Introducing Damen's innovative integrated crew transfer solution, the FCS 7011 represents a quantum leap forwards in terms of speed, comfort and accessibility. Designed to carry personnel to and from offshore assets in a broad weather window, it expands the options available for offshore marine access using future-proof logistics.
CHANGING THE LOGISTICAL MIX

The starting point for developing the FCS 7011 was broad market consultation throughout the offshore crew change value chain. The widespread desire for increased safety with greater cost efficiency has resulted in a solution that adds a new dimension to the logistical mix. The time has come to think differently in a new era of offshore personnel transportation.

FCS 7011 HIGH SPEED TRAVEL

Optimised sailing times for increased numbers of personnel, to locations farther from shore, results in more efficient operations no matter the conditions. A comfortable transit with increased workability has become a reality due to advanced design and the latest technologies.
Knowing that a safe, comfortable journey lies ahead, passengers can use the transit period to relax and prepare themselves for work. A restful, secure environment awaits on board the marine access solution of the future. An interior that goes well beyond practical functionality, delivering a completely new experience combining both comfort and safety.

THE NEXT LEVEL OF COMFORT

Generations of ship building knowledge combined with cutting-edge, comfort-enhancing technologies including the latest in motion-specific interior design delivers an unrivalled travelling experience.

SIT BACK AND RELAX

Personalised entertainment systems offer a wide array of options ranging from films and music to ‘in-flight’ information.

FLEXIBLE LAYOUT

The spacious interior allows for the addition of client-specific configurations of rooms. This allows for rooms to be set up for both social and formal meetings.
SAFETY FIRST

GETTING TO WORK

A safe crossing makes embarkation and disembarkation as quick and smooth as possible. Extensive optimisation projects with our key partners have resulted in an industry-leading synthesis of vessel layout, dynamic positioning, stabilisers and motion-compensated gangways. Together, these ensure fast, safe crew movements across a broad weather window.

The next-generation personnel transfer system has been specifically designed by Ampelmann to fit the FCS 7011. The reduced weight, electric cylinders and optimised gangway length match the vessel perfectly, ensuring a fully integrated crew change solution.

As an alternative and contingency solution, FROG basket operations can be conducted from the deck.
**MARINE ACCESS SYSTEM**
- **Ampelmann electric hexpod – DOF compensation**

**INTERCEPTOR**
- Reducing pitch and roll during transit

**WATERJET PROPULSION**
- High speed, high manouvrability and DP performance

**RETRACTABLE THRUSTER**
- High performance station keeping

**GYRO STABILISER**
- Reducing roll by up to 80%

**OPTIMAL VIEW**
- Large windows for passengers

**CREW TRANSFER BASKET**
- FROG: contingency or primary transfer system

**360-DEGREE VISIBILITY**
- A clear view for marine crew

**TWO-DECK**
- Flexible passenger lay-out

**CARGO AREA**
- Capacity for 'hot shot' cargo

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**DAMEN FCS 7011 CREW TRANSFER**

**IN DETAIL**

**PRINCIPAL DIMENSIONS**
- Length overall: 73.4 m
- Beam overall: 11.0 m
- Draught at bow: 6.5 m
- Cargo deck area: 35.6 m²

**ACCOMMODATION**
- Business seats lay-out: 120-150
- Economy seats lay-out: up to 200
- Crew: 8-12

**PERFORMANCE**
- Maximum speed: 40 kn
- Cruising speed: 35.57 kn
- Workability: up to 3.0 m significant wave height
- Station keeping: DP2

**ACCOMMODATION**
- Business seats lay-out: 120-150
- Economy seats lay-out: up to 250
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The Damen Sea Axe hull reduces acceleration and resistance, softens the pitch motion and eliminates slamming, resulting in unrivalled comfort and low fuel consumption compared to conventional ships.

INTERCEPTORS
The active interceptors generate counteracting forces by intelligently directing the transom water flow, reducing both pitch and roll motions even further when the FCS 7011 is underway.

GYROSCOPE
The large gyroscope generates powerful counteracting torques using zero energy, passive physics. This reduces the roll motions of the vessel significantly. The system works during both transfer and transit.

MARINE ACCESS SYSTEM
The marine access system fully compensates for all of the six degrees of motion made by the vessel, making the transfers safe and simple. The hexapod system with its electric cylinders, together with the telescopic gangway, actively compensates for all residual motions at the aft deck.

The FCS 7011 crew transfer vessel offers unrivaled comfort, even when sailing at high speeds. This is due to the combination of the passenger accommodation being positioned where the vessel movements are typically lowest and the multiple, state-of-the-art technical solutions that are integrated to minimize the vessel’s accelerations and motions when it is both underway and stationary. Its weight distribution has also been optimized for smooth and comfortable ride periods within the limits set by Class Rules’ stability requirements.
Damen has developed extensive R&D programmes leading to multiple ground-breaking innovations. We are committed to the continuous improvement of our products and production methods with the objective of reducing the environmental impact of the product lifecycle.

Damen R&D also contributes greatly to the digitalisation of Damen products and services by supporting vessel connectivity.

WORKING FOR A BETTER FUTURE

Our research and development programmes, with the close cooperation of our partners, have helped create a vessel that delivers a new level of comfort and safety for high-speed, long-distance transfers.

DP calculations and seakeeping advice were provided by MARIN (Maritime Research Institute Netherlands). The ship hydrodynamics department of Delft University of Technology (TU Delft) was responsible for the model testing, calculations and additional design input.

Advice on human motion experience and the development of the Virtual Horizon was undertaken by TNO (Netherlands Organisation for Applied Scientific Research).

EXPERIENCE AND R&D

Fast Crew Supplier 5009
Extensive track record of crew change for offshore oil and gas

Fast Ropax 5510
Proven passenger transport solutions

Accommodation Support Vessel 9020
Marine access solutions

IDEAS AND SKILLS

Innovation and the development and testing of new ideas lies at the heart of progress. They are at their most effective when they are done in cooperation with other organisations. This is why we work closely with numerous research institutions, universities, maritime organisations and, of course, clients. And not just in the Netherlands, but all over the world.

The revolutionary Sea Axe bow is just one example of what can be achieved through cooperation.

Whilst much of our R&D work goes on at our headquarters in Gorinchem, the Netherlands, Damen operates on a global scale. Wherever we are, the results from all our R&D activities benefit the work done by all the yards and subsidiaries of the Damen Shipyards Group.

PROGRESS THROUGH PARTNERSHIP
The FCS 7011 is a core part of Damen’s commitment to developing a new and more sustainable business model for the offshore crew transfer sector.

To deliver efficiencies and cost savings, this involves not only determining the ideal mix of waterborne and airborne transport to specific locations, but also looking at different ways of contracting to allow more transparency and flexibility.

This programme includes looking at moving away from traditional day-rate fee structures to those that might charge on a pay per person / transfer, and even the possibility of vessel sharing among operators so that a single large vessel like an FCS 7011 could embark multiple crews and deliver them to multiple platforms on a single run.

For a vessel that may have a lifetime of several decades, the many factors that contribute to the total cost of ownership, from build to operations to decommissioning and disposal, are all coming under the microscope.

**SAILING THE FCS 7011**

**RELIABLE EFFICIENT ECONOMICAL**

**INSIGHTS INTO YOUR OPERATIONS**

Damen Digital is the gateway through which all the data from systems and equipment on board Damen vessels is channelled and transmitted. Digital monitoring paves the way to more precise scheduled maintenance planning and can extend the length of the periods required between maintenance stops through, for example, the accurate monitoring of fuel and oil quality. Damen works closely with its clients to continuously extend the capabilities of Damen Digital.

**SUPPORTING YOU 24/7**

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Our commitment to the future extends beyond ensuring the success of your business and ours. It also encompasses providing a safe environment in which employees can conduct their work and leisure activities, which includes minimising the environmental impact of our products.

The maritime industry recognises the increasingly urgent need for greater environmental awareness. With operations often situated close to the shore and sources of food, the environmental impact of every vessel needs to be kept to a minimum.

Damen has developed, tested and delivered several vessels with diesel-electric propulsion systems, which effectively reduce fuel consumption, emissions and noise levels. Fully electric propulsion (in combination with remote charging stations) is the logical next step and an interesting option for nearshore operations.

Damen Shipyards Group operates 36 shipbuilding and repair yards, employing 12,000 people worldwide. Damen has delivered more than 6,500 vessels in more than 100 countries and delivers some 160 vessels annually to customers worldwide. Based on its unique, standardised ship-design concept Damen is able to guarantee consistent quality.

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

Damen offers a wide range of products, including tugs, workboats, naval and patrol vessels, high speed craft, cargo vessels, dredgers, vessels for the 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 can assist customers with 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, Damen has built over 1,000 vessels locally in over 70 countries. Damen can deliver packages ranging from simple licensing to vessel design, full materials supply and, if necessary, turnkey solutions, all tailored to each client’s requirements.

**DESIGN & LICENCES**
- Basic and/or detailed designs provided
- License/royalty for multiple series
- Proven design

**MATERIAL PACKAGES**
- Renowned suppliers
- Materials on stock
- Advanced logistics

**BUILDING ASSISTANCE**
- Assistance on-site
- Enhance shipyard skills
- Transfer of knowledge/technology

Damen Services intends to provide added value to a Damen vessel, whether this involves a single intervention or a complete package such as an integrated logistics support or a long-term service agreement.

**INTEGRATED LOGISTICS SUPPORT**
- Reliability, availability and maintainability analysis
- Reliability centered maintenance analysis
- Logistic support analysis

**DELIVERY**
- Warranty support
- MyDamen
- Commissioning

**GETTING STARTED**
- Damen Services is able to tailor to the client’s package in order to facilitate smooth delivery. As the shipyard ensures a smooth delivery, the client will enjoy maximum efficiency and optimal turnaround.

**KEEPING YOU GOING**
- Downtime is becoming more and more expensive. Damen Services’ portfolio is designed to reduce downtime during the life cycle of the vessel or fleet. Services will be configured to fit the client’s needs. Whether it is the monitoring of machinery or a short intervention, Damen Services can deliver the best solution.

**INTEGRATED LOGISTICS**
- Integrated Logistics Support (ILS) is increasingly applied in the commercial and coastguard sectors today.
- If requested, Damen can supply a customised ILS program tailored to every client’s unique requirements.

**WARRANTY SUPPORT**
- Customer satisfaction is of utmost importance to us. Customers can reach out to a dedicated service team 24 hours a day, seven days a week. As well as having access to Damen via our mobile app, customers are visited by a Damen technician, regardless of whether there is an issue or not.

**INNOVATION & DEVELOPMENT**
- We respond to the rapidly changing world with the continuous development of our services. This includes an expanding focus on digitalisation and sustainability.
- Examples include remote monitoring, a personal webportal for maintenance management, 3D parts printing and intelligent asset management.
JOB DONE

HAVE A SMOOTH JOURNEY HOME...