

Diab

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ALWAYS AT THE  
CORE OF YOUR  
SOLUTION

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# MAKING YOUR PRODUCTS MORE COMPETITIVE AND SUSTAINABLE

With the broadest range of structural core materials, decades of experience and a global presence, we are dedicated to making your products more competitive, circular and sustainable.

## TAKE ADVANTAGE OF OUR KNOWLEDGE

We help you make your products and your manufacturing process more competitive and sustainable by offering industry-leading competence together with the broadest range of stronger, lighter and recyclable structural core materials.

You can safely put your trust in our vast knowledge and support as your reliable partner. With 70 years of knowledge, a global presence for local needs and an optimal supply chain, we are your trusted and committed partner from start to finish.

## A SOLUTION FOR EVERY APPLICATION

Our products and solutions have been used in a wide range of industries for decades and are all certified according to relevant industry standards. Today our range of high-performance core materials can be found in applications all over the world, in segments such as marine, aerospace, wind energy and industry, including transportation.

And with our global manufacturing, sales, technical support and engineering presence, we can assure you of security of supply, cost-effectiveness and local support for many years to come. Offering industry-leading competence together with stronger, lighter and smarter materials, we are always at the core of your solution.

## SUSTAINABILITY IS IN OUR CORE

Today, sustainability is not an option. It is mandatory. And at Diab we work hard to make a difference on the big issues that matter to us all.

We are strongly committed to making your solution more sustainable in every way. With our structural core materials, you can boost energy efficiency, reduce emissions, conserve natural resources and create a longer life cycle for your product.

We have also made sustainability one of our top business priorities. For instance, we are the first company in the world in the field of composite materials that has set science-based targets approved by the SBTi (Science-Based Targets initiative). That means we have a documented plan for reducing the carbon footprint in line with what is defined in the Paris agreement to keep the planet below 1.5 degrees overheating.

## OUR CIRCULAR BUSINESS MODEL

The materials you buy affect the applications you make and sell. We are implementing a circular business model to start a chain effect. Instead of a linear model where materials travel through the system in one direction, it could be circular both in sales and sourcing. For example, if we can reuse post-industrial plastic waste from our own and customers' processes, we can reduce carbon footprint and waste handling costs. The effort to reduce our carbon footprint goes beyond the single company. Supporting our suppliers in lowering their emissions also benefits our products which, in turn, benefits our customers. It's a chain effect that works in both directions.



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# WHATEVER YOUR CHALLENGE, WE HAVE THE RIGHT CORE MATERIAL

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Our excellent track record proves the quality and reliability of our materials and solutions, providing security and proof of performance that few others can offer. And as long-time experts in a wide array of structural core materials, we offer you a high service level and help make your manufacturing process more effective and sustainable. With our circular business model, in-depth knowledge of construction and a broad range of different core materials, we are ready to stand by you in every challenge you face.



## WIND ENERGY

Using advanced composite materials, you can reduce the LCoE (levelised cost of energy), increase the reliability of wind turbines reliability and keep them working efficiently for 25 years or more. Our core materials will confer very high stiffness, strength and fatigue resistance on components while lowering their weight. We are experts in sandwich composite solutions and have extensive experience of working with the wind industry. We have a set of core materials, finishings and type kits specifically tailored to each application. We also know the importance of quickly and effectively zeroing in on the right solution.



## MARINE

The keys to success in the marine industry are maximising performance while reducing weight, cost and environmental impact. Our core materials offer the highest strength-to-weight ratios for all marine applications, which enable higher speed, longer range, greater payload capacity and reduced power demand. Their excellent fatigue and slamming properties also make them particularly suitable for special craft that often operate in high-sea conditions. We offer three high-quality product lines for marine applications.



## INDUSTRY

Our wide range of core materials provides solutions for multiple applications across industry, such as transportation, subsea, sports equipment, cryogenic applications and construction. Our high-performance core materials provide light weight, high strength and excellent thermal properties, some even enduring cryogenic temperatures. Their excellent buoyancy makes them perfect for subsea applications, and being nonorganic means they have a very long lifetime not affected by water or moisture.

In transportation our core materials are used in trains, buses, trucks and automotive, where they enable lighter sandwich designs that result in decreased fuel consumption, higher payloads and longer range – all with a positive impact on the environment. Our lighter and stronger core materials are also playing an important part in the development of electric vehicles.



## AEROSPACE

One of the crucial challenges in aircraft design is making a structure as light as possible without sacrificing strength. Aerospace quality requirements leave no room for error, making the task even more difficult. Our core materials offer high strength-to-weight ratios, good isolation capacities and low environmental impact for all aerospace applications, together with a more efficient manufacturing process with reduced costs for your parts production. That allows you to reduce weight and fuel consumption while increasing range and/or payload. We offer several high-quality product lines for aerospace applications.





# THE BROADEST RANGE OF CORE MATERIALS

Diab provides a wide range of structural core materials for optimised sandwich design. Each grade provides specific characteristics suitable in various conditions. Always contact our Sales & Technical team to ensure the right selection for your application.

## **DIVINYCELL - PVC**

Our series of high-performance PVC core materials with excellent strength-to-weight properties. An all-purpose series used in multiple industries and available in a wide density range suitable for different manufacturing processes, e.g. infusion and prepreg.

Divinycell H offers excellent mechanical properties and low weight. It is widely used and has a proven track record in virtually every application area employing sandwich composites, including wind, marine, industry, transport and private jets. The PVC series comes in grades H, HP, HM, HT and HCP with different features suitable for many applications, and each grade has a variety of densities.

Divinycell MC is the innovative structural core with best in class mechanical properties and low weight. The unique microcell structure renders substantial weight reduction of the laminate, thanks to lower core density in combination with exceptional low level of resin uptake.

## **DIVINYCELL - PET**

Our series of thermoplastic, recyclable PET core materials are suitable for many applications and industries, such as wind energy, transport and construction. The PET series is available in different grades and densities.

Our updated range of PET includes Divinycell PR, a sandwich core made of up to 45% post-consumer PET, and additional post-industry recycled PET to boost performance. A true circular sustainable product to meet environmental needs and commitments. Divinycell PL, a high-performance PET core material that is recyclable and based on post-industry recycled PET. Divinycell PA60 is our low density PET sandwich core ideal for automotive and mobility applications. The PET series is compatible with most resin systems and capable of elevated temperature processing.

## **DIVINYCELL - PES**

Our recyclable PES-based sandwich core material, with excellent FST properties and high-temperature processing capabilities, suitable for commercial aircrafts interiors. Divinycell F is a core material series specifically developed for aircraft interiors, seating and food trays. It improves lifetime cost while decreasing environmental impact. It has excellent FST properties and meets the US and European regulatory requirements for commercial aircraft interiors. Available in many different densities.

## **DIVINYCELL - PEI**

Our recyclable PEI foam core material excellent for structures, radomes and interior components.

Divinycell U is a recyclable and thermoformable prepreg compatible sandwich core. The foam is a polyetherimide based thermoplastic foam with excellent dielectric properties. The material is compatible with most aerospace and defense composite manufacturing processes at high temperature.





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# RESOURCES TO ENHANCE YOUR PRODUCT

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Alongside the broadest range of core materials, we also offer you a comprehensive array of added value products, such as kits with pre-cut parts and surface finishing options for form and flow.

## **CHOOSING THE OPTIMAL FINISHING FOR A COMPETITIVE EDGE**

Finishing refers to the machining of structural core materials. You can choose from a wide range of cuts, grooves and perforations in different variations each serving a specific purpose for the core to adopt to curvature, or for air evacuation & resin distribution in vacuum assisted manufacturing process. With our long experience in composite design and manufacturing methods, we can recommend the finishing suitable for each purpose.

## **KITS TO BOOST YOUR PERFORMANCE**

A kit consists of pre-cut parts that are shaped as necessary and then numbered to fit exactly into their designated places in the mould. By eliminating the on-site shaping and cutting of sheets, you can reduce build times, save labour and material costs, and reduce waste. In addition the easy assembly and exact fit in the mould, mean you can consistently achieve a high quality in less time.

The kit can consist of everything from flat sheets only to precise 3D shapes made with CNC routing. The design is based on your requirements on component weight, cost and quality level, as well as the geometry and manufacturing process selected.

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# DIAB APPLICATION CENTER

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Diab Application Center is our powerful team with engineers, product specialists, and process specialists ready to team up with you to realize the total value of composites.

## **PRODUCT SUPPORT**

We are here to support you with selecting the suitable core material for your application, advice on finishing the best fit for purpose, and essential advice on different manufacturing processes. Product support always comes for free with the purchase of our products.

## **COMPOSITE CONSULTING GROUP (CCG)**

Our experience in sandwich core materials and related manufacturing processes is well documented. CCG provides specialized composite technology and engineering services to improve your product further. With broad competence within everything from design and structural engineering to process optimization - including flow modeling for closed molding, tooling design, and infusion training - we ensure that you can realize the total value of composite designs.

## **KIT ENGINEERING AND PRODUCTION**

Diab uses a well-defined kit process that enables us to provide the most competitive offering, top service, and quick turn-around times. Whether the kit consists of flat sheets or 3D machined parts, we look at surface requirements, tolerances, weight limitations, and it all affect the approach we take for each kit design.

## **COMPOSITE PART & PROTOTYPE PRODUCTION**

Prototyping and short production runs have high investment costs and can limit other daily operational activities. Our experienced engineers and fabricators can quickly bring your concepts to reality, whether you are in a start-up or existing business with a lack of resources or equipment.

## **TESTING**

Understanding the material and its behavior in a variety of environmental conditions is key to optimized design. Let us help you characterize your composite solution, core materials, and sandwich structures with our own calibrated testing equipment and network of authorized test labs for exotic test methods.

# DIAB AT A GLANCE

- SALES UNITS
- DIAB'S MANUFACTURING PLANTS
- MANUFACTURING PARTNER
- HEAD OFFICE

**800**  
COWORKERS



### WORLDWIDE SUPPLY AND SUPPORT

Ensuring security of supply, cost efficiency, flexibility, and local support, Diab combines a global manufacturing, sales, and engineering presence with local know-how. We follow our customers and anticipate their needs, positioning ourselves in locations to best support them. Our seven manufacturing sites and fourteen sales companies in strategic locations around the world offer our full range of materials and services.

**FOUNDED 1950  
IN SWEDEN**



**7**  
MANUFACTURING  
SITES

**14**  
SALES  
COMPANIES

**40**  
DISTRIBUTORS

### OUR FOCUS AREAS:



WIND



MARINE



INDUSTRY



AEROSPACE

Take advantage of  
our knowledge!



At [www.diabgroup.com](http://www.diabgroup.com) you can get exclusive access to our expertise via MyDiab. And with our interactive Core Selection Guide it's easy to find the best core for your application.



Member of UN Global Compact  
Approved CO<sub>2</sub>-reduction targets from  
the Science Based Targets Initiative



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Diab is a world leader in sandwich composite solutions that make customers' products stronger, lighter and smarter. Diab provides a range of core materials, cost-effective kits and finishings, along with in-depth knowledge on composites. Diab also provides engineering services for composite technology through CCG (Composites Consulting Group). Diab is a participant in the UN Global Compact.