DESSAU Constructions GmbH

Version 1.0.0.

Sustainable Solutions.

www.dessau.ch

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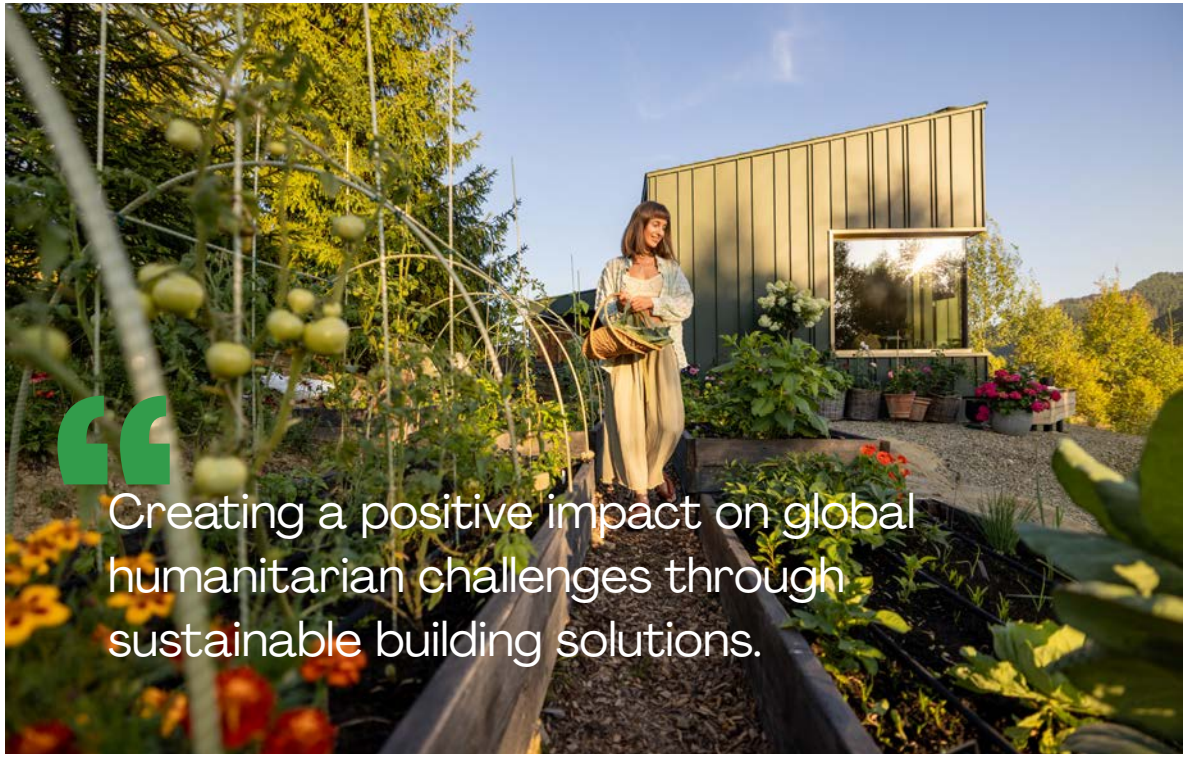
Solutions.

Building For a Greener Future

At DESSAU, we are committed to making a positive impact on the environment, the construction industry, and the lives of our partners and colleagues. By integrating sustainable practices and responsible material choices, we aim to reduce our carbon footprint and contribute to a greener planet.

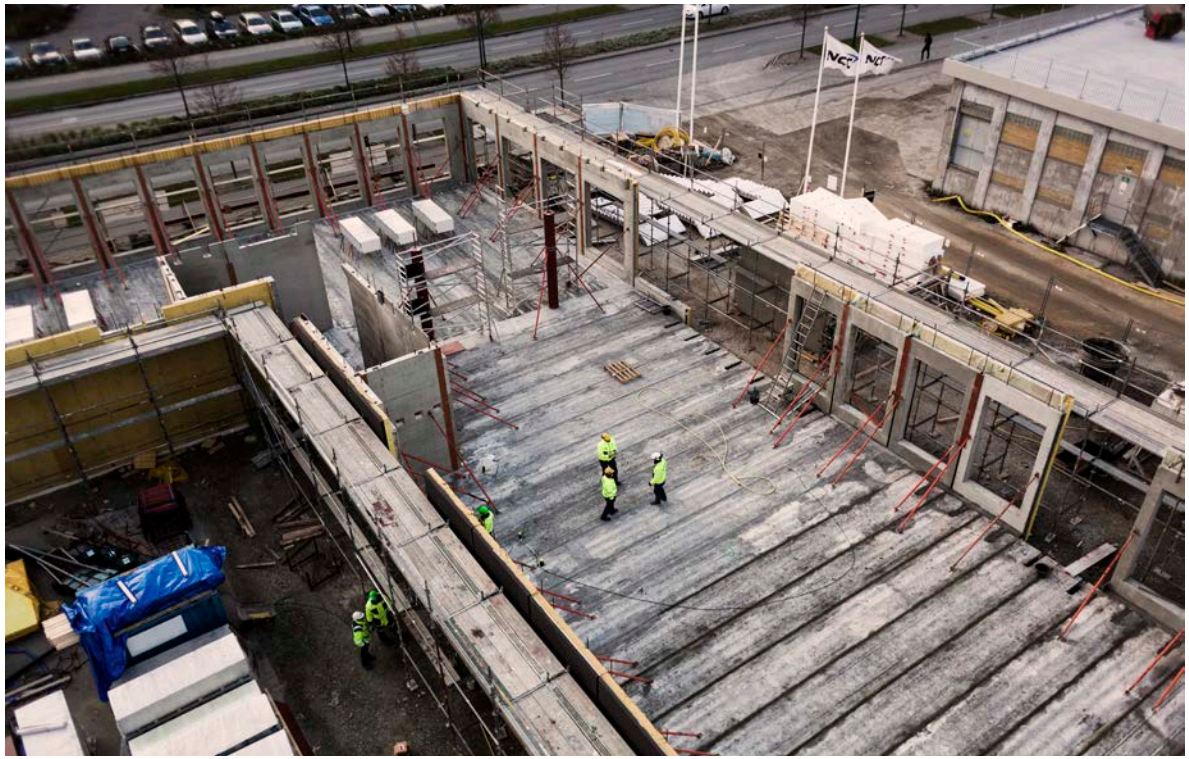
Our approach is focused on transforming traditional construction by setting higher standards for sustainability. Through innovation and the use of eco-friendly materials, we strive to create structures that are not only efficient but also environmentally responsible. Let's work together to build a healthier planet—for you, your children, and the generations to come.

We believe sustainability is more than just a goal—it's a responsibility. By adopting a cradle-to-cradle approach, we ensure that every material we use can be repurposed or recycled, reducing waste and preserving natural resources. This philosophy drives our innovation and reinforces our commitment to building a better tomorrow.



Unsustainability of The Construction Sector

The construction sector is one of the largest contributors to global carbon emissions, **accounting for nearly 40% of annual CO_2 output worldwide**. Traditional building methods often rely on resource-intensive materials and generate significant waste, making the industry a key area for improvement. From high energy consumption during material production to inefficient designs that increase operational emissions, the sector faces immense challenges in aligning with global sustainability goals. Additionally, the end-of-life disposal of construction materials frequently results in landfill overflow, further exacerbating environmental issues. To combat these challenges, innovative solutions like lightweight steel frame construction and cradle-to-cradle practices are essential for reducing waste, improving energy efficiency, and creating a more sustainable future. DESSAU is committed to leading this transformation, promoting environmentally responsible building practices that challenge the unsustainable norms of the industry.



What We Are Doing to Drive Sustainability

At DESSAU, we take proactive steps to address the challenges of sustainability in the construction sector. Through innovation, responsibility, and a commitment to eco-friendly practices, we are rethinking how buildings are designed, constructed, and maintained.

By aligning our work with sustainability goals, we aim to build a future where innovation and environmental responsibility go hand in hand. Together, we can redefine the construction industry for a greener tomorrow.

Our Approach

Cradle-to-Cradle Approach:
We ensure that the materials we use are part of a continuous lifecycle. This minimizes waste and maximizes the potential for recycling and repurposing at the end of a building's lifespan.

Efficient Resource Use:
Our lightweight steel frame construction reduces material consumption while maintaining strength and durability. By optimizing designs, we lower energy use during both production and construction.

Energy-Efficient Solutions:
We incorporate advanced insulation systems and sustainable building materials to improve thermal performance, reduce operational energy needs, and meet high energy standards like Minergie®.

Sustainable Partnerships:
We collaborate with suppliers who share our values, sourcing materials that comply with rigorous environmental standards to ensure a minimal carbon footprint.

2 Advantages.

Building With LGS (Light Gauge Steel) Profiles

Reducing Carbon Footprint
Using lightweight steel offers a transformative solution for the construction industry, enabling a potential 44% reduction in carbon emissions.

Recyclable
Steel is 100% recyclable, making it an eco-friendly building material. Unlike traditional building materials, steel frames require less raw material, and generate less waste during construction.

Designed for dismantling
Our lightweight steel structures are engineered with a cradle-to-cradle approach, making them easy to disassemble and reuse. This ensures minimal waste, promotes recycling, and supports a sustainable lifecycle for every project.

Offsite Construction Advantages

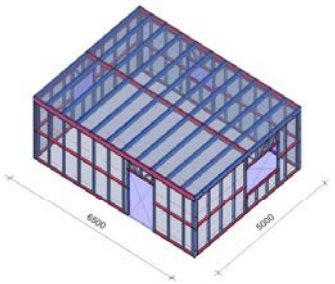
Minimized Waste, Maximized Efficiency
Offsite production ensures precise material use, significantly reducing waste compared to traditional construction methods.

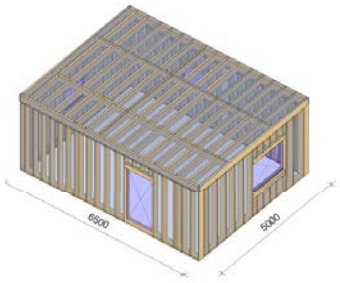
Optimized Logistics
Prefabricated components require fewer trips to the site, lowering transportation emissions and costs.

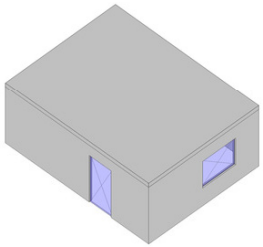
Fast and Reliable
With components pre-assembled offsite, construction time on-site is drastically reduced, allowing for quicker project delivery.

Lightest Construction Solution

Why Choose Steel Frame Construction? Steel frame construction offers unmatched strength, durability, and flexibility. It is lightweight yet incredibly robust, making it ideal for reducing transportation and foundation costs. Steel is also 100% recyclable, supporting sustainable building practices while ensuring long-term structural integrity. Choose steel for faster, smarter, and greener construction.







Light Gauge Steel (LGS)

~25-30 kg/m²

LGS is 2-3 times lighter than wood framing and 8-10 times lighter than concrete structures, making it the most efficient choice for lightweight construction.

Wood Framing

~50-70 kg/m²

Wood framing is 2-3 times heavier than LGS but remains lighter than concrete. While widely used in residential construction, its weight can limit scalability in larger structures compared to steel.

Concrete

~250-300 kg/m²

Concrete is 8-10 times heavier than LGS and 4-5 times heavier than wood framing. While it offers durability and load-bearing capacity, its significant weight increases transportation costs and requires robust foundations.

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Initiative.

XCarb®

At DESSAU, we actively support the XCarb® initiative by aligning our practices with its mission to reduce global CO2 emissions. While we don't produce steel, our commitment lies in promoting sustainable construction practices and adopting a cradle-to-cradle approach. This ensures the materials we use are part of a continuous lifecycle, minimizing waste and lowering carbon footprints across our projects. Sustainability at the Core of Our Vision

Through efficient use of resources, smart design, and environmentally conscious materials, we contribute to creating sustainable buildings for a greener tomorrow. By embracing XCarb®'s values and prioritizing low-carbon solutions, DESSAU takes an active role in supporting the global transition toward carbon neutrality. Together, we can achieve a balance between innovation, sustainability, and responsibility.

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.

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It might surprise you, but traditional reinforced concrete construction actually uses more steel (reinforcement) than steel-frame construction. The cold bending process enhances the performance and load-bearing capacity of steel sections, making steel-frame structures more efficient in terms of material use. Additionally, these structures are environmentally friendly, as they can be easily disassembled and fully recycled at the end of their life cycle.

This approach not only optimizes resource usage but also challenges misconceptions about steel-frame buildings, offering a modern, sustainable alternative to conventional methods.

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4 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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Thank you for your attention.

DESSAU™

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