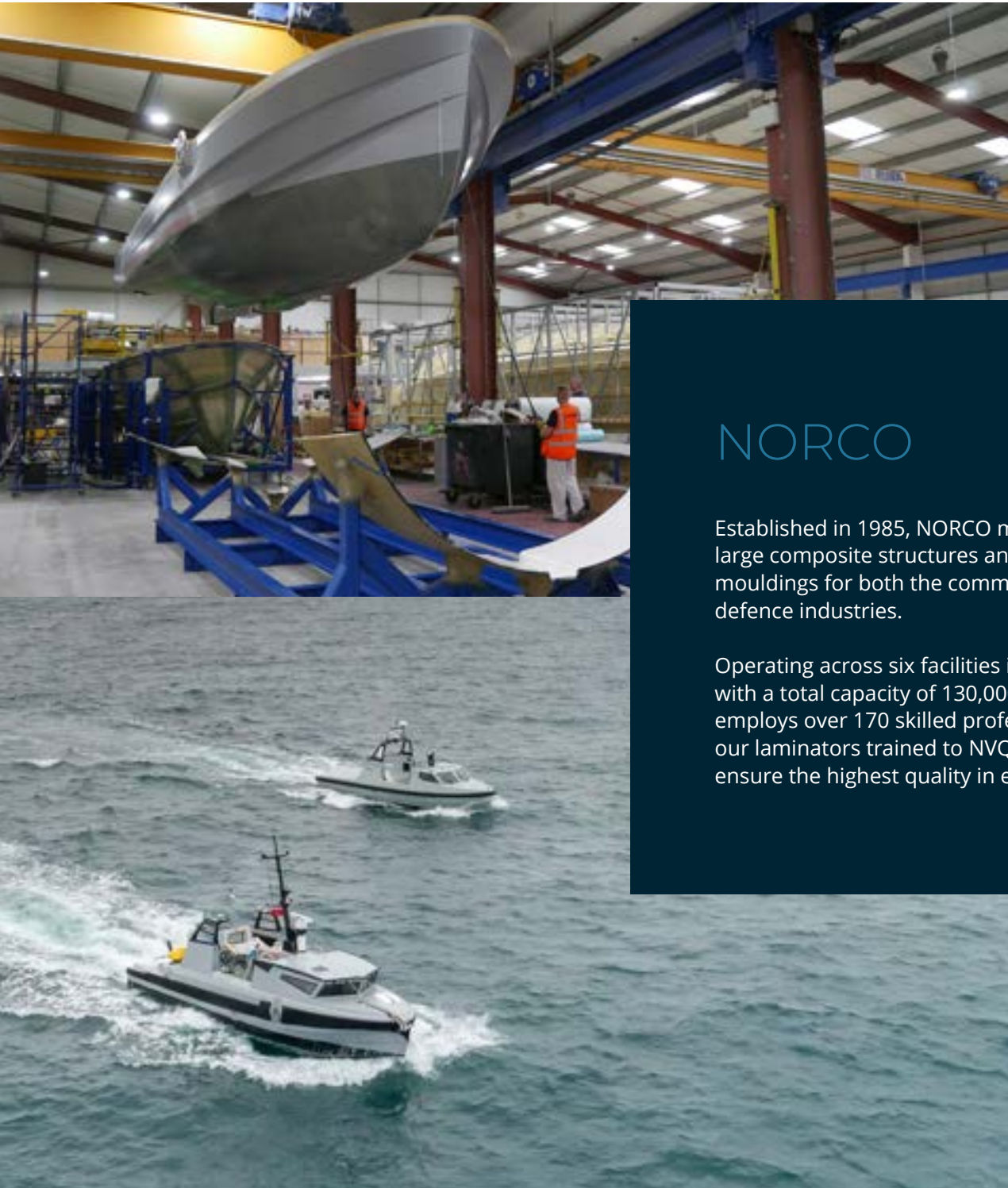


NORCO.CO.UK



LEADING
MANUFACTURERS OF
LARGE COMPOSITES
STRUCTURES
& GRP MOULDINGS

 **NORCO**



NORCO

Established in 1985, NORCO manufacture large composite structures and GRP mouldings for both the commercial and defence industries.

Operating across six facilities in Dorset - UK, with a total capacity of 130,000 sq ft, NORCO employs over 170 skilled professionals. With our laminators trained to NVQ standards to ensure the highest quality in every project.

**Manufacture of 12m
Unmanned Surface
Vessels for L3Harris and
Thales.**

**NORCO's facilities
continue expanding to
meet customers' needs.**



THROUGH THE YEARS

NORCO was formed in 1985, primarily to provide pattern work and fabricate plastic tanks. The business quickly became the chosen mould maker for the local boat builder Sunseeker.

In 1998, the company purchased its own buildings and, in 1999, developed its own training facilities and NVQ course. A dedicated Composites Centre was opened in 2013 and this was extended by 10,000sqft in the first half of 2018.

NORCO has since further invested in facility and capability, with our dedicated Defence and Aerospace site opening in 2020 and further expanding in 2024, a testament to our team's drive to be the industry leaders in large composite structures.

To date, we have worked on large composite structures and supplied tooling for many sectors, including the defence, security, and communications industries.



NORCO's six facilities offer space and flexibility to meet the broad requirements of their customers.

FACILITIES

NORCO operates from six sites in Dorset, United Kingdom. Five sites are located in the same trading estate and the other site is situated in a secure park with perimeter fencing and a 24/7 manned security gatehouse.

The total factory areas amount to circa 130,000 sqft.

97,800 sqft. yard space is available for the storage of tooling and potentially the development of a workshop/office space.

- Unit 43 - Large Composite Structures
- Site D - Precision Composites
- Unit 33 - Training Centre & Marine
- Winfrith - Defence & Aero Composites
- CNC Centre
- Spray Shop



With an in-house CNC Centre and Spray Shop, NORCO offers a complete one-stop capability with reduce reliance on third-party supply chain.



CAPABILITIES

NORCO provide comprehensive manufacturing from large structures to small components, offering a complete solution for composite and GRP needs across our advanced facilities.



PROJECT ENGINEERING



MOULDS & TOOLS



IN-HOUSE CNC CENTRE



RESIN INFUSION



PREPREG MANUFACTURING



SMALL CARBON COMPONENTS



HAND LAMINATION



VOLUME PRODUCTION



PAINTING AND FINISHING



FULLY EQUIPPED

AUTOCLAVES	<ul style="list-style-type: none"> ø 2.5m x 5.8m ø 1.3m x 3.8m
CURING OVENS (ALL MAX 120°C)	<ul style="list-style-type: none"> 7m x 7m x 4m 9m x 5m x 2m 5.5m x 5.5m x 3.5m
SPRAY BOOTHS (ALL MAX 80°C)	(x2) 10m x 6m
5 AXIS CNC M/C	<ul style="list-style-type: none"> 12m x 8m x 4m 3.5m x 1.5m x 1.2m
KIT CUTTING	<ul style="list-style-type: none"> Bulmer cutting machines (x2) 3m x 1.5m Pathfinder cutting machines (x2) 3m x 1.5m
INSPECTION	Leica AT960 laser tracker & scanner + Polyworks software
LIFTING CAPACITY	Up to 50 tonnes in 14m crane bay.

CUSTOMERS

NORCO have achieved official approval status with many significant customers in key market sectors.

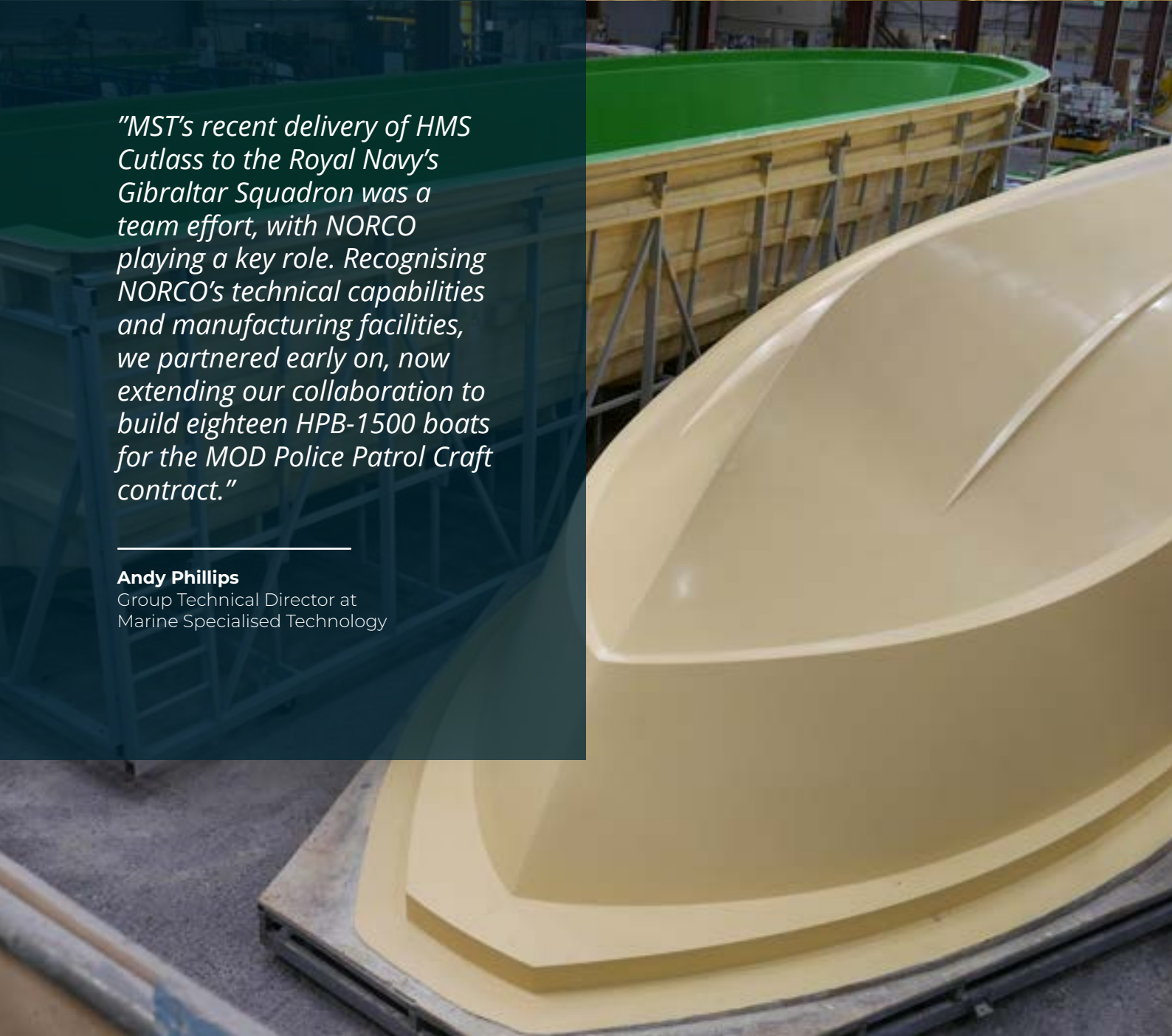




"MST's recent delivery of HMS Cutlass to the Royal Navy's Gibraltar Squadron was a team effort, with NORCO playing a key role. Recognising NORCO's technical capabilities and manufacturing facilities, we partnered early on, now extending our collaboration to build eighteen HPB-1500 boats for the MOD Police Patrol Craft contract."

Andy Phillips

Group Technical Director at
Marine Specialised Technology



CERTIFICATIONS AND APPROVALS

Certification to ISO9001 and AS9100 ensures traceability of materials, calibration of equipment and configuration control. NORCO's approvals ensure the products manufactured achieve their design intent.



MEMBERSHIPS

NORCO maintain memberships in specific associations to stay updated on the latest industry trends and developments, and to contribute to meaningful discussions that shape the future of composite manufacturing.





SEA CLASS WORKBOATS

NORCO worked in partnership with Atlas Elektronik UK and the UK MOD to produce the new range of SEA Class workboats. This was in response to industry demand for safe, reliable, and flexible boats that could be rapidly reconfigured for a number of different naval operational roles.

The SEA Class workboats ranged in size from 11 to 15 metres, all of which were fully composite construction of glass multiaxial reinforcements in a sandwich construction using a closed cell foam core.

Each hull and deck were resin infused as a single piece using a semi-automated vacuum infusion process, which had been developed by NORCO specifically for this project.

MAST RAISING EQUIPMENT

NORCO work in collaboration with MacTaggart Scott to create mast raising equipment for submarines, using the innovative Quiet Modular Mast (QMM) system. The QMM, vital for operations like radar and communications, is designed for minimal drag and operates effectively at any speed. NORCO's advanced composite materials, including carbon and glass fibre, ensure the system's low weight, easy installation, and robust performance, solidifying the QMM's reputation as a trusted solution in modern submarine technology.



NAVAL RADOMES

NORCO manufactured Radomes and Radome Support Structures (RSS) for naval vessels' radar systems, specifically for Airbus Secure Communications. Due to the Radomes' high placement on ships, weight was crucial, necessitating the RSS to be both stiff and lightweight. NORCO utilised pre-preg carbon fibre with a Nomex core and Tufnol hardpoints for the RSS, and a Nomex core with glass pre-preg skins for the Radome to satisfy dielectric requirements.

Existing mould tools were refurbished and modified for efficient manufacturing, including a 360-degree rotation feature for the Radome tool. All pre-preg materials were CNC kit cut to ensure precise overlaps and joins. In collaboration with Airbus Secure Communications, NORCO successfully delivered this project, reinforcing its role in the Defence and Communications sector.





MILITARY POLICE PATROL VESSELS

Working in partnership with Marine Specialised Technology (MST), NORCO are manufacturing the hull, wheelhouse, and internal structure for 18 Ministry of Defence Police Patrol Vessels. This collaboration showcases NORCO's exceptional capabilities in composite manufacturing. Drawing on extensive expertise in the marine and defence sectors, NORCO are delivering high-quality components, fully prepared for fit-out and testing by the MST Group.





GAS TURBINE COCOONS

NORCO collaborated with Siemens Energy to create IP55 rated GRP cocoons for gas turbine engine storage and transport, providing a dry and impact-resistant solution.

This innovation replaces the previous heavy and less protective steel containers, utilising resin infusion for a lightweight, durable design with Kevlar reinforcement.

Successfully meeting rigorous standards, the project underscores NORCO's expertise in composite manufacturing, strengthening its ongoing relationship with Siemens Energy and demonstrating a commitment to quality and sustainable solutions.

The Clamshell Cocoons are operational, meeting high standards and passing tests for dust and moisture protection to secure an IP55 rating.



A key challenge was the strict weight control required to ensure optimal performance and efficiency of the USV.



UNMANNED SURFACE VEHICLE

NORCO was selected by Thales and L3Harris, ASV (UK) to produce mould tools and prototype shells for a 12-metre Unmanned Surface Vehicle (USV). This USV is designed to carry Thales T-SAS towed sonar and SAAB's Remote Operating Vehicle (ROV).

This project showcases NORCO's expertise in manufacturing high-quality composite structures for advanced maritime applications.

FLIGHT SIMULATORS

NORCO have been collaborating with leading flight simulator manufacturer Collins Aerospace (Now an RTX subsidiary) for over a decade on a variety of different flight simulator platforms. With a strong focus on collaborative design for manufacture in composites, NORCO have assisted in the development of reliable cost-effective solutions.

In 2022, NORCO proved its operational efficiency and commitment to customer service by delivering 14 flight simulators on time, achieving a 100% on-time delivery record.





HIGH SPEED PATROL CRAFTS

NORCO was selected by Marine Specialised Technology (MST) as the main composite supplier for a £9.9 million UK Ministry of Defence contract to construct two 19m vessels, replacing the Gibraltar Squadron Fast Patrol Crafts.

The programme took 18 months and NORCO produced the tooling, hull, deck, and wheelhouse for both vessels, contributing to its defence contracts portfolio and demonstrating its ability to meet MoD quality standards.

The new vessels replaced the Scimitar-Class vessels HMS SABRE and HMS SCIMITAR, as part of the Royal Navy's modernisation programme, ensuring the security of British Gibraltar Territorial Waters.



EVTOL AIRCRAFT FUSELAGE

NORCO are playing a crucial role in the development of Skyfly's Axe aircraft by designing and manufacturing the fuselage patterns and composite tooling in-house. To validate the concept and assess the design's ergonomics, we conducted a test resin infusion and release. The fuselage was laminated and infused as a single piece, forming a test article to fine tune the process, ready to manufacture the first flying part.

Skyfly Technologies Ltd specialises in the design, construction, and sale of electric vertical take-off and landing aircraft (eVTOL), including passenger and hybrid-electric VTOL models.

By engaging in the project at such an early stage, NORCO is able to provide invaluable time-saving and lightweight solutions that are critical for the successful development of the aircraft.

UNMANNED AERIAL VEHICLES

NORCO collaborated with Facebook to create solar-powered UAVs designed to extend internet access to remote areas. Employing advanced manufacturing techniques and material selection, NORCO designed the direct tooling and produced the first prototype within nine months, followed by seven more aircraft with a 42m wingspan. Leveraging expertise in out-of-autoclave composite manufacturing, they met rigorous weight specifications without the need for expensive autoclave processing, demonstrating their capability in producing lightweight, high-strength composite structures.

Maximum weight reduction was the key requirement for the 42m solar powered aircraft, weighing just 125kgs without batteries and motors.





MOTORSPORTS TELEMETRY TABLES

NORCO has created an innovative telemetry table for motorsport teams, emphasising speed, customisation, and ergonomics. This modular and portable table offers a quick, adaptable, and comfortable setup for data, communications, and computing needs, ideal for both garages and pit walls. Its design accommodates fast setups, breakdowns, and is sea freight friendly for global events.

The project highlights NORCO's ability to efficiently deliver innovative solutions tailored to new industry needs.



EVTOL CONCEPT AIRCRAFT

NORCO successfully manufactured a full-scale airframe mock-up of an eVTOL aircraft, demonstrating their composite design and manufacturing expertise aimed at advancing aviation technology.

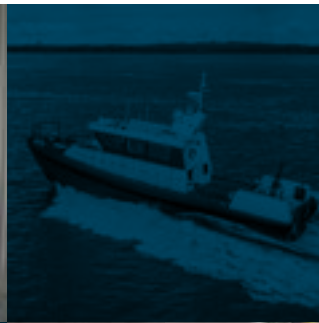
The project encompassed wing and fuselage sections for testing aerodynamics and electric propulsion. Utilising carbon and glass fibre reinforcements, the airframe featured six rotors for lift and propulsion, with practical tests conducted on a vehicle test rig.

This effort highlighted NORCO's commitment to quality and efficiency in composite manufacturing, validating structures for potential large-scale production and showcasing their expertise in contributing to the aviation industry's future.



Validated structure with cost-effective tools and methods, proving the use of composites at large scale for production.

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**PROUDLY
SUPPORTING
THOSE WHO
SERVE.**



 **NORCO**