NAVAL SOLUTIONS

 $N \cdot V \cdot L$

NAVAL SOLUTIONS

TABLE OF CONTENTS

Our Vision	4
Our Mission	5
Our Milestones	6
Our Shipyards and International Operations	8

About Us	9
Peene-Werft	10
Blohm+Voss	13
Norderwerft	14
Neue Jadewerft	17

Making the Difference

Quality Management	18
System Integration	19
Transfer of Knowledge and Technology	19

. 18

NVL Naval Vessels21Frigates22Corvettes25Offshore Patrol Vessels26Fast Patrol Boats29

Logistic Support Ships	
Mine Countermeasure Vessels	
NVL Coast Guard Vessels	
	00

Offshore Patrol Vessels	38
Fast Patrol Boats	39

NVL Services	40
--------------	----

October 2021

OUR VISION

"WE STRIVE TO BE THE FIRST PORT OF CALL FOR NAVIES AND MARITIME CUSTOMERS ACROSS ALL THE SEVEN SEAS."

OUR MISSION KEEPING YOU MISSION-READY

At NVL Group, we consistently provide tailored, smart and cost-effective naval solutions, keeping navies and maritime customers worldwide mission-ready.

We passionately focus on each project and our customers. Our experienced and qualified teams work closely together across our shipyards, exceeding customer expectations by listening carefully to their ideas, understanding their specific requirements, and delivering high-quality new build vessels as well as comprehensive services throughout the entire life cycle of their fleets. We work in trusted partnerships with our customers, providing infrastructure support where needed, and transfer our knowledge and technology to customers around the globe.

As a group of renowned shipyards based on outstanding German engineering and craftsmanship, we take pride in our heritage and continuously strive to remain pioneers of innovative solutions while combining product quality and affordability. We value our employees and take responsibility for the ecological and economical sustainability and the efficient use of resources of our planet – because we care!

Outstanding people with experience and courage, trust, performance and innovation build our DNA – the DNA of shipbuilding.

A REPUTATION BASED ON SUCCESS **OUR MILESTONES**

OUR HERITAGE

We take pride in our heritage and continuously strive to remain pioneers of innovative solutions while combining product quality and affordability. Since our beginnings in the late 1870s, we have launched more than 1,000 naval vessels and coast guard vessels at our shipyards and have built and repaired ships for both the German Navy and fleets in over 50 countries. The timeline below provides a brief selection of vessels completed at our new build shipyards Blohm+Voss (Hamburg) and Peene-Werft (Wolgast), as well as our heritage shipyards of Fr. Lürssen Werft (Bremen), which today is dedicated solely to yachts.

Fr. Lürssen Werft, Founded in 1875

1957

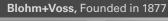
Jaguar class

Patrol boats





S1 Speedboat





1912 SMS GOEBEN Battlecruiser

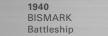
.

1957

vessels

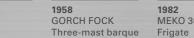






1964

Iltis class



1972

Tiger class



Missile speedboats Gepard class

1982

143A

1981

Fast-attack crafts



1981 F122 Frigates

1992

MJ332

vessels



Mine countermeasure Fast patrol boats

1998

FPB 57

Kiliç class

1992

Hydra class

Frigates

Bremen class

Frankenthal class



MEKO 200 HN Frigates



2002

BERLIN and

EGV type 702

FRANKFURT A.M.

Naval support vessels



2008

F124

Frigates

Corvettes

K130 (boats 1-5)

Brandenburg class



Braunschweig class Darussalam class

2019 F125 Baden-Württemberg class, Frigates



2010

OPV80

vessels

Offshore patrol



TS60 Coastal patrol boat



1969 Kondor class, Mine Parchim class Torpedo speedboats countermeasure vessels



Sassnitz class Corvettes



2012 Multipurpose coastal BONN Fast attack crafts patrol boats



2013 EGV type 702 Naval support vessel boats

2016 OPB40 Offshore patrol





Page 6 • Our Milestones

- Standy

Krake class, Mine

countermeasure

OUR FUTURE

As we strive towards the future, we continue to build reliable naval vessels for customers around the globe. We take pride in our high quality standards and working together as a team with our customers and between our shipyards for best results. This is a selection of the vessels that are currently under construction within NVL Group.

Whatever the requirement or the budget, we remain flexible and provide tailored naval solutions from a single source. The breadth of our expertise is demonstrated by our portfolio, ranging from fast patrol boats and offshore patrol vessels to corvettes, frigates, mine countermeasure vessels and logistic support ships.







SEA 1180 Arafura class Offshore patrol vessels Under construction



MMPV90 Corvettes Under construction



MBV 707 Fleet tankers Under construction



F126 Frigates (as subcontractor) Under construction



OUR SHIPYARDS AND INTERNATIONAL OPERATIONS

Bremen, Germany NVL Headquarters NVL Services

Wilhelmshaven, Germany Neue Jadewerft Hamburg, Germany Blohm+Voss Norderwerft

Wolgast, Germany Peene-Werft KBO

Varna, Bulgaria Naval Technology Bulgaria

> Muara, Brunei Muara Maritime Services

Henderson, WA, Australia Luerssen Australia

Adelaide, SA, Australia Luerssen Australia

ABOUT US WELCOME TO NVL GROUP

NVL stands for Naval Vessels Lürssen and is an independent, privately owned group of renowned Northern German shipyards and related companies, formerly known as Lürssen Defence. The new build of naval vessels and coast guard vessels is what we do at NVL Group – and that's not all. Whatever your requirement, we build high-quality ships that provide superior levels of performance – and then sustain this performance throughout their life cycle with the expertise of NVL Services. They ensure your ships are in good shape for deployment when you give the command. Our new build and repair shipyards are strategically located at the North Sea, the Baltic Sea and the Port of Hamburg. As a group of shipyards, we always find the ideal location for your project. When it comes to complex projects, we work together to leverage our full strength and flexibility. Construction at our network of shipyards is supplemented by licensed manufacture at customer facilities around the world under technology transfer arrangements.



WOLGAST PEENE-WERFT

As a state-of-the-art shipyard of NVL Group, Peene-Werft is specialised in the new build and repairs of naval vessels and coast guard vessels of all shapes and sizes.

Since its beginnings in 1948, the shipyard has successfully developed tailored solutions, various projects in small series, and production of a series in large quantities. Our breadth of manufacturing possibilities makes Peene-Werft a varied shipyard ready to take on any project.

Located in a small town in the north-east of Germany, the shipyard benefits from its close access to the Baltic Sea.

- State-of-the-art shipyard at the Baltic Sea for the full range of new build and repairs of naval and coast guard vessels
- Deep manufacturing breadth, specialised in various working materials like aluminium, non-magnetic materials, stainless steel and more
- Multigenerational team backed by a state-of-the-art apprenticeship programme
- Close cooperation with sister shipyards within NVL Group to ensure the best results for your individual project





HAMBURG BLOHM+VOSS

Since its beginnings in 1877, Blohm+Voss has been located in the heart of the Port of Hamburg, Europe's third-largest port and an important and respected centre of shipbuilding excellence.

With hundreds of new builds to date, over the years this shipyard has forged shipbuilding history and set standards in technology and design. Today, more than ever, Blohm+Voss is a leading provider of innovative and customised solutions for the new build of naval vessels.

The shipyard is equipped with vast dock capacities and highly advanced technologies, including multiple floating docks and one of the largest dry docks in Northern Europe.

- Several different types of docks to cater to all shapes and sizes of naval vessels and commercial vessels
- Management capabilities to execute complex new build projects
- Highly qualified team with a strong heritage and a passion for innovative ideas
- Close cooperation with sister shipyards within NVL Group to ensure the best results for your individual project

HAMBURG NORDERWERFT

Norderwerft has been part of the Port of Hamburg for more than 100 years. To this day, this fully integrated shipyard is renowned for its promptness, flexibility and high quality, offering shipbuilding expertise down to the very last detail.

As a key repair shipyard of NVL Group, Norderwerft is responsible for repairs and conversions, modernisations, upgrades and the maintenance of naval vessels and commercial vessels such as container ships up to 200 metres in length. In addition, the shipyard offers services for other types of vessels such as historical boats, tugboats, dredgers and research vessels.

- Repair shipyard with a long history in the Port of Hamburg and docks that hold naval and commercial vessels of up to 200 metres in length
- Specialised in ship repairs, refits, modernisations and upgrades, as well as the maintenance of all kinds of vessels
- Personal and passionate 24/7 service anywhere in the world by our highly qualified, flexible and experienced team
- Close cooperation with sister shipyards within NVL Group to ensure the best results for your individual project





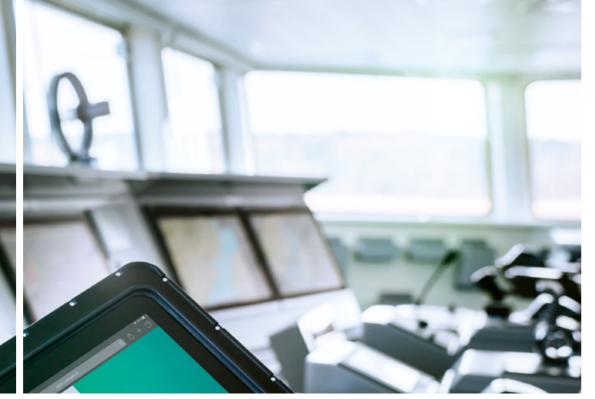
WILHELMSHAVEN NEUE JADEWERFT

Founded in 1947, Neue Jadewerft serves NVL Group as a state-ofthe-art repair shipyard, specifically designed to handle the full range of repair, refit, overhaul and maintenance of large naval vessels up to 150 metres in length. The shipyard also offers these services for civil ships such as tankers, excavators, container ships, tugboats and more.

Neue Jadewerft is located in the deep-water and tide-free Port of Wilhelmshaven. Thanks to this location, the routes from the main trade lanes in the North Sea to the shipyard are some of the shortest in Germany.

- State-of-the-art facilities, uniquely located at the deep-water Port of Wilhelmshaven, independent of tides
- Specialised in the repair, refit, overhaul and maintenance of large naval vessels and auxiliary ships of up to 150 metres
- Strong customer focus from our tight-knit team to provide quality and efficiency, everywhere in the world, 24/7
- Close cooperation with our sister shipyards within NVL Group to ensure the best results for your individual project

MAKING THE DIFFERENCE



QUALITY MANAGEMENT SOLID CRAFTSMANSHIP

Every naval vessel and coast guard vessel delivered from our shipyards has been inspected down to the finest detail and will comply fully with all relevant industry standards.

NVL Group's reputation for quality stems from our lengthy shipbuilding expertise, outstanding engineering skills, carefully selected supplier network and the commitment that we devote to each and every ship. Our focus on quality assurance commences right at the start of each project and continues throughout all building phases and along all interfaces – until the vessel is completed. Thereafter, we continue to support our customers' requirements throughout the ship's entire life cycle with the assistance of NVL Services.



SYSTEM INTEGRATION DELIVERING A FULLY INTEGRATED SHIP

The integration of onboard systems – including command and control equipment, weapons und sensors – is an important part of our project execution. We focus on the effective interaction of each individual system within a design's overall architecture to ensure seamless operations. At NVL Group, we also make certain that your vessel will interoperate with existing fleet assets, as well as with ships from other navies during joint operations.



TRANSFER OF KNOWLEDGE AND TECHNOLOGY PLACING EXPERTISE IN YOUR HANDS

Sharing our broad expertise in shipbuilding, support and sustainment for our customers' enduring benefit is one of NVL Group's key business objectives. We look to work in partnership with you to understand and fulfil your particular objectives: whether they relate to developing local construction capabilities, improving shipyard infrastructure or enhancing the skills of your shipbuilding workforce. We aim to further enhance your capabilities, providing you with cutting-edge tools and techniques for lasting success.



SECURING THE WORLD'S SEAS

NVL NAVAL VESSELS

Our objective at NVL Group is to supply high-quality naval vessels that can be relied upon to deliver superior levels of performance throughout their working lives. Drawing on decades of shipbuilding knowledge, our skilled workforce uses the latest shipbuilding technology and modular design techniques to equip your fleet to achieve mission success.

Proven in service with navies across the globe, our naval vessels combine sturdy construction with state-of-the-art equipment to excel on even the most demanding deployments.

With a vast portfolio of naval vessels, and a wide range of service and support options available through NVL Services, we can deliver a ship that meets your exact needs.

- Combine the benefits of lengthy experience and cutting-edge technology
- Draw on the knowledge of Germany's entire naval sector
- Flexible designs permit system customisation when required
- Trusted to perform by navies at home and abroad

FRIGATES SUPERIOR PERFORMANCE ACROSS THE WORLD'S OCEANS

NVL Frigates are designed to deploy anywhere in the world to achieve maritime superiority in the face of the most intensive dangers. Compliant with current NATO standards and proven in German Navy service, they benefit from the German naval shipbuilding sector's proficiency. All are constructed from high-quality materials and incorporate the latest technology. They are built to provide dependable service over a long life cycle.

Our frigates are able to perform demanding missions in challenging environments. A modular design approach expands equipment options and ensures a true multirole performance. Robust construction is combined with fully redundant systems to enhance survivability. Whatever the requirement, an NVL Frigate is equipped for the task.

- Utilise the full extent of German shipbuilding expertise
- Modular design approach supports multiple equipment options
- Incorporate a wide range of advanced weapons systems
- Established designs proven in German Navy service







CORVETTES PROVEN COMBAT MISSION SUCCESS

NVL Corvettes use advanced technology to provide potent capability at an affordable price. Optimised for high-intensity combat, their modular design ensures they can perform a wide range of duties.

Our corvettes are designed to be agile and manoeuvrable, benefitting from tested and proven hull forms. They incorporate generous margins to assist periodic upgrades. Flexible and resilient, NVL Corvettes represent a powerful addition to your fleet.

- Effective performance at an affordable price
- Modular design for operational flexibility and ease of upgrade
- Incorporate high levels of survivability
- High accommodation standards
- Design validated by repeat German Navy orders



OFFSHORE PATROL VESSELS MULTI-MISSION PERFORMANCE

NVL Offshore Patrol Vessels maintain security in a fast-changing maritime environment. Equally at home in confined coastal waters or in the vast expanses of an EEZ, our OPVs are robust, reliable vessels proven in worldwide service. All can be readily adapted for a variety of demanding duties through the integration of a mission deck with containerised systems. Easy to operate and economical to maintain, NVL Offshore Patrol Vessels use state-of-the-art technology to keep your waters safe.

- Proven through service with navies worldwide
- Integration of mission modules for operational flexibility
- Adaptable configurations, such as a stern ramp for fast interceptors
- An optimum balance of naval and commercial standards







FAST PATROL BOATS

PROVIDING A RAPID NAVAL RESPONSE

NVL Fast Patrol Boats are optimised for ensuring the safety of littoral seas and coastal infrastructure. Combining high speed with excellent seakeeping abilities, they are based on mission-proven designs that have been refined with the benefit of lengthy realworld experience. Constructed by experts for experts, our fast patrol boats provide you with a powerful yet nimble means of conducting naval operations in littoral waters.

- Proven in naval and coast guard service worldwide
- Combine high speed with excellent stability
- Carefully designed hull forms optimise seagoing performance
- Designs refined through decades of operational experience
- Support throughout the vessel's lifetime available from NVL Services



LOGISTIC SUPPORT SHIPS SUSTAINING YOUR FLEET

NVL Logistic Support Ships sustain naval operations by ensuring that supplies and other services are always within easy reach. Designed to undertake a wide range of support functions, our logistic ships are built to classification society rules and incorporate military standards as appropriate. All comply with current environmental requirements. Our logistic support ships provide navies with the freedom to perform at distance from their home bases.

- Incorporate military standards where appropriate
- A wide portfolio of designs built to classification society rules
- Optimised for safe and effective replenishment
- Able to deploy containerised mission modules
- Provide high standards of accommodation







MINE COUNTERMEASURE VESSELS

MASTERY IN MINE WARFARE

NVL Mine Countermeasure Vessels provide an effective and dependable way of combatting the threat posed by modern mine warfare. They combine minehunting, minesweeping, defensive minelaying and clearance diving support functions in a single, non-magnetic steel hull. All can deploy unmanned systems at a distance, but also operate safely within mined waters. Robust and survivable vessels, NVL Mine Countermeasure Vessels offer a proven means of eliminating the danger posed by naval mines.

- NATO-proven designs using durable non-magnetic steel
- Superior magnetic and acoustic stealth performance
- Excellent levels of demonstrated shock resistance
- Multi-mission performance inside and outside the minefield
- High transit speeds for rapid deployment







PROTECTING YOUR MARITIME DOMAIN

NVL COAST GUARD VESSELS

Our mission at NVL Group is to equip coast guards with reliable, versatile ships that provide an effective means of policing territorial seas. Working in partnership, we use our shipbuilding expertise to design vessels tailored to meet specific coast guard requirements. We sustain their readiness throughout their lengthy careers with the support of NVL Services.

Our constabulary vessels are built with the agility to deploy rapidly to the point of danger and with the stability and endurance required to sustain a persistent presence.

Our broad range of coast guard vessels provides a practical and affordable solution to the many challenges that threaten your maritime interests.

- Proven with coast guards and maritime constabulary forces worldwide
- Designed to achieve excellent performance in adverse seas
- Provide high accommodation standards
- Built and sustained with the benefit of NVL Group's extensive expertise
- Easy to operate and efficient to maintain

OFFSHORE PATROL VESSELS POLICING TERRITORIAL SEAS

NVL Offshore Patrol Vessels provide coast guards worldwide with a formidable means of policing coastal waters and the seas beyond. Balancing commercial and naval standards, they use modular designs for easy adaptation to meet specific customer needs. Innovative, dependable ships, our coast guard offshore patrol vessels are built to complete challenging missions in a cost-effective way.

WHAT MAKES US STAND OUT

- Proven in service worldwide
- High performance in a wide range of seagoing environments
- Excellent stability and high crew comfort
- Modular systems include up to five mission containers
- Can deploy a fast interceptor via a stern ramp



FAST PATROL BOATS READINESS IN LITTORAL WATERS

NVL Fast Patrol Boats offer coast guards a swift and potent means of maintaining littoral security. They combine exceptional seakeeping with high manoeuvrability to provide versatile performance across a broad spectrum of missions. Designed for efficient and reliable service, our compact NVL Fast Patrol Boats help safeguard your coastal seas.

- Proven in coast guard and naval service worldwide
- Lightweight construction and careful hull design
- Sustained seakeeping and comfort in rough seas
- Built by experienced professionals for experienced professionals
- Enduring readiness supported by NVL Services



LIFE CYCLE SERVICES NVL SERVICES

All of our shipyards at NVL Group have been leaders in quality and performance from their very beginnings. Today, our continued reputation for excellence is based both on the capability of the vessels we build and the comprehensive support services we provide to our customers around the world through NVL Services. As a privately owned company with a down-to-earth approach, we provide flexible support that is tailored to your specific needs. NVL Services are available both for vessels built by one of our own shipyards and for those constructed by other shipyards.

FOR YOUR FLEET TAILORED AND COMPREHENSIVE SUPPORT

LOCAL CONSULTANCY AND PARTNERSHIP

We build strong local partnerships, contributing our extensive knowledge and state-of-the-art technology.

INFRASTRUCTURE SUPPORT

Your fleet's readiness can benefit from the guidance our committed experts provide to ensure every aspect of your infrastructure is fit for purpose.

DIGITAL TRANSFORMATION

We deliver a reliable, paper-free digital infrastructure, placing real-time information on your ships' operational status at your fingertips.

UPGRADE

(•))

We undertake the efficient, cost-effective upgrade of any ship built by any yard to refit it with state-of-the-art equipment that is tailored to your needs.

GUARDIANS OF QUALITY

H

Upholding our reputation are our Guardians of Quality – our committed and experienced workforce. Accessible anywhere in the world, our skilled team makes sure your ships perform at their best throughout their life cycles. Whether you require a simple refit of just one ship or complex, full-service support for an entire fleet, we ensure the full extent of our technical and practical knowledge is at your disposal, as and when you need it.

WE INVITE YOU TO FIND OUT MORE ABOUT OUR COMPREHENSIVE SERVICES IN OUR BROCHURE "SERVICE SOLUTIONS"



You can rely on our qualified engineers and global supply network to deliver timely and well-organised repairs, minimising operational downtime.

SPARE PARTS SUPPLY

T°

Our experience and knowledge support the efficient, customised supply of spare parts when you need them, anywhere in the world.

DOCUMENTATION

We provide clear and comprehensive technical documentation to make sure that the information you need is always at hand.

TRAINING

Our skilled workforce has decades of technical and seafaring knowledge to share, improving your ability to perform any job.

MAINTENANCE

We combine leading-edge processes with our practical experience to ensure your ships remain in mission-ready condition, at all stages of their life cycle.

QUALITY. TRUST. RELIABILITY. AT YOUR SERVICE

At NVL Group, we are dedicated to our customers' ideas, committed to their individual requirements and driven by a fundamental difference: our DNA. The DNA of shipbuilding. To find out how we can help you with your specific project, please feel free to get in touch with us. We are at your service.

NVL • THE DNA OF SHIPBUILDING



NVL B.V. & Co. KG Zum Alten Speicher 11 • 28759 Bremen • Germany • Tel. +49 421 6604 344 • info@nvl.de • www.nvl.de