

SUTHERLAND



COBRA DESIGN & DEVELOPMENT CASE STUDY

Sutherland Furniture Carbon Chaise



CASE STUDY: Sutherland Furniture Carbon Chaise

COBRA is collaborating with American luxury furniture design house, Sutherland Furniture, to transform a traditional design into a statement, combining modern minimalism with advanced materials, whilst retaining the elegance and comfort long associated with Sutherland designs.

Sutherland Furniture was founded in 1991 by David Sutherland, and through partnerships with leading designers, has become a leader in luxury outdoor furniture. The company uses only the highest quality materials and works with manufacturers around the world who have strong sustainable practices: two reasons why COBRA was a natural fit when the design house was looking for a company to help design and manufacture the first in a range of carbon fibre furniture.

COBRA's Design and Development team is renowned for its innovative approach to new projects, having worked on many high performance and luxury items such as automotive components and watersports equipment. The team brings together structural engineers, product designers, efficient material sourcing, and market-leading composite manufacturing techniques to develop solutions for customers who are looking for something a little different. Working with the chaise designer, Jean-Pierre Geelen, Sutherland Furniture and the material suppliers, COBRA led the project through the development period, and is now finalising the specification and design ready for production.

The chaise structural frame is full carbon, with the waterproof textile net made by COBRA's accessory company, DSM.



Prototyping the Frame

The frame prototypes – one with a gloss and one with a matt finish – have been made from a 750g carbon triaxial fabric, 80g carbon unidirectional, with 204g carbon twill for the surface finish, hand laid with a vacuum applied to consolidate the laminate. The part was cured at ambient temperature, with an 80°C post cure.



The frame is made of two hollow shells: the bottom shell is structural, providing the strength to take a person's weight, with multiple inserts to lock-in the textile net; the top shell aesthetically completes the frame once the net is in place. Based on their extensive experience and ongoing research into new production techniques, COBRA proposed an innovative magnetic solution to join the two shells.

COBRA's ability to provide a unique one-stop service to Sutherland Furniture - taking the project from concept through to production, the ability to provide multiple components (not only the composite part), and the depth of knowledge to successfully bring together multiple materials into one solution – has given the design house the confidence to pursue its next step of developing a full range of carbon and stainless steel products for its discerning customer base.

“We are very excited about the launch of this chaise. It is such a technically advanced mix of materials and developing a product with carbon is something very new to us. We have really appreciated the guidance of, and collaboration with, the COBRA team.”

Stephen McSkimming, Sutherland Furniture





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