

MAXIMISING COMPOSITE PERFORMANCE







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DCG - THE CONCEPT

A large number of defence equipment projects with complex scopes and a **significant potential for composite materials** are expected in the next decade.

Such projects require extensive capacity in the pre-tender and tender phases and may require **multiple capabilities and disciplines not available from a single supplier**.

In response to the forecast demand increase, and recognising the specific requirements of such defence programs, **Defence Composites Group** creates a unique new collaboration between leading composites industry specialists.

Defence Composites Group partners are proud to have supported the Royal Dutch Navy, Royal Belgian Navy, Royal Danish Navy, Qinetic, TNO and NLR with composite projects in the past and look forward to expanding their presence in the defence field in the future.



DANISH MINISTRY OF DEFENCE ACQUISITION AND LOGISTICS ORGANISATION



Koninklijke Marine

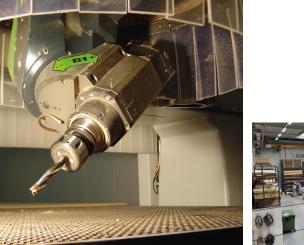




2MV - ENKHUIZEN









2MV Composites specialises in the development and manufacture of both one-off custom and series production composite projects. 2MV has built long term relationships with its customers across the marine, sporting goods and industrial composites sectors supplying a broad range of hand laminated, infused and prepreg components to the most exacting quality standards. 2MV focus heavily on the initial customer interaction, developing an enhanced understanding of each project's unique requirements to select the optimum material and processing solutions. From tooling to final assembly and final finishing, all production activities are managed in-house at 2MV's Lloyds approved manufacturing facility.





HOLLAND COMPOSITES - LELYSTAD





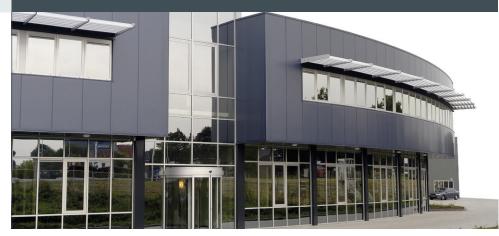


Founded in 1992, Holland Composites is a composite manufacturer able to deliver projects at large scale. From high-quality single items to series-based solutions, Holland Composites can support the largest defence composites programs from its 4500m2 production facility. Holland Composites employs state-of-the-art manufacturing technology including CNC machining, automated fibre cutting, curing ovens, autoclaves and 3D printing to deliver total composite solutions.

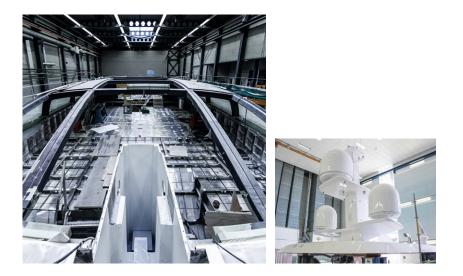




RONDAL - VOLLENHOVE







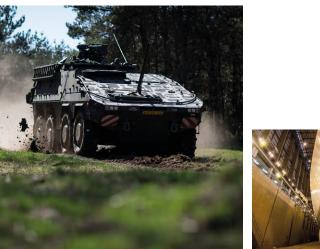
Over the past 25 years, Rondal has evolved into a leading **carbon fibre composite specialist**. Composite spars, winches, hatches and fully integrated systems combine not only exceptional composite craftsmanship but also a huge in-house engineering expertise. With new modular ovens up to 92 x 11 x 4.5m and spray booths up to 60 x 11m, Rondal delivers impressive processing and finishing capability for the largest composite structures.



SOLICO ENGINEERING - OOSTERHOUT









Since 1989, Solico Engineering has provided smart, independent composite engineering for a massive range of applications across the Defence, Maritime, Architectural and Industrial sectors. Now a team of 20 engineers, Solico has a **huge experience in defence composite projects** including submarines, surface vessels and land forces equipment. Solico's in-house test lab also offers full-service testing of materials and components throughout all stages of a composite project

DCG - COMPOSITE PROCESS EXPERTISE

DCG offers large-scale composite engineering and production resources and the ability to select and implement the most suitable process for each project from a full spectrum of composite manufacturing technologies. DCG technicians are experts in the following processes:

- Hand lay-up
- Vacuum bagging
- Vacuum infusion
- RTM
- SPRINT™
- Prepreg
- Structural bonding







DCG - FACILITIES AND EQUIPMENT

DCG operates 3 world-class composite production facilities and a fully equipped materials testing laboratory. DCG is fully equipped to support the largest defence composites projects.

- 1 x 30m Pre-preg production line
- 4 x CNC fibre cutting tables
- Resin injection machines and vacuum pumps
- 2 x heated hydraulic presses 5 x 2 m
- 2 x autoclaves 6.5 x 2.2 m and 9.5 x 1.2 m
- 8 x (modular) ovens up to 78 x 11 x 4.5 m (2024: 92 x 11 x 4.5 m)
- 2 x 5 axis CNC milling machine
- Waterjet cutting machine 8 x 2 m
- 2 x spray booths up to 60 x 11 m
- Testing laboratory for materials and components
- 100 kN Instron 3382 universal testing machine with wide range of fixtures to perform mechanical/QA tests
- Creep test bench
- Lenton AF 11/6B incineration oven
- Mettler Toledo DSC12E Differential Scanning Calorimetry



hal 2





- 15000 M² PRODUCTION AREA
- 1800 M² OFFICE SPACE
- ₩ 120 FULL TIME EQUIVALENT PRODUCTION HEADCOUNT

autoclaaf

60 FULL TIME EQUIVALENT ENGINEERING HEADCOUNT

DCG - QUALITY & APPROVALS

DCG maintains composites specific quality systems and approvals. Secure environments and screened employees are in place for all defence related projects.

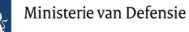
ISO 9001:2015

ABDO 2019

- Up to TBB3
- Up to clearance level B

WORKSHOP APPROVALS

- Lloyd's
- DNV-GL
- TÜV
- RINA





DCG - THE ADVANTAGE

By combining the knowledge, expertise and capacity of 4 leading Netherlands-based composites specialists, Defence Composites Group offers the defence industry a powerful set of benefits.

- Timely and expert response to any questions from the industry
- Specific composite design approach for defence applications
- Absolute quality in composite manufacturing
- Coordinated quality control methodology and documentation
- Streamlined procurement process
- Competitive price and quality proposition



Rapid Response

Defence Specific Design





Paperwork/Document Control



Streamlined Process



Cash Saving

Defence Composites Group

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