Specialist project support vessel
An introduction


James Fisher introduces a new class of offshore support vessel available for operations around the UK and across European waters.

Designed to balance high performance with cost-effectiveness, Dart Fisher is our latest offshore support vessel. It is a flexible, multi-role craft ideal for conducting support operations in renewable and other maritime engineering sectors.

Its high carrying capacity minimises the number of visits needed to a site – further reducing costs and increasing operational flexibility.

The vessel’s high quality specification also includes marine grade aluminium construction for damage survivability, large fuel capacity and superior propulsion and performance solutions.

Unique features

Dart Fisher has been installed with innovative features developed from within the group to enable superior performance.

Large cargo capability - Utilising the 60ft ISO container rail system, Dart Fisher enables the safe and secure transport of up to 30T of cargo offshore in a combination of 20ft and 10ft ISO containers, providing operational flexibility. The rail system allows the containers to be moved around the vessel in minutes improving project efficiency.

Intelligent Fender System™ - Providing the customer, asset owner and operator with real-time data to understand vessel performance. Enables greater asset protection, enhanced safety, fuel savings and customer assurance through monitoring of push-on forces.

Ship-to-Turbine™ - Operating from a 20ft containerised system, Dart Fisher is the model vessel to deliver innovative, cost-effective offshore gearbox oil exchange services.

Vessel Motion Monitoring System™ - Providing accurate data to measure the movement of the vessel during operations improving technician welfare and safety during transit.
Benefits and features

Dart Fisher can deliver fully integrated, totally flexible operations in one single trip; including diving, ROV deployment, surveys, cable and pipeline subsea repair, technician and equipment transfer.

Significantly reducing operational downtime, Dart Fisher has the ability to stay in field for up to a week.

In addition, James Fisher can deliver experienced marine project management support to successfully fulfil clients’ needs.

Benefits

Dart Fisher delivers many benefits to offer a more efficient, integrated offshore solution by performing multiple capabilities in one operation.

- Internationally recognised DNV certification ensuring high quality performance and reliability
- Versatile long-range solution operating up to 150 nautical miles from safe haven
- Reduces the number of dedicated vessels needed and the amount of site visits required
- Delivers significant cost reductions and increased operational efficiency
- Capable of supporting crew for long periods in the field with accommodation, sewage treatment and fresh water-making facilities. Easily adapted to support technicians for the same period with the addition of a SOLAS A60 accommodation module
- Offers high-speed crew, equipment and operational transit – even with a high payload
- State-of-the-art monitoring systems to deliver live and accurate data to assist owners, charterers and crew during operations

Features

The operational efficiency of Dart Fisher reduces costs and streamlines supply chains through the delivery of James Fisher’s fully integrated solution.

- DNV 1 category 1 certification
- Practical fresh water-making capability – at a rate of up to 100 litres/hr – allowing the vessel to work autonomously
- Transports up to 8 generators per day (based on a standard 50kVA model weighing 2,780kg) enabling greater efficiency in servicing offshore turbines
- 60ft ISO rails to support up to 30T of cargo in a combination of 20ft and 10ft containers
- Hercules HHBT bow thrusters to deliver greater operational manoeuvrability
- Palfigger deck-mounted crane supports ROV launch, recovery and general lifting on vessel
- Oil spill boom deployment equipment to aid rapid response in contamination situations
- State-of-the-art Furuno navigation and communications suite, complete with integrated ECDIS and ARPA radar, GMDSS VHF and HF radios, remote control bridge wing stations, satellite broadband and satellite phone
Commercial capabilities

Crew transfer

Welfare and safety are critical factors in crew transfer and advanced features guarantee these. As well as delivering high-speed transit for personnel and technicians, essential amenities are catered for with a wide range of facilities.

- Easy transfer of 12 passengers/technicians with KPM Marine Crew 100 Suspension Seats supported with four point safety harnesses
- Comfortable environment for crew transfer supported by a Webasto air conditioning unit
- International charge points supported with stabilised entertainment system
- Welfare facilities include toilets, showers and a full galley

Cargo

Dart Fisher is capable of carrying a significant payload of either essential equipment or fuel which dramatically reduces the number of site visits needed. It has been designed to make the most of all available deck space.

Equipment:

- Large deck space of 150m² which can transport up to 30T of cargo and equipment for operations
- Operating with a 60ft ISO rail system, Dart Fisher is capable of carrying a combination of 20ft and 10ft ISO containers. This allows flexibility in operations, security in fastening to the deck and a containerised approach to transporting cargo and equipment – which allows for a quick transfer of equipment from shoreside to the deck
- Includes a Palfinger deck-mounted crane to support operations and management of heavy equipment on deck

Refueling system:

- DNV bunded capability to carry 25,000 litres of fuel in one trip
- Pumps 170 litres of fuel per minute through a 164ft hose providing quick fuelling options in offshore wind activities

Accommodation

Dart Fisher can support fully loaded operations with a range of 675 nautical miles with an accommodation module to offer a safe and comfortable environment for technicians. All of our certified offshore accommodation modules are designed to provide longevity and low maintenance service in the most demanding locations.

- Certified to DNV 2.7-1 / EN 12079, CSC and ABS rules
- Safe area application with overpressure system
- Flexible laydown solution with minimal footprint
- Easy ‘plug and play’ hook-up
- SOLAS A60 rated and conforms to the latest FTP codes
Overview

<table>
<thead>
<tr>
<th>Vessel type</th>
<th>Multi-role catamaran</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hull material</td>
<td>Marine grade aluminium</td>
</tr>
<tr>
<td>Hull form</td>
<td>Symmetrical round bilge catamaran</td>
</tr>
<tr>
<td>Bow thruster</td>
<td>Hercules HHBT</td>
</tr>
<tr>
<td>Engines</td>
<td>2 x MAN V12 engines</td>
</tr>
<tr>
<td>Propulsion</td>
<td>2 x servogear ecoflow propulsor</td>
</tr>
<tr>
<td>Classification</td>
<td>DNV 1A1 HSLC R1 windfarm service 1</td>
</tr>
<tr>
<td>Flag</td>
<td>UK MCA SCV code (MGN 280) category 1</td>
</tr>
<tr>
<td></td>
<td>MCA area category 1: up to 150nm from safe haven</td>
</tr>
<tr>
<td>Cargo</td>
<td>30T</td>
</tr>
<tr>
<td>Length overall</td>
<td>25.7m</td>
</tr>
<tr>
<td>Length on design waterline</td>
<td>24.4m</td>
</tr>
<tr>
<td>Beam (not including fenders)</td>
<td>8.0m</td>
</tr>
<tr>
<td>Maximum speed</td>
<td>30knts</td>
</tr>
<tr>
<td>Load line length</td>
<td>23.1m</td>
</tr>
<tr>
<td>Deck space</td>
<td>150m²</td>
</tr>
<tr>
<td>Maximum range</td>
<td>790nm (technicians only with reserve tanks)</td>
</tr>
</tbody>
</table>

General arrangement
Technical details

Vessel performance

Principle dimensions
- Length overall: 25.7m
- Length on design waterline: 24.4m
- Load line length: 23.149m
- Beam (not including fenders): 8.0m
- Depth (moulded): 3.8m
- Draught (to baseline): 1.54m
- Deck space: 150m²

Capacity
- Fuel (main tanks): 2 x 3,000 litres
- Fuel (reserve tanks): 2 x 3,000 litres
- Fresh water: 1 x 520 litres
- Sullage: 1 x 520 litres
- Cargo: 30T
- ISO 20ft containers: 3

Max dead weight
- Technicians: 12 @ 100kg = 1,200kg
- Crew: 4 @ 100kg = 400kg
- Main tanks (100%): 6,000 litres = 5,040kg
- Fresh water (100%): 520 litres = 520kg
- Sullage (10%): 52 litres = 52kg
- Stores: 500kg
- Cargo: 30,000kg
- Total: 37,712kg

Propulsion
- Engines: 2 x MAN V12 D2862 LE463 “Medium Duty” rating. 1400bhp @2100rpm, EIAPP Tier II compliant
- Gearbox: 2 x Servogear HD295HL/HR with ratio 3.3:1
- Propulsion: 2 x Servogear Ecoflow Propulsor controllable pitch propellers, 4 blades, 1225mm diameter
- Bow thruster: Hercules HHBT
- Speed: 25 knots (90% MCR, Fully Loaded in calm water) 30 knots (90% MCR, Full Pax (no cargo) in calm water)
- Crane: 1 x fully marinised Palfinger PK6500M deck crane
- Generators: 2 x Beta Marine 35kW 3 phase 400 volt gensets

Range
- Technicians only without reserve tanks: 395 nm
- Fully loaded without reserve tanks: 335 nm
- Technicians only with reserve tanks: 790 nm
- Fully loaded with reserve tanks: 675 nm
Note, above figures are with the engines running at 80% MCR, 2 gensets running at 50% load and with a fuel reserve of 10%.

Certificates
- MCA dangerous goods certificate
- German COE (certificate of equivalence)
- DNV category 1 (1A1 HSLC R1 windfarm service 1)
- MCA category 1 (150nm)
- EIAPP certificate
- MARPOL 73/78 Annex IV sewage certificate

CCTV
Waterproof CCTV cameras are positioned around the vessel to provide clear visibility through a multifunction display mount at the central helm. This provides a safe and recordable platform to monitor the activities on the main deck to give the skipper greater control within operations.

Oil spill response
This vessel has the ability to rapidly transport and deploy large oil spill equipment and booms.
### Safety equipment
- 2 x SOLAS no. 2 card
- 1 x Code of practice training manual
- 1 x SOLAS training manual
- 2 x 3 gallon bucket
- 1 x Davit arm for man overboard system
- 2 x 16 man liferaft (SOLAS ‘A’ pack) with hydrostatic release
- 18 x SOLAS lifejackets with lights
- 2 x Thermal protective aids
- 16 x SOLAS immersion suits
- 1 x EPIRB 121.5 MHz frequency
- 4 x Orange ring type c/w reflective badging and vessel name
- 1 x Lifebuoy drogue and pocket
- 18 x Metres orange floating line 8mm
- 1 x Throwing line (sock type)
- 1 x Throwing line holder
- 2 x Adult harness c/w attached line
- 12 x Red parachute rocket
- 6 x Red hand held flare
- 2 x Buoyant smoke
- 1 x OS yellow poly bottle 2 litre
- 1 x VHF GMDSS safety message card
- 1 x Fire blanket slim pack MSA
- 3 x Day shapes - anchor ball
- 1 x Day shape - diamond
- 1 x Bell
- 1 x Waterproof torch c/w bulb MCA
- 1 x Aqua signal w/proof hand s/light 24V 50W
- 1 x Radar reflector white
- 1 x Galley stop
- 1 x Cat B medical stores law MSN 1768 (M + F)
- 1 x Water container
- 1 x Lockable cabinet for medical stores
- 1 x Oxygen meter

### Passenger welfare

#### Mess
- Seats: 12 x passenger suspension seats with fold down tables and four point safety harnesses
- Tables: Fixed large table suitable for meetings, dining or work
- Lockers: 12 x personal lockers
- Entertainment: Satellite broadband, TV, Radio, 2 x 27” monitors for games, DVDs and plotting system
- Electrics: International charging sockets throughout the mess

#### Bathroom
- Toilets: 3 x macerator toilets
- Showers: 2 x standard showers, 1 x diver’s shower
- Drying room: 1 x standard drying room

#### Galley
- Refreshments: Tea/coffee facilities
- Domestic: Drying facilities
- Dining: Hot and cold food areas
- Galley: 1 x single door refrigerator, 1 x medium sized microwave, 1 x sink with hot and cold water, 2 x electric plate hob, 1 x electric oven, 1 x electric hot beverage machine

#### Accommodation
- Dimensions: 6.058m x 2.438m x 2.896m
- Certification: A60, ABS, DNV 2.7-1, EN 12079, CE marked, ILO and CSC certified safe area and come as standard size of ISO 20ft
- Weight: 7,600kg
- Crew berths: 4 x MLC compliant including showers, toilets and sinks
Applications
Diving

- Large deck space to support dive control units, deck decompression chambers, handling of umbilicals and a full dive spread
- SOLAS A60 accommodation capability to keep divers in operations for up to 7 days - increasing efficiency and cost-effectiveness
- Vessel can support a wide range of diving activities including subsea inspections, repair and maintenance work
- Excellent facilities to support divers’ welfare – including hot showers and a purpose-built changing room
- Full redundancy in all electrics allowing for full power back-up support while on operation
- Moon pool to support diver tracking

ROV

- Deck-mounted Palfinger crane to launch ROV into operations
- Large deck space to facilitate the transit of ROVs including control cabin
- Moon pool available for deployment of ultra-short base line transducer

Ship-to-Turbine™

- Large deck space and carrying capacity to support the STT 20ft ISO container and replacement oil in 10ft ISO containers
- Ability to support STT technicians at sea for up to a week’s duration allowing for increased operational productivity per trip
- Capability to work in UK and European waters from strategic locations throughout the UK
- Significant reduction in operational downtime

Underwater surveys

- Moon pool allows for safe deployment of instrumentation and tracking devices
- Large deck space for towed instrumentation
- Supports ROV surveys
- Able to carry out multiple surveys including scour, anode inspection and cable interface surveys
- Capable of carrying survey suite
- Available upgrade to a differential global positioning satellite allows support of further survey work

Project support

- Fast vessel – even with a high payload; allowing operational flexibility and support of equipment, technicians and garage space to support operations and maintenance
- Multiple services can be delivered from the vessel in one operation allowing greater scope of work to support project needs. This can reduce the number of required trips and increase the time spent on-site – with the capability to support a project at sea for up to 7 days
- Transfer of up 12 passengers/technicians
- Fast oil spill boom response capability

Onboard workshop

- Flexibility in operations to deliver repairs and maintenance solutions while in field
- Large garage space to allow for a custom workshop to support the specific project requirements
- MCA certified to carry hazardous goods in support of maintenance jobs including painting and fuel transfer

Offshore refuelling

- Large deck space of 150m² supporting a 60ft ISO rail to transport up to 25,000 litres of bunded fuel in one trip
- Quick and effective fuel transfer of up to 170 litres per minute
- Cost-effective solution to manage refuelling and transport of windfarm temporary generators with the deck space supporting up to 8 generators per day (based on a standard 50kVA model weighing 2,780kg)

Crew and equipment transfer

- Excellent amenities including kitchen, hot and cold food capability, washrooms and sleeping accommodation - keeping crew in operation or transfer as comfortable as possible
- Up to 12 crew transported in one operation
- Carries up to 30T of cargo in a combination of 20ft and 10ft containers
- 2 x V12 MAN engines that enable the vessel to reach 30knts in crew/technicians transfer, and 25knts when fully loaded with crew/technicians and 30T cargo
Experience

Proven track record

Location: Dogger Bank Met Mast (sailing from Grimsby)
Client: Forewind
Capability: • IRM • Equipment transfer • Met Mast support • Working 100nm offshore

Location: Hornsea Met Mast (sailing from Grimsby)
Client: RES Smartwind
Capability: • IRM • Working 100nm offshore • Fog horn replacement

Location: Rhyl Flats Windfarm (sailing from Liverpool)
Client: SIEMENS/RWE
Capability: • Crew transfer • Equipment transfer

Location: Dogger Bank (sailing from Grimsby)
Client: Universal Foundation Norway
Capability: • IRM • Unmanned aerial vehicle inspection