 9.3 times lighter than concrete.

REINFORCED CONCRETE - STRUCTURE



330,17 kg/m²

Concrete is the heaviest material you can find, and therefore not suitable for elevating because it can damage the existing foundations.

References.



PARIS (FR)

Light steel frame elevation of an apartment building in the city of Boulogne-Billancourt / Paris.



LEUVEN (BE)

Elevation of a residential building to create a new floor, in the center square of the city.



ANTWERP (BE)

Height increase by two levels of a historical building located in the city centre of Antwerp.



GUADELOUPE

Elevation of a building consisting 4 duplexes, up front of the sea in Guadeloupe.



GHENT (BE)

Building elevated by two colourful storeys, near the Einde Were French fry shop.

OUR PROJECTS

Scan the code and have a look online.



07 OUR PRODUCTS

Our products to fit your needs.

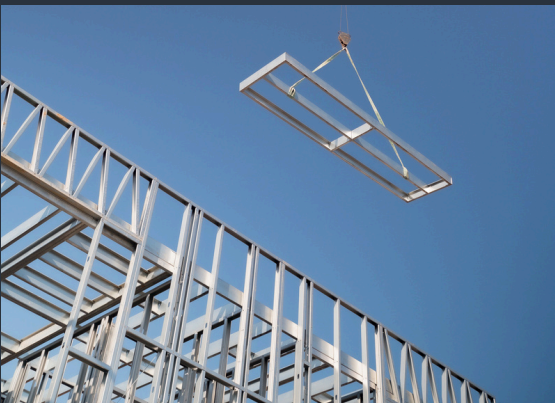


FLATPACKED

Steel profiles unassembled, reducing transport volume and allowing for easy handling.

With detailed assembly instructions, packaged screws, end caps, and panel plans, on-site assembly becomes straightforward, efficient, and adaptable to any project conditions.

- Easy transportation
-



FABRICATED

Pre-Assembled for Maximum Efficiency

Steel profiles delivered pre-assembled, saving time and effort on-site. With precise factory assembly, this solution ensures high-quality results, reduces labor requirements, and accelerates project timelines.

- Precision on site
-



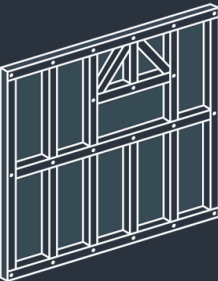
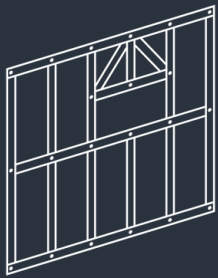
FASTWALL

Quick and Easy Wall Installation

Prefabricated wall system designed for rapid and seamless on-site installation. Delivered ready-to-install, it minimizes construction time while ensuring exceptional quality and durability.

- Speed and efficiency

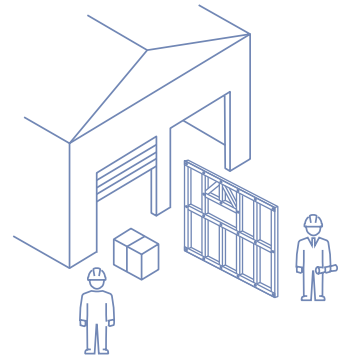
From design to site.



1

INTERNAL ENGINEERING OFFICE

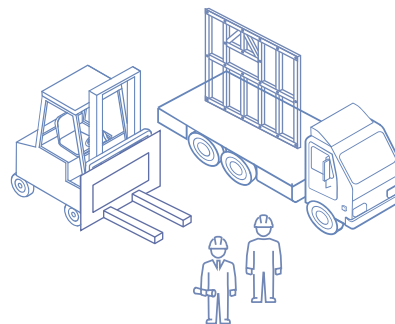
We digitally design your steel frame project. We provide you with a 3D model, stability calculations and drawings in full compliance with Eurocodes.



2

OFFSITE PRODUCTION AND ASSEMBLY

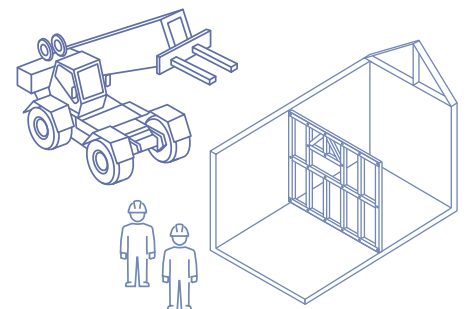
Precise production and assembly in our factory, under controlled conditions to guarantee the precision and quality of our product.



3

TRANSPORT

Delivery is organized according to the construction sequence to ensure smooth assembly.



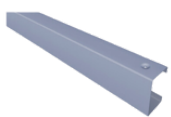
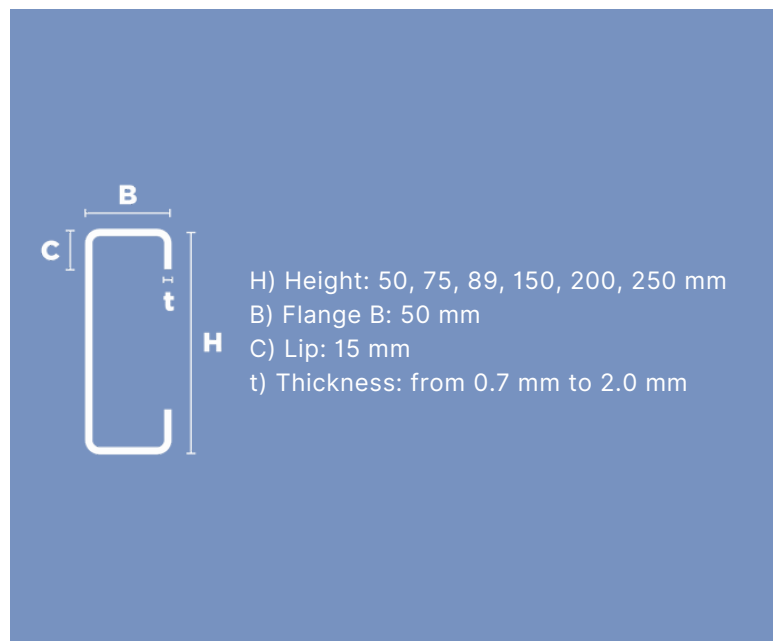
4

INSTALLATION ON THE SITE BY THE CONTRACTOR

Quick, easy, and labor-saving installation. Technical assistance from our beSteel Certified Advisor is available.

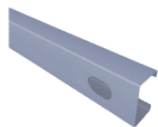
A sustainable material.

beSteel profiles are made from Arcelor Mittal Magnelis® steel. They have high quality and are corrosion resistant. Consisting of 3.5% aluminum and 3% magnesium.



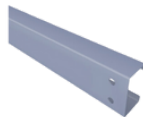
SCREW HOLE

For a quick, simple and precise assembly.



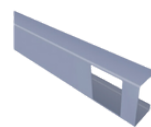
SERVICE HOLE

For electrical applications.



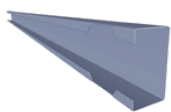
INDEX HOLE

For connections with bolts.



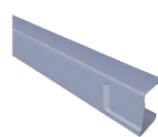
WEB NOTCH

Profiles fit together horizontally.



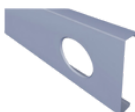
LIP NOTCH

For mounting profiles easily.



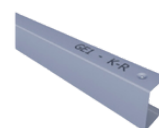
SWAGE ENDS

For precise fixing of profiles.



UTILITY SERVICE HOLE

Hole of 120-140 mm for sanitary elements and ventilation.



PRINT ID LABEL

For time-saving, well-organized installation.

On the road to carbon neutrality.

CRADLE TO CRADLE

Steel construction is one of the few methods that offers a clear answer to the need for circular construction.

This means that steel structures are 100% recyclable and offer a solution that can be dismantled without compromising quality.



XCARB® - TOWARDS A CARBON NEUTRAL STEEL

beSteel is convinced that steel has an essential role to play in helping society to decarbonize, and that it will be a large part of the solution to this problem.

That's why we are proposing the XCarb® program to reduce Europe's CO2 emissions from steel production, and are aiming for carbon-neutral steel by 2050.



TRADITIONAL CONSTRUCTION OR LIGHT STEEL CONSTRUCTION? THE OBVIOUS ANSWER.

It may come as a surprise to you, but it takes more steel (reinforcement) to build reinforced concrete than steel-frame.

Cold bending of sections improves steel's performance and load-bearing capacity. This results in a solution that's efficient in terms of raw material use, and environmentally friendly thanks to its ease of disassembly and recycling at end-of-life.

ULTRA FAST CONSTRUCTION

Off-site production and assembly, avoiding delays on site thanks to controlled conditions for fast, precise on-site assembly.

SUSTAINABLE AND LIGHTWEIGHT

4x time lighter than wooden construction methods. A hybrid module made of light steel helps to reduce the CO2 impact of the construction sector.

360° EXPERTISE AND DIGITAL FOLLOW-UP

Production of lightweight steel structures and complete monitoring. So that your project meets the most strict technical and stability requirements, all in-house.

CONTACT US

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**SCAN THE CODE FOR MORE ABOUT
OUR PRODUCTS AND SOLUTIONS**

