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# Securing our seas

### Damen has a rich tradition of naval shipbuilding reaching back over 140 years

Our Defence & Security product range is comprehensive, covering everything from seven-metre interceptors to the 205-metre Joint Support Ship (JSS) HNLMS Karel Doorman of the Royal Netherlands Navy. Our solutions are valued by navies, coastguards and maritime law enforcement agencies all over the world.





#### **GLOBAL PRESENCE AND SUPPORT**

### **Founded in the Netherlands**

A family business founded in 1927 in the Netherlands, today Damen operates 36 shipbuilding and repair yards, and employs 11,000 people worldwide.

Damen has delivered over 7,000 vessels to more than 100 countries and typically builds around 175 vessels annually. Due to its unique, standardised ship-design concept, Damen is able to guarantee consistent quality.



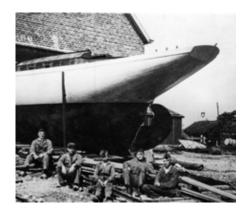
#### THE DAMEN STANDARD

# Design & Building philosophy

Damen has been refining its shipbuilding skills and craftsmanship for more than 90 years. Our Chairman Kommer Damen is a true pioneer in the maritime industry, having introduced the standardised shipbuilding concept back in 1969. He understood that this concept gave Damen customers the benefit of being able to order vessels from stock, ensuring a swift delivery.

Extensive R&D and input from our customers over the generations means that Damen vessels continually evolve and improve. Damen vessels are based on proven designs and guaranteed to be built to the highest quality standards, resulting in unbeatable performance, which in turn leads to maximum uptime and the lowest total cost of ownership.













#### Research & Development

The standardised shipbuilding concept has significant implications for Damen's RD&I activities. Anticipating market needs in the development of standard vessels enables us to implement state-of-the-art features within new designs. Building vessels in series has also allowed us to develop extensive RD&I programmes that ensure continual knowledge and product evolution and enable the adoption of robust and reliable breakthrough technologies.

#### >> Innovation

Innovation is in Damen's DNA. The standardised shipbuilding concept and the Sea Axe hull are just two examples of our contribution to developments in the maritime industry. Innovation remains a key focus in all that we do.

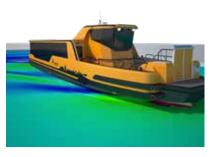
#### >> Modularisation & One-offs

Standardisation does not imply a set approach with no flexibility. Damen is also experienced in the production of custom one-off vessels. Additionally, an extremely wide range of modular options is available for the standardised ship portfolio, ensuring vessel optimisation whatever the task.

















#### **DAMEN'S BACKBONE**

# Research, Development & Innovation

Our RD&I programmes have led to many groundbreaking innovations. Commitment to continuous improvement reduces the environmental impact of our products over their entire lifecycle. Digitalisation of Damen products and services is an important part of our efforts. The potential of big data, almost limitless computational power and cloud computing enable us to develop lifelike simulation models, which we use to predict vessel performance. Damen acts at the forefront of knowledge and innovation, enhancing sustainability and digitalisation at every opportunity.



#### **NAVIGATING TO ZERO**

### **Sustainability**



Our dedication to our environmental, social, and economic responsibilities includes always working within the law and voluntarily exceeding legal requirements. We seek to be innovative and to demonstrate leadership in relation to sustainability, understanding the importance of this for our future and for that of our stakeholders.

We design, manufacture, repair, and service maritime solutions that enable a positive outcome for our employees, clients, local communities, and suppliers, while preserving our oceans and waterways.

#### >> Sustainable Solutions

It is the nature of our business that our products and services have a significant impact on the world around us. This is because of the materials we use, the extended lifetimes of our products and the processes occurring at the end of their lifecycle. This is why we integrate sustainability as early as possible into the design of our vessels, making the transition to the circular economy a priority.

#### >> Sustainable Operations

Being aware of the impact that we, as a company, have on the environments in which we operate and the people within them, is a major part of keeping our house in order. We are committed to reducing this impact, keeping people safe, providing good working conditions, and engaging with the local communities around us.

#### >>> Sustainable Organisation

Becoming the most sustainable shipyard means transforming the Damen organisation now and ensuring it remains responsive in the future. It means building a strong organisation where the principles of sustainability are fully embedded across all our businesses.

#### **KEY TO SUCCESS**

### **Modular approach**



Building standard vessels in a series gives our clients fast access to proven, reliable technology. Our standard designs can be tailored to individual needs via modular construction, so our clients receive the ideal vessel, whatever challenge they are facing. Standard designs can always be equipped with various options to suit specific tasks.

#### Benefits of modular building

- > Fast response to customer requests
- Competitive pricing
- Tested and proven technology
- Continuous product development
- Interchangeability of ships, crews, spares
- Lower maintenance costs
- Guaranteed performance



#### PROVEN TECHNOLOGY, PROVEN QUALITY

### **Modular building**

At Damen shipyards all over the world, the standardisation process is most evident in the production of tugs. State-of-the-art equipment and facilities result in the construction of proven, reliable vessels in the fastest possible timeframe. A wide range of standard and modular options is available for the

standardised ship portfolio, ensuring vessel optimisation whatever the task. In the case of working with third-party yards, we cooperate closely with the partner, developing a unique programme for each project that leads to the optimal use of yard space and efficient construction.

#### **FINANCIAL SERVICES**

### Financing and leasing

Damen Financial Services offers a wide range of financing arrangements for all types of Damen vessels, equipment, and products.

#### Supporting all kinds of clients

Damen Financial Services supports everything from start-up companies to large entities, as well as government bodies.

#### **Relevant financial solutions**

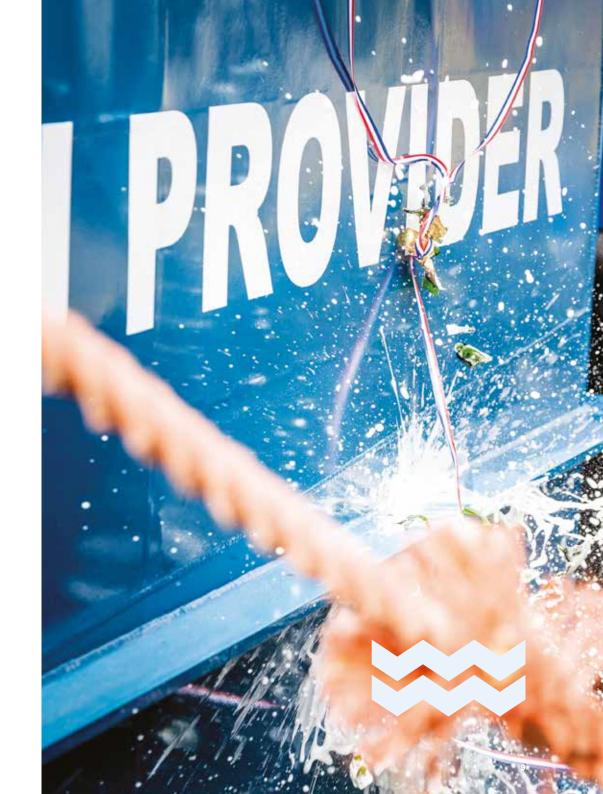
For complex and larger projects, a buyer's credit is applied. For smaller, standard projects a supplier's credit is more feasible. Additionally, our customers are able to lease Damen vessels via Damen family-owned leasing companies. For special purpose companies, Damen Financial Services can provide support through project finance. This is based on projected cash flows related to contracts and anticipated contracts.

#### **Strong financial network**

For more than 40 years, Damen Financial Services has dedicated itself to arranging export loans and leasing facilities. During this period, we have developed long-standing relationships with national and international commercial banks, export credit insurers (e.g., the Dutch Export Credit Agency Atradius), investors and multilateral institutions.

#### Some of the major benefits are:

- Saving costs due to favourable loan durations, down payments, and interest rates relative to local market conditions.
- A user-friendly service. Damen Financial Services will arrange the most suitable financial package on behalf of our clients. This includes assisting with the application and required documentation and conducting the necessary risk assessments.
- Our market knowledge and financing experience offers access to a wide range of relevant financial solutions.





#### **BUYING AND SELLING**

### **Trading & Chartering**

Damen Trading is the specialised sale and purchase broker within Damen. Over the years, Damen Trading has gained extensive experience in vessel brokerage and trade-in services.

For customers, this results in a comprehensive service before, during, and after the acquisition of a vessel.

THINK GLOBAL, ACT LOCAL

### **Damen Technical** Cooperation



Damen can assist customers in building Damen vessels locally via Damen Technical Cooperation (DTC).

This highly flexible option results in a valuable transfer of technology and enables owners to enjoy Damen quality combined with the convenience of local production.

Since DTC was established, over 1,000 vessels have been produced locally in more than 70 countries worldwide. Damen can deliver everything from the licence and vessel design to a full material package and if necessary, turnkey solutions based on client requirements. DTC's scope covers the entire Damen portfolio.



#### **Design & Licences**

- ▶ Basic and/or detailed designs provided ▶ Renowned suppliers
- ➤ License/royalty for multiple series
- Proven design



#### Material packages

- Materials on stock
- Advanced logistics



#### **Building assistance**

- Assistance on-site
- ➤ Enhance shipyard skills
- ➤ Transfer of knowledge/technology



**Covering all mission** needs, Damen Defence and Security solutions are developed and tailored in partnership with our customers, and with a strong focus on real operational requirements.

We offer support with experienced staff with thorough naval and operational knowledge.

Continuously evolving through time, our ships benefit from proven and reliable systems, while at the same time, introducing state-of-the-art solutions:

- Hybrid propulsion
- Survivability measures
- Flexible topsides
- > Advanced electric generator concepts
- Continuous reduction in detectability
- Unmanned vehicles

**PROVEN AND RELIABLE** 

Mission ready







#### **Combatants**

- ▶ Large Custom-built Combatants
- SIGMA Series
- Crossover Series



#### **Patrol**

- Offshore Patrol Vessels Coast Guard
- Offshore Patrol Vessels Military
- ▶ Inshore Patrol/Stan Patrol Vessels
- Interceptors
- > RHIBs



#### **Amphibious series**

- > Custom-built Amphibious Ships
- Landing Platform Docks
- Landing Ships
- Landing Crafts



#### **Auxiliaries series**

- ➤ Custom-built Naval Auxiliaries
- Multi-role Auxiliary Vessels
- Sail Training Vessels
- Training Vessels
- > Custom-built Support Vessels

Over the years, Damen has delivered a number of customised frigates to the Royal Netherlands Navy.

Additionally, for export to navies around the world, Damen supplies a complete range of vessels built according to the Ship Integrated Geometrical Modularity Approach (SIGMA). Although built according to a standardised concept, SIGMA vessels are tailored to the clientsí unique operational requirements and can be equipped for missions ranging from maritime security up to naval warfare and power projection.

- ▶ Large Custom-built Combatants
- SIGMA Series
- Crossover Series

**MISSION PROVEN** 

Combatants







#### **LARGE CUSTOM BUILT**

### **Multipurpose frigate**

The eight Karel Doorman class frigates were built by Damen Naval (former Damen Schelde Naval Shipbuilding) and commissioned between 1991 and 1995.

This frigate is also known as the Multi Purpose or M class frigate.

This class was the first introduction to the Royal Netherlands Navy of CODOG propulsion. The M class is able to operate in all the main warfare domains (surface, subsurface and antiair warfare).

In 2018 only two M class frigates are still operated by the Royal Netherlands Navy. In 2004, two of the original eight frigates, Tjerk Hiddes and Abraham van der Hulst, were sold to Chile followed by two more to Belgium (Karel Doorman and Willem van der Zaan).

In 2006 the fifth and sixth frigate (van Nes and van Galen) were sold to Portugal.

Between 2011 and 2014 a Mid-Life update was realised mainly for the combat systems on the two remaining RNLN M class frigates followed by an MLU for the two Belgium M classes. A MLU for the Portuguese M class frigate will also get underway.

#### **Sensors**

- ➤ Thales SMART S Mk.1 3D
- ➤ Thales LW08
- > Thales Scout
- ➤ Thales Gatekeeper (EO)
- ➤ Thales Seastar
- ➤ Signaal PHS 36
- ➤ Towed Array TNO IRLFAS
- > 2x FC (Thales STIR)
- **>** Link 11/16/22

#### **Effectors**

- > 76mm main gun Oto Melara
- ➤ Harpoon Surface to Surface missiles
- ➤ Mark 46-torpedoes
- ➤ Mark 48-VLS for Sea Sparrow missiles
- ➤ Goalkeeper-CIWS
- ➤ NH90-NFH



#### General

Length o.a. 122 metres
Displacement 3,300 tonnes
Beam mld 14.4 metres
Draught 6.2 metres
Speed 29 knots





#### **LARGE CUSTOM BUILT**

### **Air Defence and Command frigate**

The four Zeven Provincien class Air Defence and Command (LCF) frigates were all build by Damen Schelde Naval Shipbuilding (DSNS) and commissioned between 2002 and 2005. The ships are optimised for the full spectrum of anti-air warfare operations. The primary sensors for this task are the SMART L and the multifunction radar APAR. A modernisation programme for the four

ships is ongoing. This includes the modification of the sensor suit (Smart L and APAR).

These modifications will make it possible to detect and track ballistic missiles at an extended range.

#### **Sensors**

- **▶** SMART-L
- Thales Smart L
- ➤ Thales APAR
- > Thales Scout
- > STN Atlas DSQS
- ➤ EO Mirador & Thales Sirius IRST

#### **Effectors**

- ➤ Main gun 127mm Oto Breda
- Mk 41 VLS (40 cells) for ESSM and SM-2 block IIIA)
- ➤ Harpoon Surface to Surface missiles
- ➤ Goalkeeper-CIWS
- ➤ Mark 46-torpedoes
- ➤ NH90-NFH



#### General

Length o.a. 144 metres
Displacement 6,050 tonnes
Beam mld 17 metres
Draught 7 metres
Speed 28 knots





#### **AN EVOLVING SUCCESS**

### The SIGMA series

SIGMA is our Ship Integrated Geometrical Modularity Approach. It is based on the experience gained by building seven generations of surface combatants for, and including feedback from, the Royal Netherlands Navy. The use of modular platform components enables bespoke tailoring of operational characteristics.

#### Naval design features

- Decreased detectability by signature reduction measures
- Increased survivability e.g. by

- improving shock resistance
- Redundancy in vital systems using Naval Intact and Damaged Stability
- Military damage control
- Enclosed gas citadel (CBRN)
- Using military standards

#### **SIGMA** advantages

The SIGMA design philosophy has the following advantages:

- Standardised and proven designs with sufficient flexibility to meet individual customer needs
- Where possible use of commercial equipment reduces cost of building and maintenance or replacement
- Easy implementation of modifications or upgrades avoids premature obsolescence of the vessel
- ➤ Extensive selection of proven hull forms across a wide range of main dimensions
- Wide range of combat suites, all making use of proven product compositions
- ➤ Commonality across different ship types

#### **Mission profiles**

The SIGMA platform can be equipped for missions ranging from maritime safety and security to power projection, such as:

- ▶ Law enforcement and police
- ➤ Search and rescue
- ➤ Counter drugs and counter piracy
- ▶ Intelligence, surveillance and reconnaissance
- ➤ Naval presence and embargo operations
- ➤ Naval combat and sea control/denial

#### **Naval features**

- Naval intact and damage stability
- Enclosed gas-tight citadel and NBC filter installations
- Shock resistance and protection of vital systems
- ▶ Redundancy in essential services
- ➤ Naval damage control zones
- ➤ Reduced signatures through RCS shaping, noise control, degausing and IR reduction





### **Inner strength**

Damen Naval is more than a ship builder; we are a systems integrator. Our SIGMA vessels are prime examples of this. Sensors, weapons, command, alarms, navigation, energy generation, propulsion – all ship systems work together to create one multidisciplinary platform. We deliver high platform standards with operational spaces fully tailored to customer wishes.

- Continuous improvement and evolution of platform solutions
- > Up-to-date mission equipment
- Modern solutions for platform management systems











#### **SIGMA COMBATANTS**

### **Multi-mission frigate**

#### **SIGMA 10514**

#### Customers

Indonesian Navy and Mexican Navy

#### **Basic functions**

Naval patrol EEZ, deterrence, search and rescue, ASW, AAW, ASUW, EW

#### **Sensors**

- ▶ 3D Surveillance & target indication radar & IFF
- ➤ Radar/electro optical fire control
- ➤ Hull-mounted sonar and/or VDS
- **▶** EO
- ➤ Illumination radar(s)

#### **Effectors**

- Main gun
- ➤ Small calibre (automatic) gun
- > CIWS
- **>** SSM
- > SAM VLS
- ➤ Torpedo launching system (2x triple)
- ➤ ESM & ECM
- ▶ 2 x decoy launchers



#### **SIGMA** multi-mission frigate

Length o.a. 105 - 125 metres
Displacement 2,365 - 4,200 tonnes

Beam mld 14 - 16 metres
Draught 3.7 - 4.1 metres
Speed 27 - 30 knots





#### **SIGMA COMBATANTS**

### **Light frigates and corvettes**

### **SIGMA 10513** (enlarged 9813)

Customers

Moroccan Navy

**Basic functions** 

Naval patrol EEZ, deterrence, search and rescue, ASW, AAW, ASUW, EW

#### **SIGMA 9813**

Customers

Moroccan Navy

**Basic functions** 

Naval patrol EEZ, deterrence, search and rescue, ASW, AAW, ASUW, EW

#### **SIGMA 9113**

Customers

Indonesian Navy

**Basic functions** 

Naval patrol EEZ, deterrence, search and rescue, ASW, AAW, ASUW, EW

#### **Sensors**

- ▶ 3D Surveillance & target indication radar & IFF
- ➤ Helicopter approach radar
- ▶ Radar/electro optical fire control
- ▶ 2x target designation system
- ➤ Hull-mounted sonar

#### **Effectors**

- Main gun
- 2x small calibre gun
- > 2x SSM launcher
- ▶ 12 cell VL SHORADS
- ➤ 2x triple torpedo launcher
- ➤ ESM & ECM
- ▶ 2 x decoys/chaff



#### **SIGMA light Frigates and corvettes**

Length o.a. 91 - 105 metres
Displacement 1,700 - 2,185 tonnes

Beam mld 13 metres
Draught 3.6 metres
Speed 27.5 - 28 knots





#### **SIGMA COMBATANTS**

### **Fast combatants**

SIGMA includes designs within the lower displacement range (500-1,150 tonnes). These are characterised by a high design speed; reflecting the current needs of navies for fast vessels in this size of range.

At the same time, it features military standards and survivability measures such as robustness, reduced underwater radiated noise levels and the efficiency of a twin shaft, propeller-driven propulsion system.

The SIGMA is a modern fast attack craft able to act in law enforcement and sovereign water patrol duties and also in high intensity confrontations with military threats.

#### **Sensors**

- ▶ 3D Surveillance & target indication radar & IFF
- ➤ Helicopter approach radar
- ➤ Radar/electro optical fire control
- 2x target designation system
- ➤ Hull-mounted sonar

#### **Effectors**

- Main gun
- 2x small calibre gun
- ➤ 2x SSM launcher
- ▶ 12 cell VL SHORADS
- **▶** ESM & ECM
- ▶ 2x decoys/chaff



#### SIGMA fast combatants

Length o.a. 51 - 80 metres
Displacement 500 - 1,150 tonnes
Beam mld 9 - 11 metres
Draught 3.25 - 3.6 metres
Up to 30+ knots









### **Crossover**

In addition to traditional naval warfare tasks, today's navies face growing challenges in fields including maritime security and humanitarian aid and disaster relief (HADR). As the number of tasks increases, the numbers of ships remain the same, or even

decrease. Fully developed with current and future capability in mind, the Damen Crossover (XO) is the ultimate mission modular naval concept. Pivotal to this innovative solution is the so-called X-deck – a single, flexible deck to handle, store, operate and deploy

mission equipment and fast RHIBs, as well as landing craft.

As the Crossover features multiple modes of access and handling, it is future proof and ready for the systems of tomorrow.









#### **CROSSOVER COMBATANTS**

# Through-life operational flexibility



#### **Enabling a wide operational profile**

- Maritime warfare (AAW/ASUW/ASW)
- Special forces/amphibious operations
- Humanitarian aid/disaster relief (HADR)
- Maritime security & safety

- Strategic transport
- Search and rescue (SAR)
- Mine countermeasure (MCM) operations
- > Replenishment & logistics support
- Unmanned vehicle deployment (AUV/UUV/USV)
- Hydrographic survey operations



#### **Crossover series**

 Length o.a.
 115 - 139 metres

 Displacement
 4,500 - 5,600 tonnes

Beam mld 19.6 metres
Draught 5 metres
Speed 21 - 30 knots

The vessels in the Damen Patrol range are, generally speaking, designed to operate at the low end of the spectrum of force.

These ships are not designed to counter the threats that are traditionally associated with military units and warships, such as torpedoes or guided missiles. Patrolling duties are generally related to:

Maritime assistance operations such as monitoring (maritime traffic, environment and fisheries), assistance (search and rescue, evacuation, humanitarian assistance and disaster relief) and support (maritime presence, naval diplomacy, intelligence protection and logistics support).

Maritime security operations such as embargo enforcement, counter piracy, counter terrorism and countering illicit trafficking such as drugs, people and weapons.

- Offshore Patrol Vessels Coast Guard
- Offshore Patrol Vessels Military
- ▶ Inshore Patrol/Stan Patrol Vessels
- Interceptors
- **▶** RHIBs



## **Patrol**







#### THE IDEAL MARITIME SECURITY TOOL

### Offshore Patrol Vessels Coast Guard

Offshore Patrol Vessels are perfectly adapted to operate continuously at sea well outside the exclusive Economic Zone. They represent the perfect solution for situational awareness and law enforcement.

The design allows for flexible payloads, enabling decision makers to react quickly to new scenarios (e.g. human assistance and disaster relief). The OPV Coast Guard is designed to be an adaptable and affordable addition

to any fleet and they are commercially constructed according to civilian standards, outfitted with commercial off-the-shelf equipment (COTS).

#### **Highlights**

- Four engine configuration
- Two engine rooms (redundancy)
- High level of damage stability
- Provided with interrogation and detention area
- Multi-mission bay for mission containers

- Dedicated space for survivors
- Two fast RHIBs
- Helicopter deck for up to medium size helicopter
- Ready for operations in heavy seas
- Long range for extensive SAR operations
- Optional external fire-fighting system
- Choose from a range of communications and navigation systems

#### Sensor options are

- ▶ 2D Radar
- ➤ Electro-Optical (EO)
- ➤ Surveillance (360°)
- Navigation Radar Intercept Sensor
- > (R-ESM)
- Electronic communications
- Support Measures

#### **Communications options are**

➤ HF, VHF, UHF and SATCOM (data)

#### Effectors options are

- **>** Gun (20-58mm)
- ▶ Remote Weapon Stations
- ➤ Heavy Machine Guns

#### **Effectors options are**

- **>** Gun (20-58mm)
- ▶ Remote Weapon Stations
- ➤ Heavy Machine Guns

### Flexible payloads (mission containers) can provide

- Diving gear
- ➤ First aid
- ➤ Pollution control



#### Offshore Patrol Vessels Coast Guard

Length o.a.72 - 93 metresBeam mld12 - 14 metresDraught3.7 - 4.0 metresDisplacement1440 - 2500 tonnesSpeedup to 20+ knotsAccommodation60 - 80 persons



#### **FLEXIBLE DEPLOYMENT**

### **Offshore Patrol Vessels Military**

Offshore Patrol Vessels Military are modified Offshore Patrol Vessels for supporting navies in the task of homeland defence. The platform's signature has been further optimized. The sensor, communications and weapons fit has been upgraded and the damage repair capability has also been strengthened.

#### **Highlights**

- Four engine configuration
- Two engine rooms (redundancy)
- High level of damage stability
- Helicopter deck for up to medium size helicopter
- Helicopter hangar with ample space for UAVs
- Multi-mission bay for mission containers

- Dedicated space for embarked forces
- Two fast boarding RHIBs
- Ready for operations in heavy seas
- Long range for extensive surveillance operations
- Optional external fire-fighting system
- Prepared for the installation of surveillance and weapon systems

#### **Sensor options are**

- > 2/3D Radar
- ➤ Electro-Optical (EO)
- ➤ Surveillance (360°)
- ➤ Navigation Radar Intercept Sensor
- > (R-ESM)
- Electronic communications
- Support Measures

#### **Communications options are**

▶ HF, VHF, UHF and SATCOM (data)

#### **Effectors options are**

- **>** Gun (20-76mm)
- ▶ Remote Weapon Stations
- ➤ Heavy Machine Guns
- ➤ Surface to Surface Missiles

### Flexible payloads (mission containers) can provide

- Diving gear
- ➤ First aid
- Mine countermeasures



#### **Offshore Patrol Vessels Military**

Length o.a. 80 - 100 metres

Beam mld 13.7 - 14.6 metres

Draught 3.75 - 4.0 metres

Displacement 1900 - 2600 tonnes

Speed up to 25+ knots

Accommodation 80 - 120 persons





### Patrol at high speed

Already patrolling the seas for decades, Damen Stan Patrol designs are based on experience and vast amounts of customer feedback.

Recently, maritime security concerns have become even more considerable, especially with large numbers of

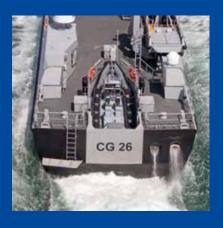
refugees looking for safety overseas. At the same time, increasing levels of piracy, terrorism and smuggling activities are putting pressure on coast and border guards. This ever-changing world requires vessels with multimission versatility.

Reliability is also key to ensuring mission success.

Damen understands this, as can be seen by the coverage of our supplier base and service organisation, globally distributed to ensure you of maximum vessel uptime.









#### **HIGH SPEED VERSATILITY**

### **Inshore / Stan Patrol Vessels**

Damen Stan Patrol Vessels range in length from 12 to 70 metres. As a result they offer a fitting solution for every operational profile, spanning riverine, littoral, coastal, inshore and offshore environments.

This versatility, combined with the benefits of standardised production, ensures that the Damen Stan Patrol series is ready for anything, anywhere, at any time.

Damen Stan Patrol Vessels are designed for maximum flexibility so as to be capable of handling a wide range of operational capabilities.

The aft deck can be configured to meet multiple mission requirements. Containers can function as decompression tanks, control spaces, or simply as storage.

Internal space is provided for materials

necessary to carry out humanitarian relief missions, or for up to three fast boats for inspection, boarding and interception. A UAV can also be launched from the vessel, extending the surveillance range considerably. The front of the vessel also offers a large amount of versatile space, which can be configured to suit differing mission requirements.

#### Suitable for

- ➤ Counter terrorism
- ➤ Anti-drug operations
- ➤ EEZ protection
- Search and rescue
- Anti-piracy
- Oil spill recovery
- ➤ Fisheries inspection
- ➤ Human trafficking prevention



#### Inshore / Stan Patrol Vessel

Length o.a. 30 - 70 metres

Beam mld 7.0 - 11.5 metres

Crew up to 60 persons

Speed up to 30 knots





#### **COMPACT CLASS**

### **Stan Patrols**

The Compact Class of the Damen Stan Patrol series has unique features, which makes the vessels the ideal asset for inshore and littoral operations.

The vessels are designed for all weather, high speed activities, employing the Sea Axe bow to reduce ship motions and ensure that the vessels' speed range can be achieved both comfortably and safely in all conditions.

The design also incorporates a wheelhouse with 360° visibility to ensure that fast operations are also safe operations.

The Compact Class is a modular design and can therefore easily adopt special requirements, such as single point lifting, troop transport, large work deck and diving equipment.

The Compact Class Stan Patrol Vessels are built with composite

materials. By using the latest technology and high grade materials, this construction is superior to aluminium or steel.

For the same strength and impact resistance, less weight is needed, which results in higher speed and more economical use. Also the chemical resistance of composites and its ease of repair makes it a first-class construction material.

#### **Suitable for**

- ➤ Counter terrorism
- Anti-drug operations
- > Search and rescue
- Anti-piracy
- Fisheries inspection
- ➤ Human trafficking prevention



#### Stan Patrol Vessel

Length o.a. 12 - 22 metres

Beam 4 - 5 metres

Crew up to 10 persons

Speed up to 35 knots





#### **MULTI-MISSION PLATFORM**

### **FCS Patrol**

The FCS Patrol Vessels combine the large multi-functional aft deck of a supply vessel with the accommodation layout and functionality of a patrol type vessel.

The spacious aft deck supports the transport of disaster relief materials and can be equipped with a large crane

or a daughter craft on a davit. The integrated container fittings provide possibilities to fasten multi-mission containers for the task at hand. Integration of a fire-fighting system is optional. Sensors, command and control and communication equipment will facilitate the patrol-related tasks.

Light armoury and ballistic protection supports defence and protection tasks.

Every FCS Patrol Vessel offers you a versatile platform, capable of being tailored to your specific needs.

#### Suitable for

- Disaster relief
- Asset protection
- ➤ Light patrol duties
- Search and rescue
- Medical assistance
- Cargo transport
- ➤ Oil spill recovery



#### FCS Patrol Vessel

Length o.a. 34 - 53 metres

Power range 3,250 - 6,500 bkW

Deck area75 - 225 m²Special personnel12 - 20 personsSpeed22 - 30 knots





Safety is an important driver of all that we do; and the Damen Defence & Security vessels are no exception. Damen's solutions for the Defence & Security market are aimed to optimise the safety of operations and crew.

#### **Increasing crew safety**

Examples of available safety solutions

- Hull shape optimised for onboard working conditions and reduced crew fatigue
- ▶ Back-up solutions for all critical systems
- > Layout and controls based on highest standards

SIMPLE. SMART. SWIFT.

# Your fit-for-the-job mission system based on mission blocks

enforcement officers and coastguard crews operate Damen vessels. Their job is to keep the maritime environment secure. At the end of the day, it's that vital combination of ship and mission package which leads to success or failure.



Looking at the growing fleet of OPVs and High Speed Craft that have to engage in security related tasks, Damen puts the mission at the focal point of its 1800-2400 OPV, Sea Axe and Stan Patrol High Speed Craft ranges. For these ships Damen offers

standardised mission modules with state-of-the-art and balanced radar, sensor, communications and effector elements. The chain is only as strong as the weakest link. Bearing this in mind, Damen carefully monitors the overall quality, exchangeability,

effectiveness and value of every element of the standardised mission blocks.

The basic idea: you can directly contact our Damen staff and design your fit-for-the-job mission system based on these four mission blocks

with our specialists. You can configure your vessel and then receive very quickly the type, technical, functional and pricing information.

Simple. Smart. Swift.





### Interception at sea

Damen Stan Patrol vessels are flexible, multi-task platforms, well equipped for the guardianship of territorial waters and their main asset is the ultra high speed boat. These boats are the forward deployment tool for high speed interception, boarding and

shallow water patrolling.
Using the Stan Patrol vessel integrated stern slipway or davit system, the boats are launched and recovered quickly and safely even in higher sea states. With a robust design and reliable equipment Damen ensures

that the boats can fulfill their missions successfully and cost-effectively. The boats can be fitted with a secure communication suited to exchange messages and data, amplifying the mission effectiveness.









### **ULTRA HIGH SPEED**

### **Interceptors**

Speed is the most obvious criterion for an interceptor.

Speed on flat water, however, is not of the highest importance. What counts is speed that can be maintained in waves. Good seakeeping abilities give a distinct speed edge in the real world. Speed requires minimal weight. However, this must be achieved along with a robust structure and capable propulsion, in order to ensure reliability and avoid high maintenance costs.

Manoeuvrability is vital if targets are very agile, such as small open boats with outboard motors.

An Interceptor is a workboat, designed to be used in difficult

situations. Therefore, ergonomics are of utmost importance. On the Damen Interceptors the location of the crew, the console and the layout are designed for the demanding circumstances of high speed chasing and manouevring. Above all stands the safe and predictable behaviour of the Interceptor in the worst conditions.

### **Suitable for**

- ➤ Counter terrorism
- ➤ Anti-drug operations
- Anti-piracy
- ➤ Special forces operations
- ▶ Rapid response actions
- Support for patrol vessels during operations



### Interceptor

 Length o.a.
 11 - 35 metres

 Power range
 552 - 5,775 bkW

 Crew
 2 - 16 persons

 Speed
 40 - 60 knots





### **RHIBS**

# **Rigid Hull Inflatable Boats**

Damen RHIBs are designed for high-speed patrol duties in all waters. Speed and extreme manoeuvrability are crucial and the Damen RHIB range certainly lives up to expectations.

Damen offers a comprehensive range of RHIBs, from 7 to 12 metres in length. The vessels are developed according to the Damen philosophy: standard concept, flexible outfitting. The range has been developed for the military, security and commercial markets. Our RHIBs are able to operate both independently and from a mothership.

### Suitable for

- ▶ Boarding operations and interception
- ➤ High speed, extreme manoeuvrability and good stability for safe operations
- Built and equipped for professional use



### RHIB

Length o.a. 7 - 12 metres

Power range 62 kW/220hp - 544kW/740hp

Speed 30 - 50 knots
Crew 2 persons
Spec. personnel 4 - 14 persons



### **Cabin RHIB**

Length o.a. 12 metres
Power 544 kW/740 Hp
Speed 30 - 40 knots
Crew 2 persons
Spec. personnel 6 persons



With the Amphibious Ships series by Damen, we cover the full range of naval vessel systems for the transfer of equipment and personnel quickly and safely from ship to shore in all weather conditions.

- Custom-built Amphibious ships
- Landing Platform docks
- Landing ships
- Landing craft



FROM SHIP TO SHORE IN ALL CONDITIONS

**Amphibious series** 



In an insecure and rapidly changing world, the ENFORCER Landing Platform Docks (LPD) have been true 'workhorses' for their operators, being highly effective and flexible whatever demands have been made of them. Damen Naval is working hard to ensure its vessels are even better prepared for the future. By applying the latest technology and customer feedback and by drawing on our experience, we are constantly improving the ENFORCER series. This includes equipment and material upgrades.

internal logistics and enhanced flexibility. The ability to transfer equipment and personnel quickly and safely from ship to shore in a range of weather conditions is the single most important capability demanded of amphibious ships. The ENFORCER LPD is characterised by a stern dock that creates a sheltered environment for the deployment of landing craft in adverse conditions, up to Sea State 4. This feature ensures an extensive weather window enabling operations

### **Effective versatility in all** circumstances

Hospital facilities up to Role 2



Secondary gun

Hangar for stowage two helicopters

Flight deck for two helicopters and

Submersible dock enabling safe ship to-shore transfer even in Sea State 4

Propulsion options include diesel direct, diesel hybrid and diesel electric

> Watertight subdivision fulfilling damage stability requirements in docked conditions

Open Roll-on Roll-off cargo deck

**LANDING PLATFORM DOCKS** 

**Proven mission** modularity







# **Unlimited capabilities**

The flexible arrangement of space, internal logistics and vital infrastructure is the basis for the operational success of the ENFORCER series. For many years, the class has been a showcase for mission modularity in operation.

The ENFORCER LPDs have proven to be both effective and adaptable, operating successfully in missions beyond those for which they were specifically designed.

### **Operational profile**

- Amphibious operations
- ➤ Maritime security
- ➤ Humanitarian aid/disaster relief
- > Search and rescue support
- ➤ Fleet replenishment
- Joint operations headquarters
- ▶ Repair & maintenance support
- Mine countermeasure (MCM) operations and support
- Hydrographic survey operations and support



### **Enforcer LPDs**

ength o.a. 120 - 186 metres
eam mld 24.8 - 27.2 metres
raught 5.8 metres

Displacement 7000 - 17000 tonnes

Speed 16 - 21 knots
Crew 90 - 150 persons
Spec. personnel 200 - 800 persons





### **Landing Platform Docks**

The Landing Platform Docks (LPD) have a large internal space for large landing craft utilities (LCU) or six small landing craft vehicle personnel (LCVP) craft. They can accommodate two medium to heavy helicopters at the same time.

The design has proven to be very effective in missions. Each vessel can carry an embarked force (EMF, 600 persons) and has a Role 2 medical facility on board.









### **CUSTOM BUILT AMPHIBIOUS SHIPS**

### **Landing Platform Docks**

The Royal Netherlands Navy's LPD, Johan de Witt can act as an amphibious command ship. It can coordinate amphibious landing operations up to brigade level. For this task it has extra facilities to embark an amphibious staff of up to 402 persons. It can also operate with Chinook helicopers.

The main tasks of HNLMS Rotterdam include transport and the ability to independently land a large group of marines with their associated equipment and supplies for up to ten days. There is room on board for 595 marines, plus vehicles, equipment and ammunition.

HNLMS Rotterdam can fully support the marines for 30 days. In addition, the vessel can also be used for various other purposes such as a platform for helicopter missions against submarines and as a transport ship for equipment for land and air force units. It also provides effective support for mine hunters, operations against terrorists, evacuation operations and for environmental disaster relief.

### **Suitable for**

- ➤ Amphibious support
- Strategic transport
- Maritime security
- ➤ Humanitarian aid/disaster relief
- Search and rescue
- > Fleet replenishment
- Joint operations headquarters
- Repair and maintenance support
- Mine countermeasure (MCM) operations and support
- ➤ Hydrographic survey operations and support



### **HNLMS Rotterdam**

Displacement

12,750 tonnes



### **HNLMS Johan de Witt**

Displacement

16,680 tonnes



### **RFA Bay Class**

Displacement

16,190 tonnes



### **AMPHIBIOUS SERIES**

### **Amphibious Landing Ships**

Landing ships have a history dating back to the Second World War.

Despite being primarily intended for amphibious assaults, many landing ships subsequently proved to be very versatile in peace time as well, fulfilling logistics transport and support tasks in remote areas worldwide.

However, many vessels are not suited or designed for the tasks that they are expected to carry out.

The Damen Landing Ship range is a state-of-the-art flexible class designed to fulfil all traditional Landing Ship mission requirements, as well as the support and secondary mission tasks required by modern naval platforms of this size. Implementing many smart design features, the Damen Landing Ship design boosts flexibility, creating vessels with more value throughout their entire lifetime

### Suitable for

- Amphibious support
- Strategic transport
- Maritime security
- > Humanitarian aid/disaster relief
- Search and rescue
- Fleet replenishment
- Joint operations headquarters
- ➤ Repair and maintenance support
- Mine countermeasure (MCM) operations and support
- ➤ Hydrographic survey operations and support



### Stan Lander

Length o.a. 42 - 57 metres
Beam mld. 10 - 12 metres
Draught 2.5 - 2.7 metres
Deadweight 290 - 700 tonnes
Speed up to 11 knots
Crew 8 - 10 persons





### **BOOSTING LANDING SHIP VERSATILITY**

### **Landing Ships**

The vessels in the Damen Amphibious Series have proven to be very effective and adaptable. Be it Landing Craft or Landing Platform Docks, the vessels have been successful in both the missions they were designed for and in those they were not. The same design philosophy is used in the latest Landing Ship range. This results in the flexible arrangement of spaces, internal logistics and vital infrastructure, thus ensuring long-term effectiveness and adaptability.



### **Landing Ship Logistics**

Length o.a. 80 - 90 metres
Beam mld. 14 metres
Deadweight 350 - 900 tonnes
Speed up to 17 knots
Crew 12 persons

roops/EMF 36 persons



### **Landing Ship Transport**

ength o.a. 100 - 120 metres

eam mld. 16 metres

Draught 3.5 - 3.9 metres
Deadweight 2900 - 2200 tonnes

eed up to 15 knots
w 18 persons

Troops/EMF 234 - 378 persons









### **AMPHIBIOUS SERIES**

### **Landing Craft**

Damen Landing Craft have been extremely effective and adaptable, with the vessels being very successful in missions they were not specifically designed for. During disaster relief operations, the Landing Craft are

particularly useful when harbour infrastructure has been disabled, being able to deliver aid and support directly to where they are needed.

During anti-piracy operations, a flotilla of craft can receive support

from a Landing Craft as a forward operating base for several days. A Damen Landing Craft is your long-term amphibious solution.



### **PROVEN VERSATILITY & FLEXIBILITY**

### **Landing Craft**

The Landing Craft range includes various essential, cost-effective design features. Included amongst these is a bow ramp (and stern ramp) designed for handling vehicles up to 70 tonnes

and a stern anchor and winch for use during beaching and beach recovery. Damen Landing Craft provide a stable landing platform in surf conditions. The design is optimised for minimum wading depths and features a high degree of survivability and redundancy. The design satisfies modern intact and damage stability requirements.

### **Operational profile**

- ➤ Amphibious operations
- ➤ Ship-to-Shore movements
- ➤ Forward operating base (FOB) role
- ➤ Harbour protection
- Riverine operations
- ➤ Humanitarian aid/disaster relief
- ➤ Non-combatant evacuation operations
- ▶ Rapid environmental assessments





LCU 3607

### **Landing craft series**

Length o.a. 15 - 36.6 metres
Displacement 8 - 80 tonnes
Beam mld 3.8 - 6.8 metres
Draught 0.8 - 1.25 metres
Speed 11 - 30 knots



The Damen Naval Fleet Support series are available in a wide range of sizes and capabilities, especially designed to provide global support.

The series are a cost effective, flexible and highly capable addition to any fleet.

- Custom-built Naval Auxiliaries
- Multi-role Auxiliary Vessels
- Training Vessels
- Sail Training Vessels
- Custom-built Support Vessels



SPECIALISED IN SECONDARY SUPPORT

Auxiliaries



### FOR DISASTER RELIEF OR EMERGENCY RESPONSE



















### **CUSTOM BUILT NAVAL AUXILIARIES**

### **Support Ship**

The Joint Support Ship HNLMS Karel Doorman is built for three main tasks: supply at sea for support of maritime units, strategic sea transport, including boarding and disembarking personnel and equipment when there are limited port facilities available, and logistics support from sea (seabasing). For the last, the ship serves as a base at sea for the execution and support of operations on land.

### **Operational profile**

- ➤ Amphibious support and operations
- ➤ Replenishment at sea
- ➤ Strategic lift
- Sea basing
- Maritime security
- ➤ Humanitarian aid/disaster relief
- Search and rescue
- > Fleet replenishment
- ➤ Repair and maintenance support
- ➤ Mine countermeasure (MCM) operations and support
- ➤ Hydrographic survey operations and support

#### Sensors

 Extensive radar suite for both surface-tosurface and surface-to-air surveillance, IFF, IO-detection System

### **Effectors**

- ▶ 2x Goalkeeper CIWS
- ▶ 4x SRBOC launchers
- ➤ 2x 30 mm remote controlled force protection guns
- ▶ 4x .50 remote controlled medium calibre guns



### **Joint Support Ship**

Length o.a. 205 metres
Displacement 27,000 tonnes
Beam mld 30.4 metres
Draught 7.8 metres
Speed 18 knots









### **LOGISTIC SUPPORT VESSELS**

# The Navy's work horses

Auxiliary vessels are often considered the workhorses for navies carrying out crucial logistics operations. Damen has vast experience in building auxiliaries in both the naval and the commercial arenas. Damen Naval, our naval shipbuilder, can match commercial and military standards and specifications, enabling it to offer military enhancements according to customer specifications.

Vessels are equipped with the latest sensor and weapon suites and cuttingedge communication, automation and propulsion systems.

### **Suitable for**

- ▶ RAS/FAS, sea basing, strategic transport, disaster relief, training
- Assistance during disasters and as a command centre
- > Transport of troops and equipment

### HNLMS Karel Doorman Joint Support Vessel (JSS)

Length o.a.204.7 metresDisplacement27,000 tonnesBeam mld30.4 metresDraught7.8 metresSpeed18 knotsRange at 15 kn10,000 nm

### HNLMS Amsterdam Replenisher (AOR)

Length o.a. 166.8 metres
Displacement 17,400 tonnes
Beam mld 22.0 metres
Draught 8.0 metres
Speed 21 knots
Range at 15 kn 13,440 nm

### **HNLMS Pelikaan**

### **Logistic Support Vessel 6513 (LSV)**

Length o.a. 65.4 metres
Displacement 1,150 tonnes
Beam mld 13.2 metres
Draught 3.0 metres
Speed 15 knots
Endurance 21 days at sea

### **Combat Support Ship**

Length o.a. 179.3 metres
Beam mid 8.3 metres
Draught 8.3 metres

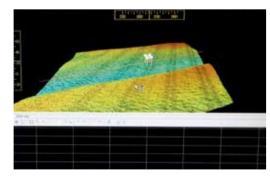
Depth to

Helicopter deck
Displacement
Speed
Displacement
Displacem











### **NAVAL AUXILIARIES**

### **Hydrographic survey**

Damen is an experienced design and construction partner for hydrographic survey vessels. Decades of experience with both naval and commercial hydrographic survey vessels means that we can offer customers an unbeatable price-quality ratio.

Damen ensures that every requirement is met in terms of hull shape, sensor suite and systems. As well as the

hydrographic research function, Damen offers add-ons such as search and rescue, mine-sweeping and training functions.

### **Suitable for**

- ➤ Hydrographic and oceanographic survey
- Oil spill recovery
- ▶ Disaster relief, Search and Rescue
- Fisheries inspection
- ▶ Pollution control
- ➤ (Coast guard) Training

### HTMS Pharuehatsabodi Hydrographic Survey Vessel (HSV)

Length o.a.66.3 metresDisplacement354 tonnesBeam mld13.2 metresDraught3.1 metresSpeed12 knotsRange at 15 kn3,000 nmEndurance15 days at sea

### HNLMS Luymes / HNLMS Snellius Hydrographic Survey Vessel (HSV)

Length o.a.81.4 metresDisplacement1,900 tonnesBeam mld13.1 metresDraught4.0 metresSpeed12.5 knotsRange at 15 kn4,300 nmEndurance14 days at sea



### **MULTI-ROLE AUXILIARY VESSELS**

### The multi-mission vessel

Intended for global service, the capacity of the Multi-Role Auxiliary Vessel (MRAV) allows for more than one specific mission during a deployment. Capable of hydrographic

operations in both littoral and deeper waters, this vessel also has a helideck and substantial storage capacity for other mission configurations, equipment and cargo.

Furthermore, the MRAV can serve as a base for more extensive operations such as disaster relief and naval task group training support at sea.









### PROVEN MISSION-MODULARITY

# **Multi-role Auxiliary Vessel**

The common theme running through the MRAV series is the provision of a basic platform offering reliable and cost-effective multi-role potential and survey capabilities. With the addition of supplementary modular mission equipment, this family of vessels can be mobilised in numerous, mainly littoral, naval tasks such as

explosive ordnance clearance and disposal, diving operations, torpedo recovery and overhaul, ROV and UAV deployment, SAR, and coastal infantry and submarine support.

The largest version of the range will be able to operate worldwide, on the ocean as well as in littoral waters. This ship has additional capabilities such as disaster and humanitarian relief, oceanography and naval training support.

The introduction of flexible concepts allows as many functions as possible to be included in the vessels' scope without reducing the effectiveness and capacity of the fleet.

### **Operational profile**

- Hydrography and oceanography
- Search and rescue
- Diving explosive ordnance clearance and disposal (EOCD)
- ➤ Unmanned systems deployment (UUV - UAV - USV - ROV)
- Coastal transport and small scale logistics support
- Coastal infantry support (compact sea base)
- ➤ Humanitarian aid/disaster relief
- ➤ At sea training and weapon system calibration support to combatants
- Naval personnel general practical training calibre guns



#### General

Length o.a. 43 - 85 metres

Displacement 660 - 3600 tonnes

Beam mld 11.5 - 16 metres

Draught 1.90 - 5.0 metres

Endurance 2 - 4 weeks





# The best training possible

The Damen Training Vessels range provides training platforms to perform diverse training and support duties.
These include torpedo and mine

recovery operations, navigation training, diving support and helicopter related training operations. In addition, they can be used for officer sea familiarisation, target towing and consort duties, as well as unmanned aerial vehicle support.









### **Sail Training Vessel**

- Naval cadet training
- Nautical training
- Navigational training



### General

ength o.a. 82-107 metres
Displacement 1150 - 3000 tonnes
Sail area 2630 - 3500 m<sup>2</sup>
Crew + trainee 85 - 240 persons
Rigging type Square, full-rigged

### THE BEST NAUTICAL AND NAVIGATIONAL TRAINING

### **Sail Training Vessels**

Damen helps customers give the best nautical and navigational training possible with our Sail Training Vessels. Naval cadet training has never been so easily put into practice. The Sail Training Vessels are also used as an ambassador of the country of origin by participating in tall ship races (STI) with other navy training vessels from all over the

world. The Sail Training Vessels are designed in cooperation with Dykstra Naval Architects for optimal sailing performance.





### FLEXIBLE CONCEPTS ALLOW AS MANY FUNCTIONS AS POSSIBLE WITHOUT REDUCING THE EFFECTIVENESS

### **Training Vessels**

The Damen Multi-role Air Training Vessel has been designed and built to undertake the following primary missions:

- Training of helicopter pilots, activities include:
  - Day/night flight deck helicopter takeoff and landing operations
  - Simulated helicopter search and rescue operations

- > Training of flight deck crew:
  - · Fi-Fi activities
  - · Crash on deck procedures
  - · Aircraft securing operations
  - Aircraft refuelling (hot/cold)
  - · HIFR, both simulated and live
  - · Vertical transfer operations
  - Anti-Submarine/Anti-Surface Aircraft Control (ASAC)
- Aircraft control training

The vessel was also successfully delivered for the following secondary missions:

- Officer Sea Familiarisation Training
- Consort Duties
- Operational diving support (mine warfare)
- Practice weapon recovery

### Suitable for

- Navigation training
- > Torpedo and mine recovery operations
- Diving support
- ➤ Helicopter/UAV training
- ➤ Officer sea familiarisation
- Target towing
- Consort duties
- ➤ Unmanned aerial vehicle support



### **Training Vessel**

 Length o.a.
 41.5 - 94.0 metres

 Beam
 9.2 - 14.4 metres

 Speed
 12.8 - 17 knots

 Crew
 24 - 22 persons

 Spec. personnel
 up to 91 persons

















### **WORKHORSES FOR NAVIES**

# Naval Support Vessels

As well as auxiliaries such as the Hydrographic Survey Vessel and Auxiliary Oiler Replenishment vessel, Damen offers many other noncombatants for other types of specialist support.

### Naval support vessels

- > Fast Crew Suppliers
- ASD Tugs
- > RSD Tugs
- Multi Cats
- Lighter Barges
- Salvage Tugs
- Diving Support Vessels
- Worldwide Support Ships
- > Rescue Gear Ships
- Emergency Gear Ships
- > Submarine support ships





### TRITON PLATFORM

# **Damen Digital Solutions**

In this age of connectivity we have developed Damen Triton. With Triton, Damen builds a digital twin of the vessel. These twins contain all the elements that the real ship consists of and is connected to its sensors.

Operators can log in remotely to their vessel and see, in real time, where it is operating along with the particulars of its performance and condition. We offer the Damen Triton service to owners and operators of Damen and non-Damen vessels alike.

### **EQUIPMENT**

# Damen Marine Components



To guarantee our customers the optimal combination of vessel and equipment we design and manufacture a range of essential components that are vital for propulsion, manoeuvring and other critical functions. These include nozzles, winches and steering and rudder systems together with their controls, all of which have a significant impact on our customers' onboard experience.

We base our designs on performance data from the previous ships that we have built, combined with the knowledge and experience within our network of vessel operators, research institutes and other renowned partners. Together, this input forms the knowledge-base that underpins our premium standard product portfolio.

Our products are suitable for use on Damen and non-Damen vessels alike. As such, in addition to supplying our own global network of shipyards, we also work closely with third-party shipyards around the world. With a focus on quality and maximum user efficiency, Damen Marine Components ensures the optimal performance of our clients' vessels.

### LIFECYCLE SUPPORT

### **Damen Services**



Damen Services cares for your fleet with a wide-ranging portfolio of customer support and after-sales services covering a vessel's complete lifecycle.

Where you need us, when you need us; we support you from deployment to decommissioning. Our diverse service options help you achieve your up-time and reliability goals whilst ensuring low lifecycle costs. Our global service network and availability guarantee a swift response.



### START-UP GETTING YOU GOING

### Ship Delivery

Through our worldwide service support network and knowledge of transport contracts, we offer comprehensive logistics to handle own-keel, heavy-lift, towage, and semi-submersible transport deliveries.



### **Warranty Support**

Our philosophy of building long-term relationships with our clients extends to providing excellent warranty support. During the warranty period, we regularly visit our clients to ensure satisfaction with our products. In the event of a problem arising, we are well-placed to solve it swiftly.



### **Technical Documentation**

Our professional and experienced in-house team provides all the technical documentation you need for safe, smooth and efficient operation that maximises the life of your vessel.



### (<del>)</del>

### Fleet Support

Our fleet support solutions make sure you can concentrate on your core business. We help you in achieving a reliable performance through offering remote support, the use of technological developments and total lifecycle support.



### **Training**

Our training programmes help to ensure your employees are skilled, motivated, and committed. This approach helps you to reach the all-important goals of reduced operational costs and improved vessel uptime.



### **Integrated Logistics Support**

Integrated Logistics Support (ILS) helps you to improve availability and maintainability of your fleet and assets.



#### Green

Our range of Green Solutions position us perfectly to assist in your efforts towards greater sustainability. Amongst our offerings are ballast water treatment systems and scrubber installations.



### **Technical Assistance**

Damen Services delivers the technical assistance to ensure optimal performance throughout the entire lifecycle of your vessel. Our specialities cover problem solving, short, well organised docking periods and high quality maintenance and repair.



### Parts & Equipment

Damen Parts Services offers competitive prices and efficient deliveries. Over the years we have built up strong purchasing power and a considerable supplier network. Thanks to our network of global Service Hubs, we can guarantee short response times.



### Repair & Conversion

Our established global sales network provides you with dedicated repair and conversion contacts to assist, whatever your requirements may be.



#### Services Portal

The Damen Services Portal is an online platform that makes it easy for everybody involved in operating, maintaining and managing vessels to stay on top of their job.

### **GLOBAL PRESENCE**

### **Service Hubs**



### Service Hubs

### Europe

Damen Services Netherlands | Gorinchem

Damen Services Germany | Hamburg

Damen Services United Kingdom | Southampton

#### **Africa**

Damen Services Nigeria | Port Harcourt Damen Services South Africa | Cape Town

### **Asia & Middle East**

Damen Services Bangladesh | Dhaka Damen Services Middle East | Sharjah | Dubai

#### Americas

Damen Services Brazil | Rio de Janeiro Damen Services Canada | Victoria Damen Services Central America | Panama

#### Australia

Damen Services Australia | Brisbane

### **Worldwide Service Hubs**

Damen's Service Hub network grew rapidly over the past few years. At present there are more than ten hubs on five continents. We continuously enhance our services in regions without proximity to a Damen Shipyard, but where Damen vessels are operating. Local presence enables our skilled engineers to respond faster than ever to your needs.

### DAMEN SHIPYARDS GROUP

### A broad scope of vessels

General Summary: Damen Shipyards
Group operates 36 shipbuilding and
repair yards, employing 11,000 people
worldwide. Damen has delivered
over 7000 vessels in more than 100
countries and builds some 175 vessels
annually. Due to its unique, standardised
ship-design concept, Damen is able to
guarantee consistent quality.

How we build: Damen's focus on standardisation, modular construction and keeping vessels in stock leads to short delivery times, low 'total cost of ownership', high resale values and reliable performance. Furthermore, Damen vessels are based on thorough R&D and proven technology.

Products & Services: Damen offers a wide range of products, including tugs, workboats, naval and patrol vessels, high speed craft, cargo vessels, dredgers, vessels for offshore industry, ferries, pontoons and superyachts.

For nearly all vessel types, Damen offers a broad range of services, including maintenance, spare parts delivery, training and the transfer of (shipbuilding) know-how. Damen also offers a variety of marine components such as nozzles, rudders, winches, anchors, anchor chains and steel works.

### **Damen Shiprepair & Conversion (DSC)**

has a worldwide network of fourteen repair and conversion yards of which ten are located in North West Europe. DSC has more than 40 floating (and covered) drydocks, including the longest at 420 x 80 metres, and the widest at 405 x 90 metres, as well as slopes, ship lifts and indoor halls. Projects range from the smallest simple repairs through to Class compliance, maintenance, complex refits and the complete conversion of large offshore structures. DSC completes around 1,300 repair and maintenance jobs annually, both at yards, as well as in ports and during voyages executed by our dedicated Harbour & Voyage team.

### Colophon

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