DESSAU Constructions GmbH

Version 1.0.0.

Innovative LGS Construction

www.dessau.ch

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About.

About Us

At DESSAU, we specialize in developing cutting-edge construction solutions using **Light Gauge Steel (LGS)**. This advanced building material combines strength, durability, and flexibility, making it ideal for a wide range of applications.

LGS ensures superior structural integrity with minimal weight, enabling faster construction, enhanced energy efficiency, and seamless customization to project needs. Engineered to meet Eurocode 3 standards, our solutions guarantee safety, reliability, and long-term performance.

The adaptability of LGS makes it the ideal choice for modern construction, delivering excellence without compromise.

DESSAU strives to be a trusted leader in LGS manufacturing and construction. With a commitment to precision, quality, and innovation, we provide tailored solutions that uphold the highest standards in design and durability. From concept to completion, we ensure every project surpasses expectations.

2 Applications.

What Can We Produce

Light Gauge Steel (LGS) construction is ideal for a wide range of structures, from residential homes to large commercial and industrial projects. Its strength, precision, and adaptability make it the perfect choice for modern building demands.

In residential projects, LGS ensures long-lasting durability, energy efficiency, and design flexibility, creating safe and sustainable homes. For commercial and industrial buildings, it supports expansive layouts, high load capacities, and rapid assembly, reducing construction time.
Beyond buildings, LGS is widely used for solar panel structures, modular expansions, and rooftop extensions, offering lightweight yet resilient solutions.

From concept to completion, LGS delivers reliable, efficient, and innovative solutions for the future of construction.

Residential Buildings

We specialize in constructing modern residential and apartment buildings using light steel profiles. Our approach ensures durable, efficient, and stylish structures tailored to your needs, whether single-family homes or multi-unit complexes.

Commercial & industrial

Constructing efficient and modern commercial buildings. From office spaces to retail complexes and warehouses, these structures maximize functionality, durability, and architectural flexibility, tailored to meet the needs of businesses of all sizes.

Public buildings

Our expertise extends to public infrastructure, including schools, healthcare facilities, and community centers. We ensure cost-effective, sustainable, and versatile solutions, meeting rigorous safety and durability standards.

Solar Panel Structures

LGS plays a crucial role in the renewable energy sector, providing strong, corrosion-resistant, and lightweight support structures for solar power installations.

Structural Upgrades & Extensions

An ideal solution for expanding and reinforcing existing buildings, especially in urban areas where space is limited and structural weight must be minimized.

Advantages

Faster Construction
Prefabricated elements allow for quick assembly, reducing construction time significantly.

Durability
Lightweight steel is resistant to rot, pests, and corrosion, ensuring long-term structural integrity.

Strength-to-Weight Ratio
Offers exceptional strength while keeping the structure lightweight, reducing foundation load.

Architectural Freedom
Enables creative and diverse architectural designs without compromising structural integrity.

Sustainability
Steel is 100% recyclable, making it an eco-friendly building material.

Precision Engineering
Manufactured to exact specifications, ensuring high accuracy and minimal material waste.

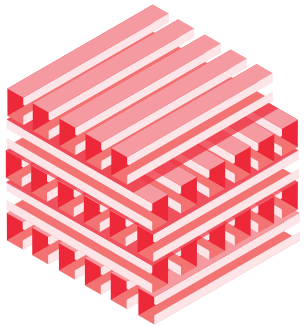
Seismic and Wind Resistance
Lightweight steel frames are designed to withstand earthquakes and strong winds.

Energy Efficiency
Supports advanced insulation techniques for improved thermal performance.

3

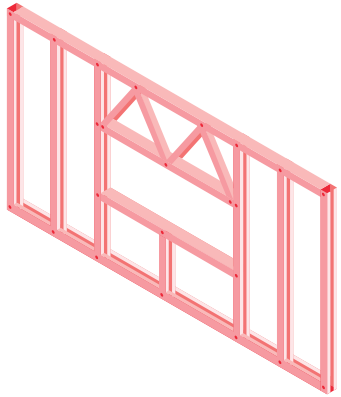
Products.

Our Line of Products



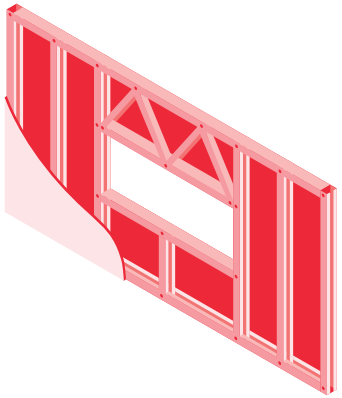
Flatpacked profiles

A fast and simple solution for constructing all types of buildings. Ideal for efficient construction with minimal waste.



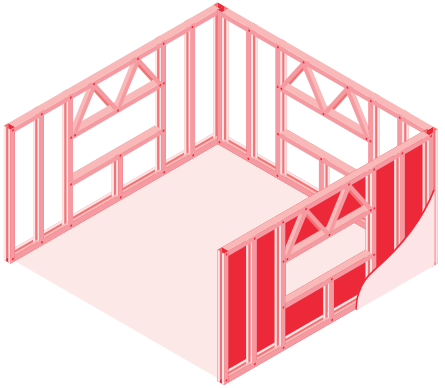
Fabricated walls

Pre-assembled structures created with precision off-site. These ready-to-install wall frames save you time.



XWall™ Panels

Fully assembled wall panels ready for installation, offering superior insulation and time savings.

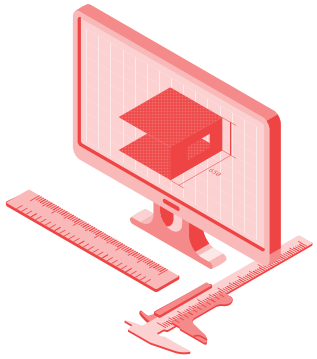


Turnkey solutions

Complete cost-effective turnkey products with integrated framing, insulation, and cladding for rapid on-site installation.

Your Project in 4 Steps: From Idea To Reality

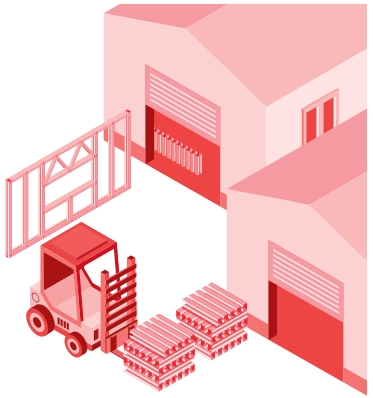
01



Planning

Every project starts with detailed planning, ensuring your ideas are translated into a clear, actionable blueprint tailored for lightweight steel frame construction.

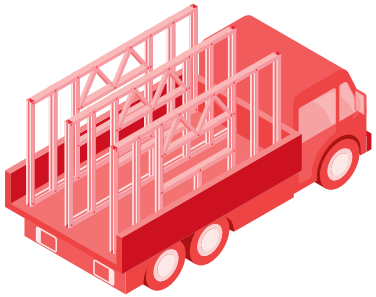
02



Offsite production

Using advanced technology, we manufacture and cut steel profiles to exact specifications, guaranteeing precision and efficiency.

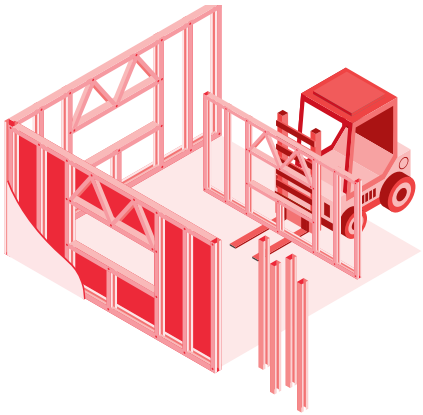
03



Seamless delivery to your location

Profiles are carefully packaged and transported to your construction site, ensuring they arrive on time and in perfect condition.

04



Construction

Light Gauge Steel (LGS) frames are designed for quick and easy assembly, turning your project into reality with speed and reliability.

We Meet the Highest Construction Standards

Thermal Performance

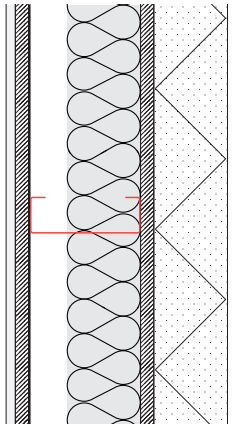
Our products are designed to integrate advanced insulation materials, ensuring excellent thermal performance and energy savings.

Fire Safety

Using non-combustible materials and fire-resistant designs, our structures meet the highest standards for fire safety and protection.

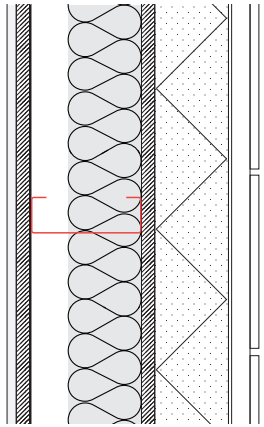
Acoustic Comfort

With integrated soundproofing solutions, our buildings reduce noise transmission, creating comfortable environments for both residential and commercial use.



Facade Cladded with ETICS

Plasterboard 12,5mm
OSB board 18mm
Vapor barrier
LGS C frame 150mm
Rock wool 100mm
Durelis board 18mm
Insulation board 100mm
Facade cladding 10mm



Ventilated cladding

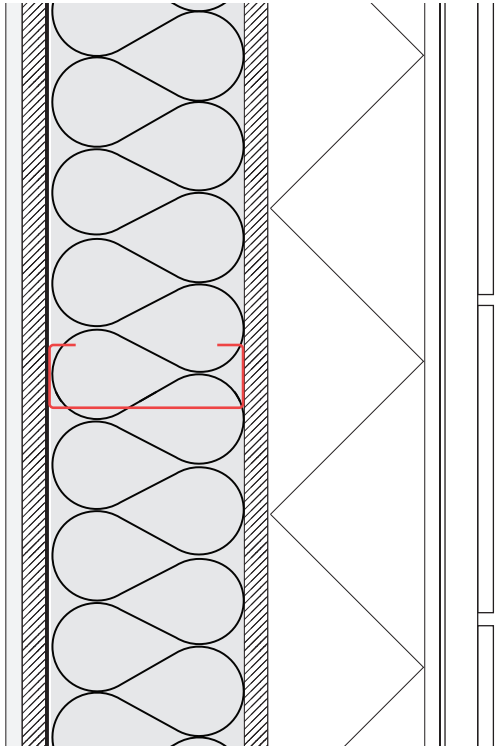
Plasterboard 12,5mm
OSB board 18mm
Vapor barrier
LGS C frame 150mm
Rock wool 100mm
OSB board 18mm
Durelis board 100mm
Waterproof membrane
Lathe 25mm
Facade cladding 12mm

Achieving the Minergie® standards

Minergie® is a Swiss building standard that prioritizes energy efficiency, comfort, and sustainability. It focuses on high-performance insulation, airtight construction, and controlled ventilation, significantly reducing energy consumption while enhancing indoor air quality and living comfort.

Minergie-P® takes energy efficiency a step further, meeting passive house criteria with ultra-low energy consumption, superior thermal insulation, and the integration of renewable energy sources. This ensures buildings achieve maximum efficiency with minimal environmental impact.

Our Light Gauge Steel (LGS) structures can be precisely engineered to comply with both Minergie® and Minergie-P® standards, delivering sustainable, energy-efficient, and future-proof construction solutions.



Ventilated cladding

Plasterboard - fireproof 12,5mm
OSB board 18mm
Vapor barrier
C frame 150mm
Rock wool 150mm
Durelis board 18mm
Insulation board/ KNAUFF Naturboard Venti 120mm
Waterproof membrane
Lathe 25mm
Facade cladding 12mm

Solar Panel Structures

LGS plays a crucial role in the renewable energy sector, and at DESSAU, we design and manufacture strong, corrosion-resistant, and lightweight support structures for solar power installations. Our precision-engineered LGS frames ensure long-term durability and optimal load distribution, making them ideal for large-scale solar farms and rooftop solar systems.

Ground-Mounted Solar Farms

Large-scale solar farms require weather-resistant steel structures that can withstand strong winds, seismic activity, and extreme temperatures. LGS framing, with Magnelis coating, offers long-lasting corrosion resistance, reducing maintenance costs over decades.

Rooftop Solar Mounting Systems

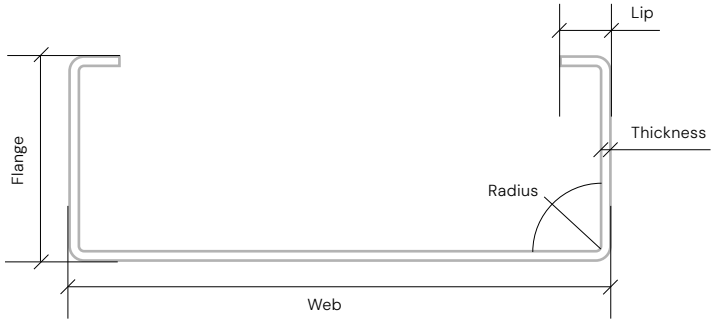
LGS is an excellent choice for commercial and industrial solar panel installations, as it is lightweight yet strong enough to support panel loads without overburdening rooftops. The precise factory-cut steel ensures perfect alignment, optimizing solar efficiency and structural integrity.

4 Technology.

Sustainable materials

Using advanced 3D CAD software, we produce a diverse range of custom-made cold-formed steel profiles through a fully automated production process. These profiles are designed for assembly into light gauge wall frames, C-joist floors, or long-span trusses.

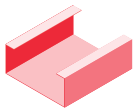
Each steel frame construction is project-specific and engineered in compliance with EN 1993, ensuring it meets the highest standards for resistance, serviceability, durability, and fire safety.



Web	63 - 300mm
Flange	41 - 75mm
Lip	0 - 20mm
Thickness	0.75 - 2.5mm
Radius	2.5mm

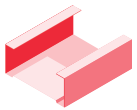
Tool Station Operations

Standalone Operations

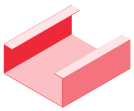


Cut

Swaged Service Hole

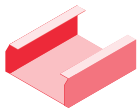


Swage



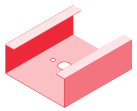
Pre-cut

Cassette System Operations



Chamfer

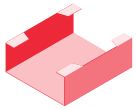
Service hole



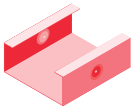
Web & Index Hole

Notch

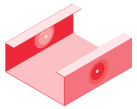
Software Controlled – Auto Adjustable Operations



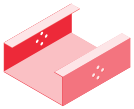
Lip Cut



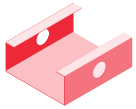
Dimpled Screw/Rivet



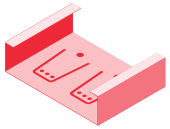
Big Dimpled Screw



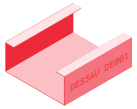
Flange Multi Connection



Bolt Hole



Double Tab



Print Label

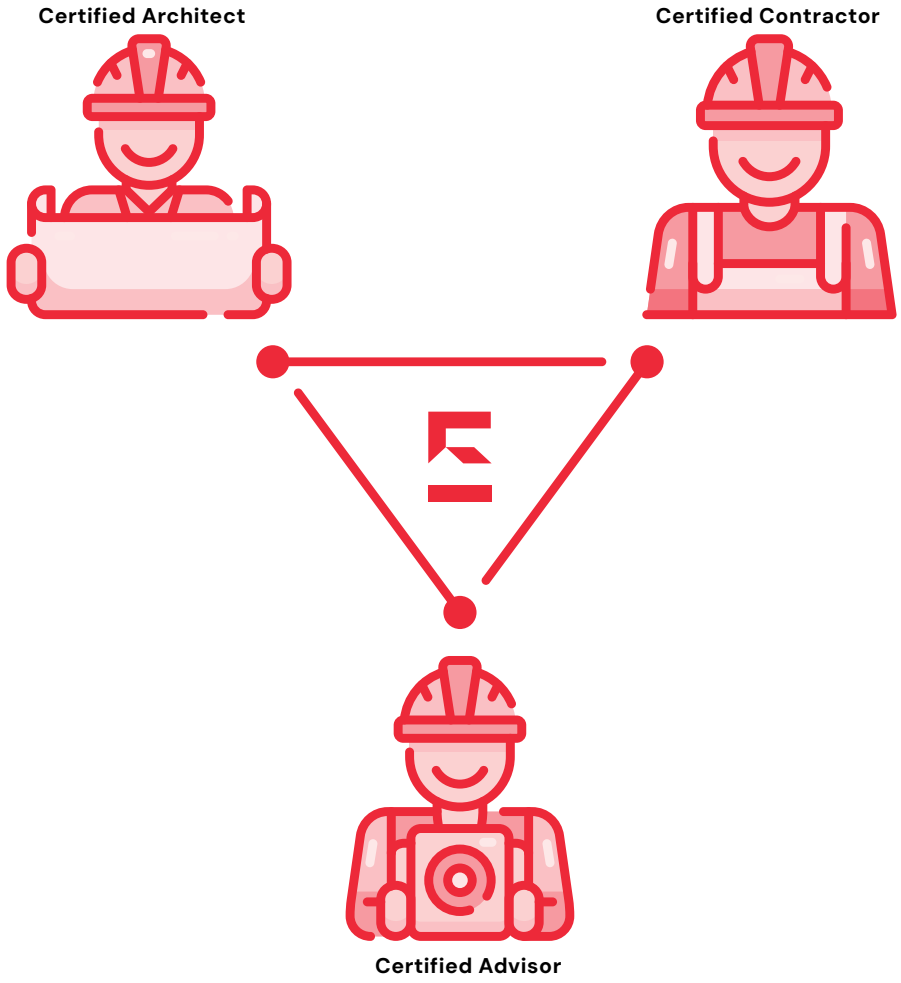
5

DESSAU CPN™.

DESSAU Certified Partner Network™

At DESSAU, we collaborate with reliable, high-quality, and experienced construction partners. Together, we make light gauge steel frame construction stand out!

Are you a contractor, architect, or specialized consultant in steel frame construction? Reach out to us! You could become the next essential link in our growing network.



DESSAU™
CERTIFIED PARTNER

Frequently Asked Questions

6

1. What is Light Gauge Steel (LGS)?
LGS is a construction system made from cold-formed galvanized steel, offering high strength, precision, and fast assembly compared to traditional materials like concrete and timber.

2. How does LGS compare to concrete and brick?
LGS is up to 70% lighter, reduces construction time by 30-50%, and doesn't crack like concrete. It also has higher seismic resistance and requires less foundation work.

3. Is LGS better than timber?
Yes. Unlike timber, LGS is fire-resistant, termite-proof, and does not warp or rot. It also provides higher precision and a longer lifespan with minimal maintenance.

4. How long does it take to build with LGS?
LGS structures can be fully assembled in days or weeks, depending on the project size—much faster than traditional construction.

5. Is LGS suitable for earthquake-prone areas?
Yes. LGS structures can withstand earthquakes up to 9.0 on the Richter scale due to their flexibility and ability to absorb seismic energy.

6. How does LGS perform in extreme weather conditions?
LGS buildings can resist hurricane-force winds over 250 km/h, extreme temperatures, and heavy snowfall, making them ideal for challenging climates.

7. What kind of insulation can be used with LGS?
LGS allows for high-performance insulation, improving thermal efficiency by 30-50% compared to traditional materials, leading to lower heating and cooling costs.

8. Is LGS sustainable?
Yes. LGS is made from 100% recyclable steel and produces up to 75% fewer CO2 emissions than concrete, making it one of the most sustainable construction methods.

9. Where can LGS be used?
LGS is used in residential, commercial, and industrial buildings, as well as public infrastructure, modular homes, solar panel structures, and rooftop expansions.

10. Can LGS be used to add floors to existing buildings?
Yes. Because LGS is lightweight and high-strength, it is ideal for vertical expansions on existing concrete structures without overloading foundations.

11. How long do LGS buildings last?
With proper coatings like Magnelis ZM250/ZM310, LGS structures can last 100+ years with minimal maintenance.

12. Does LGS rust?
No. LGS profiles are protected with Magnelis®, a corrosion-resistant alloy that lasts 3x longer than traditional galvanization.

13. How is LGS manufactured?
LGS profiles are precision-cut in factories using BIM software and automated roll-forming machines, ensuring millimeter accuracy and minimal material waste.

14. What kind of finishes can be applied to LGS buildings?
LGS structures support various cladding options, including brick veneers, fiber cement panels, composite materials, and custom architectural finishes.

15. Why is LGS the future of construction?
LGS offers faster, stronger, and more sustainable building solutions, aligning with global trends in efficiency, affordability, and environmental responsibility.

16. How does LGS perform in terms of acoustic insulation?
LGS structures can achieve high acoustic performance by integrating materials like Azmafon or Acoustic Rockwool, which significantly reduce sound transmission. With proper insulation layers, LGS buildings can meet or exceed residential and commercial noise reduction standards.

7

Info.

Contact information

For media and press inquiries, collaboration requests, or brand-related information, please reach out to us. We are happy to provide press materials, interviews, and insights about DESSAU's innovative approach to modern construction and design.

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DESSAU Constructions GmbH

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CPO

Thank you for your attention.

DESSAU™

DESSAU Constructions GmbH