

DAMEN

OCEANS OF POSSIBILITIES

SESSION 2

The Blue Economy Roll Out

Frederick Vandepitte – Regional Sales Director Africa



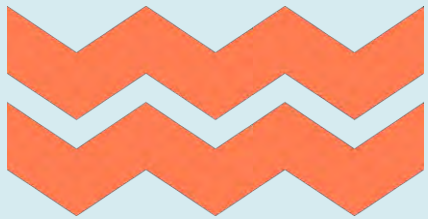
Agenda



Consolidating the Traditional Activities and Introducing Aquaculture, Maritime Services, Marine Biotechnology, O&G Exploration as Part of the Blue Economy Roll Out

- › Introduction of Damen
 - Damen as a company
 - Deliveries to Africa
- › Fishing
 - Local built artisanal
 - Industrial
- › Aquaculture
- › O&G
- › Blue Economy – The Ports
- › Finance





Introduction



OUR HISTORY

Created in 1927
One shipyard
8 ships per year
Located in the Netherlands (¹Holland)





Over 13,000 employees
38 shipyards across
5 continents with
an orderbook of 5,5 billion EUR in 2024

 Damen
newbuild yard

 Damen Shiprepair
& Conversion yard

 Damen Technical
Cooperation yard

 Damen
service hub

 Damen
Company 

PORT TOUR





REMORQUEURS ET NAVIRES DE
SERVITUDE



PÉTROLE ET GAZ OFFSHORE



OFFSHORE EOLIEN



PONTONS ET BARGES



DRAGAGE



TRANSPORT PUBLIC





NAVIRES DE CROISIÈRE



DÉFENSE ET SÉCURITÉ



PÊCHE



AQUACULTURE



YACHTING



TRANSPORT MARITIME





TRANSPORT INTÉRIEUR / BUNKER BARGE



CONSTRUCTION CIVILE



CONVERSIONS

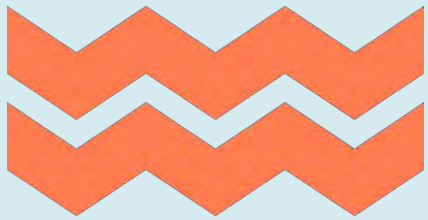


ANTI POLLUTION



RÉPARATION





Fishing



Fishing – Artisanal & Local



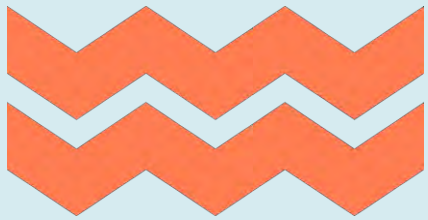
DAMEN
ARTIST IMPRESSION

DAMEN
ARTIST IMPRESSION



Fishing – Industrial and Ecologic



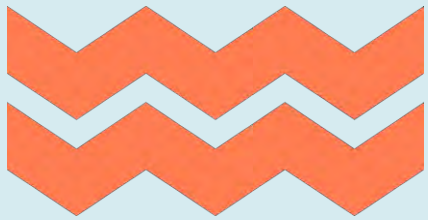


Aquaculture



Aquaculture





O&G

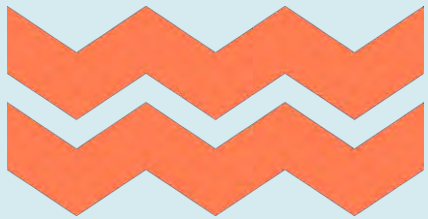


O&G – Personnel & Security



O&G – Supply & Safety





Blue Economy – The Ports



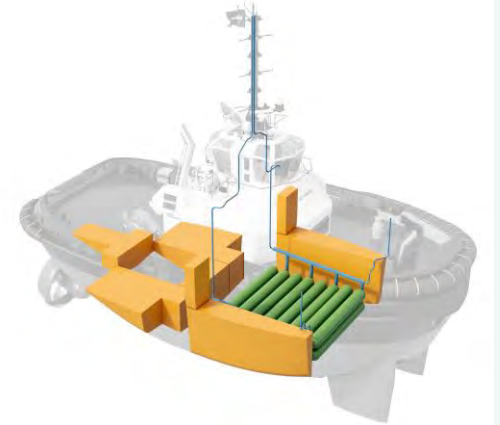
DIESEL - FUEL FLEXIBLE



DIESEL - METHANOL



DIESEL - HYDROGEN



DIESEL - ELECTRIC



The Perfect Size



Is Small



The Perfect Size



Is Medium



The Perfect Size

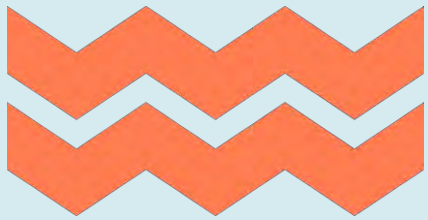


Is Large



The Ports – Pilot vessel





Financing



THE ENABLER THAT ENABLES IT ALL

Damen Financial Services



Atradius Dutch State Business, the export credit agency of the Netherlands supporting Dutch exporters, can provide credit insurance coverage.

Repayment

Financing needs to be amortized during tenor in equal installments. Grace period and residual value can be discussed.



Competitive financing terms, due to AAA rating of the Netherlands.

Coverage

Up to 85% of purchase price (i.e 15% downpayment)

Tenor

Up to 15 years post delivery and potentially longer tenor possible for "Green" projects.



Atradius has a strong focus on energy transition. Premium discount and more flexible for "Green" projects".



AFRICAN DEVELOPMENT BANK GROUP



مكتب أبوظبي للمصادرات
ABU DHABI EXPORTS OFFICE



Booths 21-22

A lot to discuss.

Ships, Maintenance, Civil Engineering...

Welcome at Booths 21-22 for info & a Tulip





DAMEN





Shrimp Trawler 2607

The Shrimp Trawler 2607 maintains the simplicity, and at the same time, improves the quality of the vessel, with focus on low fuel consumption. The processing area includes a plate freezer for 500 kg, seven stations with storage in the fish hold at -20°C. The living quarters include accommodation for two officers and separate crew accommodation.

90 m³

cubic metres
insulated fish hold



9.5

knots
max. speed*

11.7

tonnes
bollard pull*



DIMENSIONS

- Length 26.45 m
- Beam 7 m
- Draught max 3.45 m
- Gross tonnage 149 GT

PERFORMANCE

- Propulsion power 440-480 kW
- Service speed 9 kn
- Fuel oil 97 m³
- Fish hold 90 m³

EQUIPMENT

- Shrimp trawl winch with 2x trawl drum and 1x try net drum
- 6 tons @ 50 m/min
- Holding power 9 tons





CRAB CATCHER 60

GENERAL

Basic functions	Crab fishing with cages, on board processing, on board cooking and freezing and storage in a freezer hold
Classification	RMRS
Flag	KM 🇷🇺 Fishing Vessel, R2, AUT 3, Ice 3 Russian

DIMENSIONS

Length o.a.	60.80 m
Length b.p.p.	55.20 m
Beam mid.	14.00 m
Depth to main deck	7.50 m
Draught summer (base)	4.00 m
Storage capacity of cages	275 m ³
Cargo deck strength	5 t/m ²
Gross tonnage	<3000 GT

TANK CAPACITIES

Fuel oil	500 m ³
Fresh water	200 m ³
Lubrication oil	10 m ³
Ballast water	20 m ³
Dirty oil	5 m ³
Sewage	20 m ³

FISH HOLD CAPACITY

Fish hold (-18°C)	900 m ³
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PERFORMANCES

Speed (at summer draught)	10.5 kn
DWT at summer draught	1200 tons
DWT at service draught	675 tons
Max. deck load with VCG 1 m above main deck	200 tons
Endurance	45 days

PROPULSION SYSTEM

Propulsion	Two diesel engines
Thrust system	Two azimuth thrusters
Propulsion power	2x 925 kW
Bow thruster	1800 mm FPP 920 kW
Bow thruster	250 kW
Bow thruster propeller	FPP, diameter 1100 mm

AUXILIARY EQUIPMENT

Networks	230/440 V 60 Hz
Main generator sets	2x 800 kW / 1000 kVA
Emergency generator set	1x 60 kW / 75 kVA

DECK EQUIPMENT

Anchor windlass	For 2x stockless anchor 1440 kg
Capstan	2x 3 ton SWL at 15 m/min
Cranes	2x Knuckle boom cranes each with a capacity of 10 ton SWL at 10 m/min.
Loading/unloading derricks	2x derricks with a length of 8 m and a hoisting winch of 750 kg at 10 m/min.

FISHING EQUIPMENT

A sliding table, an hydraulic tilting platform at SB side, a release gutter for female and juvenile catch.

Two derricks, one with a length of 5 m with a 5 tons power block and one with a length of 2 m with an 8 tons power block, one coiler.

Conveyor belt for transport of the crab to the storage tank.

A tank of 30 m³ for storage of live crab, with lifting bottom.

A crab butchering table with conveyor belt to the factory deck and conveyor belt from the butchering area overboard.

A bait area with bait store.

PROCESSING, BOILING, FREEZING AND PACKING

Processing area with conveyors, survey decks, collecting station, preparation tables, overhead rail system with trolley, processing tables, boiling basin, two cooling basins, brine freezing basin, glazing basin and brine mixing tank. Packing area with conveyor to the freezing hold.

FREEZING

Total freezing capacity 30 tons/24 hours in brine tanks.

ACCOMMODATION

A spacious air-conditioned accommodation for 37 persons. It includes a large wheelhouse with technical space, ship's office, leisure spaces and various stores and workshops.

LIFESAVING EQUIPMENT

MOB boat with davit on the forecabin deck on PS.

Life rafts on main deck one in front of SB recess and one aft of PS recess.

NAVIGATION EQUIPMENT

Navigation systems suitable for navigation in Arctic conditions.

COMMUNICATION EQUIPMENT

Communication systems according sea area A3.

All data presented is preliminary and is subject to change without prior notice. Artist impressions and general arrangement plan may show optional equipment. Options may impact performances.

LANDING UTILITY VESSEL 2208

Standard



PICTURE OF SIMILAR VESSEL

GENERAL

Yardnumber	Standard
Date	17-04-2024
Basic functions	Ro-Ro and dry cargo transportation, Aquaculture support operations
Ship type	LUV 2208
Classification	MCA CAT 2 Workboat
Emission regulation	IMO Tier II, Ø III
Flag	UK
Builder	Damen Shipyards & Coastal workboat Scotland

DIMENSIONS

Length overall	21.70 m
Beam overall	7.90 m
Beam moulded	7.50 m
Depth moulded	2.50 m
Design draught	1.55 m
Dead weight	60 t
Deck cargo	40 t
Deck area	110 m ²
Gross tonnage	101 GT

TANK CAPACITIES

Fuel oil	21.5 m ³
Fresh water	1.0 m ³
Waste water	1.0 m ³

PERFORMANCES

Speed	9.0 kn
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PROPULSION SYSTEM

Main engines	2x Volvo D13
Engine power	2x 294 kW @ 1800 rpm
Total Power	588 kW
Gearboxes	2x ZF W235
Propulsion	2x Fixed pitch propellers
Diameter	1.0 meter

AUXILIARY EQUIPMENT

Networks	230 / 400 V AC @ 50 Hz, 24V DC
Generator	Sole Diesel, 45GTC, 45 kVA, 36 kW
Shore connection	1x 16A
Cooling system	Closed cooling system
Hydraulic system	Gearbox driven
Ø Cargo system	Fuel supply hose
Ø High pressure washer	Kärcher HDS 8, connected to fresh water tank
Fire fighting ER	Stat-X

DECK LAY-OUT

Anchor	2x HHP
Ø Capstans	3x 5 ton
Ø Deck crane fore	1x HS Marine AK 72
Ø Deck crane aft	1x HS Marine AK 40
Fender	Diagonal rubber fender
Bow ramp	Hydraulically operated, Bi-fold, 3.1m clear width
Safety equipment	Life raft, life jackets, first aid kit, fire extinguishers
Access to waterline	Recessed steps at both sides

ACCOMMODATION

Deckhouse	Helmsman seat with control desk, settee, toilet, pantry
Ø Accommodation	Cabins for 2-4 crew, sanitary space, pantry, AC

NAUTICAL AND COMMUNICATION EQUIPMENT – GMDSS A1

Navigation lights	Including RIM and NUC
Searchlight	Francis FR230CP, 230W, 24V
Navigation system	Raymarine Axiom 12 RV, with radar and chart plotter
GPS	Raystar 150
Echosounder	CPT-S
Autopilot	Evolution
VHF	2x Icom 25 W
Portable VHF	2x Icom Handheld

Items marked with Ø are optional

Fast Crew Supplier 7011

STANDARD



SEA NINE



GENERAL

Hull material	Aluminium
Superstructure material	Aluminium
Basic functions	Fast Marine Access, Crew transfer
Classification	Bureau Veritas 1 * Hull * MACH, HSC-code--Cat A, Dynapos AM, Sea Area 3

DIMENSIONS

Length overall	73.6 m
Beam overall	11.2 m
Depth at side	5.5 m
Draught max	4.5 m
Deadweight max	Up to 105.0 ton
Cargo deck area (fore)	35.0 m ²
Deck load	2.5 t/m ²
Gross tonnage	1276
Crew	Up to 12 persons
(Industrial) personnel	Up to 200 persons

TANK CAPACITIES

Fuel oil	70.0 m ³
Fresh water	11.0 m ³
Sewage	11.5 m ³
Bilge water/ dirty oil	6.0 m ³

PERFORMANCES

Speed	27-40 kn
Range	650-800 nm
DP	Up to DP2ENR* (99,98,91,91)

PROPULSION SYSTEM

Main engines	4x MTU / Caterpillar
Total Power	8,000-14,400 kW
Gearboxes	4x Reintjes VLJ type
Propulsion	4x Waterjet
Bow thrusters	1x or 2x 426 kW, retractable 1x or 2x 250 kW, tunnel

ELECTRICAL EQUIPMENT

Network	700-750V DC, 24V DC, 440V 60Hz AC, 400/230V 50Hz AC
Generator	Up to 4x 450 kW, main engine driven
Emergency generator set	1x 95 kW

COMFORT ENHANCING EQUIPMENT

Roll reduction	1x Gyroscope, VEEM VG 1000
Ride control	Active Interceptors, Naiad Dynamics

DECK LAY-OUT

Anchor equipment	1x HHP Pool TW, chain, electric winch
Davit and rescue craft	
Prepared to receive a marine access system and a transfer basket	

SHIP SYSTEMS

Ship systems are according to Class	
Fuel filtration	2x Static filter system and pump
Engine room ventilation	2x Extraction fan, 36,000 m ³ /hr in total
Air-conditioning	Up to 785,000 BTU/hr
Fire extinguishing	Fixed gas-flooding system in engine room, sprinkler system in accommodation, manually operated fire extinguishers

ACCOMMODATION

Bridge deck	Wheelhouse
1 st Deck	Personnel area, bar and lounge, lobby
Main deck	Personnel area, crew cabins, mess/pantry, technical spaces
Lower deck	Crew cabins, technical spaces, stores
Seats	Luxurious (fully) reclinable seats, pitch 1.0-2.0 m

NAUTICAL AND COMMUNICATION EQUIPMENT

Integrated navigation system	
Remote monitoring system	
Searchlight	2x
Radar	1x X-band, 1x S-band
Electronic chart	Dual ECDIS
DGPS	2x
AIS	1x
Compass	1x Magnetic, 2x gyro
Autopilot	1x
Night vision camera	1x HSC approved
Echo sounder	1x
Speedlog	1x
Internal communication	Intercom and public address system
CCTV	1x
External communication	GMDSS A2

OPTIONAL

Marine access system	Fully integrated motion compensated gangway, continuous access
DP system	DP 2, including reference systems, bow thruster configuration
Classification	HSC-code--Cat B, Dynapos AM R (DP2)
Seat type	Reclinable marine seats up to fully reclinable first class seats
Entertainment system	Video and music on demand, Wi-Fi
Transfer basket	1x, up to 10 persons
Data communication	Iridium, V-SAT, Fleet broadband, 4G
Cold store	
Sewage treatment plant	

Fast Crew Supplier 3307 - patrol

STANDARD



SEA NINE



GENERAL

Hull material	Aluminium
Superstructure material	Aluminium
Basic functions	Fast supplier / Crew boat / Patrol duties / Maritime safety / Securing economical Waters & coastal boundaries / Search and rescue
Classification	Bureau Veritas 1 * Hull * MACH Light ship/ Fast Patrol Vessel Sea Area 3

DIMENSIONS

Length overall	34.2 m
Beam overall	7.3 m
Depth at sides	3.3 m
Draught max	2.5 m
Deadweight max	Up to 60.0 t
Cargo deck area	70.0 m ²
Deck load	2.5 t/m ²
Deck cargo	10.0 t
Gross tonnage	174
Crew	Up to 6 persons
(Security) personnel	Up to 14 persons

TANK CAPACITIES

Fuel oil	60.3 m ³
Fresh water	18.1 m ³
Sewage	4.9 m ³
Bilge water/ dirty oil	1.4 m ³

PERFORMANCES

Speed	Up to 30.0 kn
Range at max speed	1,700 nm

PROPULSION SYSTEM

Main engines	3x Caterpillar / MTU
Total Power	Up to 3,580 kW
Gearboxes	3x Reintjes WVS series
Propulsion	3x Fixed pitch propellers
Bow thruster	1x 75 kW, electrically driven

ELECTRICAL EQUIPMENT

Network	24V DC, 230V/400V 50Hz AC
Generator sets	2x 86.0 kW

DECK LAY-OUT

Anchor equipment	1x 105 kg HHP Pool TW, chain, electric winch
Fendering	Aluminium fender on deck level, heavy duty rubber fender transom corners and tyre fender at sides

SHIP SYSTEMS

Ship systems are according to Class	
Fuel filtration	1x Static fuel filter
Engine room ventilation	2x Supply fan, 38,000 m ³ /hr in total
Air-conditioning	Up to 220,000 BTU/hr
Fire extinguishing	Stat-X in engine room

ACCOMMODATION

Bridge deck	Wheelhouse
Main deck	Personnel cabins, mess, sanitary spaces, office, store, deck store
Lower deck	Mess, galley, crew cabins, sanitary spaces, store

NAUTICAL AND COMMUNICATION EQUIPMENT

Integrated navigation system	
Remote monitoring system	
Searchlight	1x
Radar	1x X-band
Electronic chart	1x Non-ECDIS
GPS	1x
AIS	1x
Compass	1x Magnetic, 1x GPS
Autopilot	1x
Echo sounder	1x
Internal communication	Intercom, loudhailer
External communication	GMDSS A2
Weather system	1x

OPTIONAL

Aft deck	Wood covering, storage boxes, container fittings
Bilge water separator	1x 0.5 m ³ /hr
Fuel filtration	Additional non-self-cleaning dynamic separator
Fuel consumption monitoring system	
Fresh water maker	
Sewage treatment plant	
Hoisting equipment	Foldable deck crane
Davit system and daughter craft	
External 4-FI system	180 m ³ /hr
Accommodation	Aft steering position, treatment room, survivors' space, food store, armoury
Various navigation equipment	
External communications	GMDSS A3
Data communication	Iridium, V-SAT, Fleet broadband, 4G, Wi-Fi system, LAN system
Ballistic protection	Wheelhouse, main deck mess, with steel plates/glass
Night vision camera	
CCTV system	



Offshore Carrier Range

5000 – 8500 – 11000 – 14000 – 20000



PICTURE OF SIMILAR VESSEL

DIMENSIONS & PERFORMANCE

Length overall	100 - 168 m
Breadth moulded	24 - 36.5 m
Depth to upper deck	9 - 14 m
Draught design approx.	5.5 - 8.0 m
Deadweight	5000 - 24000 t
Cargo deck length	65 - 126 m
Maximum deck area	1500 - 4600 m ²
Trial speed approx.	10 - 15 kts
Accommodation	30 - 240 persons

DP SYTEM

The DOC fulfils the latest market demands because it can be equipped with a DP3 system. This makes the DOC extremely stable ensuring safe loading/unloading operations offshore.

CUSTOMIZATION OPTIONS

All vessels in the DOC range can be customized with:

- DP2/DP3
- Helicopter deck (Sikorsky S76/S92)
- 4 point mooring
- Active roll damping
- Retractable bow thruster
- HFO fueled or LNG fueled
- Ice Class
- Grounding

POSSIBLE MISSION SPECIFIC EXECUTIONS

The DOC can be outfitted with special mission equipment to create a mission specific vessel.

Among others:

- Cable Laying – DOC – CLV
- Offshore Construction – DOC – OCV
- Deep Sea Mining – DOC – DSM
- Rock Dumping – DOC – RDV

ENVIRONMENTAL PROTECTION

- The DOC is supplied with a Green Passport, which gives an inventory of possible hazardous materials on board.
- Fuel tanks are protected with cofferdams from bottom and shell, and the vessel has a Zero Dumping Certification.
- Scrubbers are optional to gain the benefits of HFO sailing and to reduce emissions.
- The DOC can be equipped with LNG propulsion, with fixed or containerized LNG storage tanks.
- Special attention is paid to sustainability, ensuring a long lifetime for the vessel.
- Heat recovery is optional (cooling water/exhaust gas).
- Optional full Clean Design.

Anchor Handling Tug Supply 180



PICTURE OF SIMILAR VESSEL

GENERAL

Basic functions

Offshore supply, towing and anchor handling operations
Lloyds Register
ø100 A1 Anchor Handler, Offshore Supply Ship, Tug, *IWS, ø LMC UMS DP(AA)

Classification

DIMENSIONS

Length o.a.	74.10 m
Length load line	70.71 m
Beam mid.	19.00 m
Depth mid.	8.00 m
Draught summer (base)	6.50 m
Draught summer (keel)	7.50 m
Deadweight (summer)	2600 t
Cargo deck area	445 m ²
Deck load (at 1 m above deck)	800 t

TANK CAPACITIES

Ballast water	1500 m ³
Fuel oil	1100 m ³
Potable water	650 m ³
Chain lockers	450 m ³

PERFORMANCES (APPROX.)

Speed (at summer draught)	15 kn
Bollard pull	180 t

PUSPULSION SYSTEM

Main engines	4x MAN 7L27/38
Propulsion power	4x 2555 bkW
Propellers	2x 4300 mm, CPP in optima nozzles
Bow thruster	2x 750 kW, 1740mm, FPP
Stern thruster	2x 410 kW, 1550mm, CPP

AUXILIARY EQUIPMENT

Networks	440 V and 230 V
Shaft generators	2x 1600 kW at 1800rpm
Main generator sets	2x Caterpillar C18, 550 kW each at 1800 rpm, 690 V, 60 Hz
Emerg./ harbour generator set	1x Caterpillar C9, 238 kW at 1800 rpm, 440 V, 60 Hz

DECK LAY-OUT

Deck crane	1x 5 t @ 14 m
Anchor mooring winch	1x 2.5 t @ 9m / 1.3 t @ 16 m
Anchor mooring winch	1x Electric-hydraulic, with rope drum and two warping heads
AH/Towing winch	1x HP hydraulic, double drum, 300 t pull, 400 t brake, 2000 m & 2000 m of 76 mm
Towing pins	4x SWL 180 t hydraulic
Chain fork	2x SWL 500 t hydraulic
Stem roller	1x SWL 500 t, split drum, ø 3.0 m, 6 m length
Tugger winches	2x electric, each 10 t pull
Capstans	2x electric-hydraulic, each 10 t pull

CARGO HANDLING SYSTEM

Ballast pump	1x 100 m ³ /hr at 3 bar
Fuel oil pump	1x 100 m ³ /hr at 9 bar
Fresh water pump	1x 100 m ³ /hr at 9 bar

ACCOMMODATION

Crew	21 persons
Passengers	11 persons

NAUTICAL AND COMMUNICATION EQUIPMENT

Radar systems	1x X- band + S-band
DP – system	DP 2
GMDSS	Area A3

OPTIONS

Fire Fighting Ship 1 or 2	
Secondary winch	2x LP hydraulic, 120 t pull, 120 t brake, 1100 m of 152 mm rope
Transport of Liquid mud, brine, base oil and dry bulk	
Travelling cranes	
Increased Bollard Pull	
Hybrid propulsion	
electric AHT Winch package	
Extended accommodation	



Stan Tug 1606



Azimuth Stem Drive Tug 1810



PICTURE OF SIMILAR VESSEL

GENERAL	
Basic functions	Towing, mooring, pushing and survey operations
Classification	Bureau Veritas 1 # HULL + MACH Tug Coastal Area
Painting	Epoxy paint system
DIMENSIONS	
Length overall	16.76 m
Beam overall	5.94 m
Depth at sides	2.54 m
Draught aft	2.25 m
Displacement	90 t
Scantlings	Hull 10 mm, sheerstrake 20 mm
TANK CAPACITIES	
Fuel oil	14.2 m ³
Fresh water	1.1 m ³
Sewage	0.7 m ³
Bilge water/ sludge	0.5 m ³
PERFORMANCES	
Bollard pull ahead	16.0 t
Speed	10.9 kn

PROPULSION SYSTEM	
Main engines	2x Caterpillar C18 TAJA
Total power	894 bkW (1216 bhp) at 1800 rpm
Gearboxes	2x Reinjes WAF 264L 4.5:1
Propellers	2x Kaplan II fixed pitch
Nozzles	2x 1350 mm Van de Giessen "Optima" with stainless steel innerrings
Rudders	2x streamlined double plates
Steering gear	Powered hydraulic 2x 45°, with rudder indicator

AUXILIARY EQUIPMENT	
Generator set	Caterpillar C2.2 NA, 230/400 V, 20.3 kVA, 50 Hz
Alternator 24 V	2x main engine driven
Battery sets	2x 24 V 200 Ah with changeover, 1x 24 V 80 Ah
Alarm system	Engines, gearboxes, bilge alarm, fire detection engine room
Bilge pump	Electrically driven Azzucce CP-40, 15 m ³ /h at 2.2 bar
Fuel oil system	Duplex filters, water separator and emergency stopping of supply
Cooling system	Closed cooling system
Water system	Electrically driven fresh water hydrophore 24 V
Fresh water heater	230 V, 30 liter
Ventilation	Mechanical ventilation in engine room, 10.500 m ³ /h
DECK LAY-OUT	
Anchors	2x 80 kg Pool (High Holding Power)
Chain	100 m shortlink, 12.5 mm diameter
Anchor winch	Electrical for one anchor
Ø Crane	Heila HLM 3-2S 0.5 ton at 6.9 meter
Ø Capstan	1.3 ton at 9 m/min
Ø Coupling winches/bollards	2x manually operated 25 ton each
Towing hook	Mampsey disc type, SWL 250 kW 25 ton
Lift rail	On top deck / Ø second life raft
Push bow	Cylindrical rubber fender 380 mm diameter
Fendering	Continuous rubber D-fender around hull 200 x 200 mm

ACCOMMODATION	
The accommodation is completely insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse and a floating floor. The air-conditioned wheelhouse is fitted with a corner settee with table and a control position. Below deck a galley, sanitary facilities, store and Ø crew cabin for 4 persons are provided. Windows are fitted in aluminium frames.	

NAUTICAL AND COMMUNICATION EQUIPMENT	
Searchlight	Pesch 250 W
Horn	Electric Ebuki E90
Radar	Furuno FR-8065 or Furuno FAR 1518-BB
Compass	Cassens & Plath, type Kötter
GPS	Furuno GP-39 or Furuno GP-170
Echosounder	Furuno FCV-628 or Ø Furuno FE-800
VHF	Sailor Compact 6248 or Ø 2x Sailor Compact 6222 DSC
Ø VHF hand-held	2x Jotron TR-30, GMDSS approved
Ø Navtex	Furuno NX-700B
Ø AIS	Furuno FA-170
Ø EPIRB	Jotron TRON-60S
Ø SART	Jotron Tronsart
Ø GMDSS area 1	MED approved equipment

GENERAL	
Basic functions	Towing, mooring, Ø escort, Ø oil pollution control and Ø fire-lighting operations
Classification	Bureau Veritas: 1 # HULL + MACH Tug (Bollard pull = 30 t) Unrestricted Navigation AUT LMS INWATER SURVEY Ø Green passport EU
Painting	Ø Lloyd's register: [4] 100 A1 Tug (Bollard pull = 30 t) [4] LMC LMS IWS Ø Green passport EU Epoxy paint system
DIMENSIONS	
Length overall	18.25 m
Beam overall	10.23 m
Depth at sides	3.75 m
Draught aft (approx.)	4.00 m
(98% consumables, without deck load and optional)	
TANK CAPACITIES	
Fuel oil	23.0 m ³
Fresh water	4.3 m ³
Sewage	3.2 m ³
Bilge water	2.0 m ³
Spare fuel oil	0.6 m ³
Ø Foam	4.4 m ³
Ø Dispersant	1.0 m ³
Ø Urea	1.3 m ³
PERFORMANCES	
Bollard pull ahead	30.5 t
Bollard pull astern	28.1 t
Speed	10.7 kn
Twin Fins	For increased maneuverability, better course stability, Ø higher escort forces, and less interaction in the inflow into the propellers.

PROPULSION SYSTEM	
Main engines	Caterpillar C32 TTAG
Total power	Approx. 1940 kW (2600 bhp) at 1800 rpm
Azimuth Thrusters	Schottel SRP 270 FP
Clutches (Slipping type)	Schottel built in
Propeller	Fixed Pitch, 5 blades, 1900 mm
Forced ventilation	Approx. 39.200 m ³ /h
Ø Exhaust emission treatment	IMO Tier II compliant

AUXILIARY EQUIPMENT	
Shaft generator	2x Shaft generator, 50kVA each 400 V, 50 Hz
Harbour diesel generator set	1x Caterpillar C4.4 64.5 kVA 400 V, 50 Hz
Bilge pump	1x Portable electrically driven
General service pump	2x Azzucce CA-401B, up to 19.0 m ³ /h and up to 2 bar,
Fuel oil filters	1x Tripex static water separator (10 micron)
Fuel oil purifiers	2x CUC PTLUS 27/54, 1260 lh each
Cooling system	Fresh water closed loop keel cooling
Fresh water pressure set	1x pump, Distremex B40, up to 6.6 m ³ /h and up to 1.5 bar
Sewage pump	Ø fired heater
Ø Central heating system	2x PTO pumps on each main engine
Hydraulic system	Dispersant pumpset with 2 spraybooms
Ø Oil pollution control	Internal fire fighting
Internal fire fighting	Ø Oil
Ø Fill pump	Ø CO ₂
Ø Fill monitor	Main engine driven pump(s), 600 m ³ /h each
	1x 600 m ³ /h or 2x 600 m ³ /h water, 300 m ³ /h water/foam mixture
DECK LAY-OUT	
Anchor	1x Pool type or Ø 2x Pool type (High Holding Power)
Anchor winch	1x Electrically driven 10 m/min + Ø 1x Electrically driven 10 m/min
Towing winch	1x Hydraulically driven split drum in open deck house structure.
	Ahead: spooling from the top, Astern: spooling from the bottom.
	Pull up to 20 ton and speed up to 44 m/min on second layer.
	Brake holding force 125 ton
	Electrically driven, 5 ton at 16 m/min
Ø Capstan aft deck	Mampsey Disc type
Ø Towing hook aft	HS Marine AK 16 HES, 0.8 t at 11.15 m or
Ø Deck crane	HS Marine AK 26/10.3 ES, 1.7 t at 10.30 m + winch 2000 kg.
Fendering	Cylindrical rubber bow fender above W-type block fender, D-type rubber fender at sides and aft, and Ø W-block fender push bow, Ø tyre fendering
ACCOMMODATION	
For 4 persons, completely insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse and floating floors. Air-conditioned accommodation with two crew cabins for two persons and pantry/messroom on the below main deck.	

NAUTICAL AND COMMUNICATION EQUIPMENT (or equivalent)	
Navigation lights	Den Heaton DNR 40 LED
Searchlight	1x Norselight SH310 1000 W + Ø 1x Norselight SH310 1000 W
Radar system	1x Furuno FAR 1518-BB
Electronic chart system	MaxSea TZ Professional
Ø ECDIS	Furuno FMD-3200
Compass	Cassens & Plath Reflecta 11
Satellite compass/GPS	JRC JLR-21
Autopilot	Simrad AP-70
Echosounder	Furuno FCV-628 or Ø Furuno FE-800 (MED)
CGTV	1 camera or Ø 5 cameras
VHF radio telephone	2x Cobham Sailor 7222 (one with DSC)
VHF portable (GMDSS)	2x Sailor SP3540
Ø SSB	Cobham Sailor 6310
Navtex	Furuno NX-700B
AIS	Furuno FA-170
EPIRB	Jotron Tron-60AIS
SART	Jotron Tron AIS
Ø VDR	Furuno VR-3000
Remote monitoring	Ready for Damen Trton
Anemometer	Gill Instruments GMX500

Ø = Optional equipment



Azimuth Stern Drive Tug 2111

PRELIMINARY CONCEPT



PICTURE OF SIMILAR VESSEL

GENERAL

Basic functions
 Classification
 Towing, mooring, escort, oil pollution control and fire-fighting operations
 Bureau Veritas
 I + HULL + MACH Tug (Bollard pull = 50 t)
 Unrestricted Navigation AUT IWS INWATER SURVEY
 Ø Escort
 Ø Ocean Ship
 Ø Green Passport EU
 Ø Fire Fighting Ship 1
 Ø Fire Fighting Ship 1 with water spray
 Lloyd's register
 Ø 100 A1 Tug (Bollard pull = 50 t) (H) LMC IWS IWS CAC 3
 Ø ECO
 Ø Descriptive note (HM or EDD (H-M))
 Ø Fire Fighting Ship 1
 Ø Fire Fighting Ship 1 with water spray
 Epoxy paint system

DIMENSIONS

Length overall 21.02 m
 Beam overall 10.81 m
 Depth at sides 4.10 m
 Draught aft (approx.) 5.00 m
 (96% consumables, without deck load and Ø)

TANK CAPACITIES

Fuel oil 30.5 m³
 Fresh water 7.0 m³
 Sewage 3.0 m³
 Dirty oil 1.3 m³
 Lubrication oil 1.3 m³
 Bilge water 2.3 m³
 Ø Foam 6.3 m³
 Ø Dispersant 2.5 m³
 Ø Urea 1.5 m³

PERFORMANCES

Bollard pull ahead 50.0 t
 Bollard pull astern 40.0 t
 Speed 11.7 kn

PROPULSION SYSTEM

Main engines Caterpillar 3512C HD TAC
 Total power 2750 kW (3702 bhp) at 1800 rpm
 Azimuth thrusters Kongsberg US165S
 Clutches (Slipping type) Kongsberg Built in 2400 mm
 Propeller diameter 2400 mm
 Forced ventilation 50,000 m³/h
 Ø Exhaust emission IMO Tier III compliant

AUXILIARY EQUIPMENT

Generator sets Harbor generator set
 Harbor generator set Accue CA-32/05 3.6 m³/h
 Bilge water separator Facet CPS-2.5 B MK III + EBM14X1 0.5 m³/h
 General service pumps 2x Accue CA-50/3 20.0 m³/h
 Fuel oil pump Accue MR41/10 up to 12.0 m³/h
 Fuel oil filters 2x Cooler filters and water separator
 Fuel oil purifiers 2x CJC PTUJ 27/81 M2-E2PWZ, 1520 l/h each
 Cooling system Keel cooling
 Fresh water pressure set DAB Euroinox 40/50T
 Sewage pumps Dabimax B40 6.6 m³/h
 Ø Sewage treatment plant Selmor Blue Sea Plus 2500
 Ø Central heating system Oil fired heater
 Main engine driven pumps (i.e. w. CAT main engines)
 Dispensant pumpset with 2 spraybooms
 Main engine driven pumps (s) 1200 m³/h or 2400 m³/h
 Ø Filtration 1x 1200 m³/h or 2x 1200 m³/h water, 300 m³/h water/foam mixture

DECK LAY-OUT

Anchor 1x 270 kg + Ø 1x 270 kg Pool (High Holding Power)
 Anchor winch 1x Electrically driven 10 m/min + Ø 1x Electrically driven 10 m/min
 Towing winch Hydraulically driven double drum, pull up to 15 ton and speed up to 30 m/min on second layer, brake holding force 150 ton
 Ø Towing pins 2x hydraulically driven SWL 12 ton
 Ø Capstan aft deck Electrically driven, 5 ton at 15 m/min
 Ø Towing hook aft Mampay SWL 650 kn / 65 ton
 Ø Capstan fore deck Electrically driven, 5 ton at 15 m/min
 Ø Crane HS Marine AK 16 HE3, 0.81 at 11.15 m or HS Marine AK 28/10.3 E3, 1.71 at 10.30 m + winch 2000 kg.
 Cylindrical rubber bow fender above fender, rubber fender at sides, cylindrical fender aft and Ø W-block fender push bow, Ø tyre fendering

ACCOMMODATION

For 5 persons, completely insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse and floating floors. Air-conditioned accommodation with three crew cabins and galley/ mess at accommodation deck.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight 1x Norselght SH470 2000 W + Ø 1x Norselght SH470 2000 W
 Radar system 1x Furuno FAR 1518-BB + Ø 1x Furuno FAR 1518-BB
 Electronic chart system Ø ECDIS
 Compass Casens & Plath Reflecta 11
 Satellite compass/GPS Simrad GN70/HS80A
 Autopilot Simrad AP-70
 Echosounder Furuno FCV-628 or Ø Furuno FE-800 (MED)
 CCTV 1 camera or Ø 5 cameras
 VHF radio telephone 2x Cobham Sailor 6222 (one with DSC) + Ø 1x Cobham Sailor 6215
 VHF portabe (GMDSS) 2x Sailor SP3940
 Ø SSB Furuno FS-1575
 Ø Inmarsat + Ø spare Furuno Felcom 18
 Navtex Furuno NX-700B
 AIS Furuno FA-170
 EPIRB Jotron Tron-60S
 SART Jotron TronSart20
 Ø VDR Furuno VR-3000
 Remote monitoring Ready for Damen Triton
 Accelerometer Gill Instruments GMX500
 Ø = Optional equipment

Azimuth Stern Drive Tug 2811

STOCK



PICTURE OF SIMILAR VESSEL

GENERAL

Basic functions
 Classification
 Towing, mooring, escorting and fire-fighting operations
 Bureau Veritas
 I + HULL + MACH Escort Tug (Bollard pull = 60t) (maximum steering force = 58 t, maximum braking force = 70 t, maximum escort speed = 10 kn) Unrestricted Service AUT IWS Inwater Survey/COMP-NOISE 3, COMP-VIS 3
 Ø Fire Fighting Ship 1
 Ø Fire Fighting Ship 1 with water spray
 Lloyd's Register
 Ø 100 A1 Escort Tug (Bollard pull = 60t) (H) LMC IWS IWS CAC 3
 Epoxy paint system

Painting

DIMENSIONS

Length overall 28.57 m
 beam overall 11.43 m
 Depth at sides 4.60 m
 Draught aft 4.65 m
 Displacement (approx.) 350 t
 Gross tonnage 299 t

TANK CAPACITIES

Fuel oil 67.8 m³
 Fresh water 14.0 m³
 Lubrication oil 2.3 m³
 Dirty oil 2.3 m³
 Sewage 1.4 m³
 Bilge water 4.5 m³
 Ø Foam 9.8 m³
 Ø Dispersant 4.3 m³
 Ø Urea 3.0 m³

PERFORMANCES

Bollard pull ahead 60.0 t
 bollard pull astern 35.0 t
 Speed ahead 13.0 kn
 Speed astern 12.5 kn

PROPULSION SYSTEM

Main engines 2x Caterpillar 3512C TA HD / D
 Total power 3800 kW (5104 bhp) at 1800 rpm
 Azimuth thrusters 2x Holsa Mobyce U/S 205S
 Propeller diameter 2400 mm
 Forced ventilation 58,000 m³/h

AUXILIARY EQUIPMENT

Generator sets 2x Caterpillar C4.4 TA, 230/400 V, 107 kVA, 50 Hz
 Ø Generator sets 2x Caterpillar C4.4 TA, 440 V, 123 kVA, 50 Hz
 General service pumps 2x Accue CA-50/3B 27.0 m³/h up to 3.4 bar
 City-bilge water stripping pump Accue CA 32/05, up to 12.0 m³/h, up to 1.3 bar
 Fuel transfer pump Accue CA40-1B, up to 12.0 m³/h, up to 1.2 bar
 Fuel oil purifiers 2x CJC PTUJ 27/81 M2-E2PWZ
 Ø Sewage treatment plant Selmor Blue Sea Plus 2500
 Cooling system Fresh water closed loop keel cooling
 Lubrication pump(s) Accue BT-HM-32/4, up to 2.4 m³/h, up to 2.0 bar
 Hydraulic system Two main engine driven pumps
 Ø Oil pollution control Dispersant pumpset with 2 spraybooms
 Ø Filtration Main engine driven pumps 1200, 2400 m³ or Ø water spray
 Ø Filtration 1x 1200 or 2x 1200 m³/h, water/foam

DECK LAY-OUT

Anchors 2x 350 kg Pool (High Holding Power)
 Anchor winches 2x Electrically driven, DMC
 Towing winch fore Hydraulically driven double drum, pull 39 ton up to 9.5 m/min, high speed pull up to 32.5 m/min, brake 150 ton
 Ø Towing winch aft Hydraulically driven two speed winch with spooling device, pull 38 ton up to 9.5 m/min, high speed pull up to 33 m/min, brake 150 ton
 Ø Towing hook fore Mampay, SWL 65 ton
 Ø Towing hook aft Mampay, SWL 65 ton
 Ø Capstan fore Electrically driven, 5 ton at 18 m/min or Ø 15 m/min
 Ø Capstan aft Electrically driven, 5 ton at 15 m/min or Ø 15 m/min
 Ø Crane HS Marine AK16 HE3, 845 kg at 11.15 m or HS Marine AK28/10.3 E3, 1700 kg at 10.30 m with winch (2150 kg)
 U-tender at sides, cylindrical tender at transom corners, cylindrical and W-block bow fender with water spray

ACCOMMODATION

For max. 8 persons (MLC 2006 compliant), insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse, floating floors and air-conditioned. Captain's cabin, chief engineer's cabin, 3 double crew cabins, galley, mess/dayroom, dry store and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight 1x Norselght 2000 W + Ø 1x Norselght 2000 W
 Radar system 1x Furuno FAR 1518-BB + Ø 1x Furuno FAR 1518-BB
 Compass Magnetic, Casens & Plath Reflecta 11
 Autopilot Simrad AP-70
 Satellite compass / GPS Simrad GN70/HS80A
 Echosounder Furuno FE-800
 VHF radio telephone 2x Sailor 7222 (one with DSC) + Ø 1x Sailor 6215
 VHF hand-held 2x Sailor SP3540
 Navtex Furuno NX-700B
 AIS Furuno FA-170
 Ø SSB Cobham Sailor 6310
 EPIRB Jotron Tron 60 AIS
 SART Jotron Tron AIS-SART
 Remote monitoring Ready for Damen Triton
 Ø Inmarsat + Ø spare Furuno Felcom 18
 Ø LRIT Furuno Felcom 19
 Anemometer Gill Instruments GMX500

Ø = Optional equipment



Azimuth Stern Drive Tug 2813

"MT. BAMA"



Azimuth Stern Drive Tug 3212



PICTURE OF SIMILAR VESSEL



GENERAL

Yard number	513338
Delivery date	February 2024
Basic functions	Towing, mooring, escorting and fire-fighting operations
Classification	Bureau Veritas 1 * HULL * MACH Escort Tug (Bollard pull = 81t) (maximum steering force = 75t, maximum braking force = 90t, maximum escort speed = 10 kn) Unrestricted Navigation AUT UMS INWATER SURVEY COMF-NOISE 3, COMF-VIB 3 Fire Fighting 1 Reclassification to Lloyd's Register [*] 100 A1 Escort Tug (Bollard pull = 81t) [*] LMC UMS IWS CAC 3 Fire Fighting Ship 1
GMDS	A1
Flag	St. Vincent and Grenadines
Owner	Depasa Marine International Nigeria Limited

DIMENSIONS

Length overall	27.59 m
Beam overall	12.93 m
Depth at sides	5.20 m
Draught aft	5.77 m
Displacement	657 t
Gross tonnage	381 t

TANK CAPACITIES

Fuel oil	89.20 m³
Fresh water	17.20 m³
Clean lubrication oil	2.40 m³
Dirty lubrication oil	2.40 m³
Sewage	8.40 m³
Blige water	5.60 m³
Foam	9.46 m³

PERFORMANCES

Bollard pull ahead	81.6 t
Bollard pull astern	76.9 t
Speed ahead	13.3 kn
Speed astern	12.2 kn

PROPULSION SYSTEM

Main engines	2x Caterpillar 3516C TA HD / D
Total power	5050 kW (6772 bhp) at 1800 rpm
Azimuth thrusters	2x Kongsberg Maritime US 255S FP
Propeller diameter	3000 mm

AUXILIARY EQUIPMENT

Generator sets	2x Caterpillar C4.4 TA, 400 V, 107 kVA, 50 Hz
General service pumps	2x Azcue CA 50/3 27 m³/h up to 3.4 bar
Oil-bilge water stripping pump	Azcue CA 32/05 10 m³/h up to 1.3 bar
Fuel transfer pump	Azcue CA40-1B 12.0 m³/h up to 1.2 bar
Fuel oil purifiers	2x CJC PTU3 27/81 MZ - E2PWZ
Cooling system	Box cooling + anti-growth system and keel cooling channels
Hydraulic system	Main engine driven pumps
Working air compressor	Kaeser EPC 440-100
Fifi set	2x Main engine driven pump, each 1200 - 1400 m³/h
Fifi monitor	2x 1200 m³/h, water/foam

DECK LAY-OUT

Anchor winches	2x 360 kg Pool (High Holding Power)
Anchor winches	2x Electrically driven, DMC
Towing winch fore	Hydraulically driven variable speed double drum, pull 30 ton up to 27 m/min, maximum speed 44 m/min, brake holding force 200 ton
Towing hook fore	SWL 86 ton
Towing hook aft	SWL 86 ton
Capstan aft	Electrically driven, 5 ton at 15 m/min
Fendering	D-fender at sides, cylindrical fender at transom corners, cylindrical and W-block bow fender with water spray

ACCOMMODATION

For 10 persons (MLC 2006 compliant), insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse, floating floors and air-conditioned. Captain's cabin, chief engineer's cabin, 4 double crew cabins, galley, mess/dayroom, dry store, switchboard room/ships office and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlights	2x Norselight 2000 W
Radar system	Furuno FAR 1518-BB
Satellite compass / GPS	Simrad GN70/HS80A
Compass	Cassens & Plath Reflecta 11
Autopilot	Simrad AP-70
Echosounder	Furuno FE-800
Speed log	Furuno DS-85
VHF Radio telephone	2x Cobham Sailor 7222 (both with DSC)
VHF hand-held	2x Sailor SP3540
Navtex	Furuno NX-700B
AIS	Furuno FA-170
EPIRB	Jotron Tron 60S
Sart	Jotron Tron Sart20
CCTV	4x camera
Remote monitoring	Ready for Damen Triton
Anemometer	Gill instruments GMX500

GENERAL

Basic functions	Push-pull, escorting, towing, fire-fighting and oil pollution control operations
Classification	Bureau Veritas 1 * HULL * MACH Escort Tug (Bollard pull = 80 t) (maximum steering force = 83 t, maximum breaking force = 91 t, maximum escort speed = 10 kn) Unrestricted Navigation AUT UMS INWATER SURVEY [*] Fire Fighting Ship 1 [*] Fire Fighting Ship 1 with water spray [*] Green Passport EU [*] Clean ship [*] Lloyd's Register [*] 100 A1 Escort Tug (Bollard pull = 80 t) [*] LMC UMS IWS Epoxy paint system
Painting	

DIMENSIONS

Length overall	32.70 m
Beam overall	12.82 m
Depth at sides	5.35 m
Draught aft	5.90 m
Displacement	800 t
(98% consumables)	
Gross tonnage	450 t

TANK CAPACITIES

Fuel oil	148.3 m³
Fresh water	15.4 m³
Sewage	5.1 m³
Dirty oil	6.5 m³
Clean lubrication oil	7.8 m³
Blige water	6.5 m³
Foam	12.3 m³
Dispersant	5.1 m³
Urea	3.0 m³

PERFORMANCES

Bollard pull ahead	81.3 t
Bollard pull astern	76.4 t
Speed	13.5 kn

PROPULSION SYSTEM

Main engines	2x Caterpillar 3516C TA HD/D
Total power	5050 kW (6772 bhp) at 1800 rpm
Azimuth thrusters	Kongsberg Maritime US 255 P30 FP
Propeller diameter	3000 mm
Forced ventilation	80.500 m³/h
Exhaust emission	IMO Tier III certified

AUXILIARY EQUIPMENT

Generator sets	2x Caterpillar C4.4 TA, 230/400 V, 107 kVA, 50 Hz
Generator sets	2x Caterpillar C4.4 TA, 440 V, 123 kVA, 60 Hz
Bilge pump	Azcue CA-32/05, up to 10 m³/h
General service pumps	2x Azcue CA-50/3B, up to 27 m³/h
Fuel oil pump	Azcue MR-41/10, up to 12 m³/h
Fuel oil purifiers	2x PTU3 27/81 MZ - E2PWZ, 1920 l/h each
Fresh water pressure set	DAB Eurobox 40/50T, 70 l/min
Sewage treatment plant	Selmar Blue Sea Plus 2500
Cooling system	Box cooling + anti-growth system
Hydraulic system	Double main engine driven pumps
Oil pollution control	Dispersant pumpset with two spraybooms
Fifi set	Main engine driven pump: 1200 m³/h or 2400 m³/h with water spray
Fifi monitor	1x 1200 m³/h or 2x 1200 m³/h water/foam

DECK LAY-OUT

Anchor winches	2x 360 kg Pool (High Holding Power)
Towing winch	2x Electric 10 m/min Hydraulically driven two speed double drum, low speed pull 30 ton up to 27 m/min, maximum speed 44 m/min, BHF 200 ton on 2 nd layer
Recovering/recovery winch	Hydraulically driven double drum rendering/recovery winch, recovery capacity 30 ton up to 44 m/min on 2 nd layer, rendering 112 ton up to 82 m/min on 2 nd layer, BHF 200 ton on 2 nd layer
Capstan fore	Electrically driven, 5 ton at 16 m/min
Capstan aft	Electrically driven, 5 ton at 16 m/min
Towing hook aft	SWL 86 ton
Towing winch aft	Hydraulically driven single drum two speed winch with spooling device and warping head, high pull/low speed 30 ton up to 11.4 m/min, slack rope speed up to 36.5 m/min, BHF 200 ton on 2 nd layer HS Marine AK 16 H3A, 0.8 t at 11.15 m or HS Marine AK 28/10.3 E3, 1.7 t at 10.30 m + winch 2150 kg.
Fendering	D-fender at sides, cylindrical fender at transom corners, cylindrical bow fender and nine heavy fender tyres on the fore ship

ACCOMMODATION

For 10 (9/12) persons, insulated and finished with durable modern linings, acoustical ceiling in the wheelhouse, floating floors and air-conditioned. With 8 cabins, galley, mess/dayroom, switchboard room, dry store and sanitary facilities.

NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight(s)	1x Norselight SH470 2000 W + 0 1x Norselight SH470 2000 W
Radar system(s)	1x Furuno FAR 1518-BB + 0 1x Furuno FAR 1518-BB
Electronic chart system	MaxSea Tez Professional or 0 Furuno FMD-3200
Compass	Cassens & Plath Reflecta 11
Satellite compass/GPS	JRC JLR-21
Autopilot	Simrad AP-70
Echosounder	Furuno FE-800
Speedlog	Furuno DS-85
VHF radio telephones	2x Cobham Sailor 7222, one with DSC + 0 1x Cobham Sailor 6210
Navtex	Furuno NX-900
SSB	Cobham Sailor 6310
LRIT	Furuno Felcom 19
Inmarsat	2x Furuno Felcom 16
ECCDS	Furuno FMD-3200
AIS	Furuno FA-170
EPIRB	Jotron TRON 60AIS
SART	Jotron TRON AIS
Remote monitoring	Ready for Damen Triton
Anemometer	Gill instruments GMX 500

DAMEN