

- ▶ Bollard Pull 53-66 tonnes
- ▶ Brake Horsepower 4826-5147 BHP
- ▶ Clear Deck Space 275-330 m2
- ▶ Winch Line Pull 150 tonnes





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General Information

Built: Qingdao Qianjin Shipyard, China, November 2010

Flag: Singapore Call Sign: 9V7621 IMO No.: 9503366

Classification: DNV-GL +1A Fire fighter(I) Offshore service vessel(Anchor handling, Towing)

DPS(1)

484

Dimensions

Length, overall: 57.50 metres
Length, BP: 50.50 metres
Breadth, moulded: 14.00 metres
Depth, main deck: 6.00 metres
Design draft: 4.55 metres
Maximum draft midship: 5.10 metres
GT: 1329

Capacities

NT:

Deadweight (maximum): 1544.75

Clear Deck Area: 30m x 11m = 330 m2 Deck Strength: General deck - 5 t/m2

Aft AH deck - 19 mm steel plate

Deck Cargo: 500 tonnes

Fuel: 566.286 m3 (dedicated)

Potable Water: 400.746 m3 Ballast Water: 371.866 m3

Brine / DMA / Glycol / Liquid

Mud: 147.264 m3 or 5200 ft3 (2 tanks dual-use Brine/Mud/DMA)

Liquid Mud: 184.432 m3 or 6513 ft3 (4 dedicated tanks)

331.696 m3 or 11713 ft3 (including 2 dual-use tanks)

Dry Bulk: 142 m3 or 5014.6Ft3 (4 tanks)

Cement density max 2.35 t/m3 and fineness 4,000 Blaine.

Machinery

Main Engines: 2 x 1920 kW = 3840 kW (5147 BHP)
Propulsion: 2 x CPP propellers in Kort nozzles
2 x Electric-hydraulic steering gear

Bow Thrusters: 1 x 500 kW (670 BHP) producing 7.9 tonnes (77.5 kN) thrust Stern Thrusters: 1 x 500 kW (670 BHP) producing 7.9 tonnes (77.5 kN) thrust

Shaft Generators: 2 x 1250 kVA, 440 V, 60 Hz

Auxiliary Generators: 1 x 320 kW Caterpillar 3406 C with spark arrestor Emergency Generators: 1 x 315 kW Caterpillar 3406 C with spark arrestor





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Towing and Anchor Handling

Bollard Pull: 66.68 MT continuous

70.10 MT maximum

Main Winch: 1 x MacGregor-Plimsoll double drum, low pressure winch

Load Capacity: Towing / A/H drums 1st layer

150 tonnes at 7.2 m/min 100 tonnes at 10.8 m/min 50 tonnes at 22 m/min

Brake Capacity: 250 tonnes (static) on towing drum 1st layer

250 tonnes (static) on AH drum 1st layer

Tow Drum Wire Capacity: 1200 m x 64 mm (2.5 inch) diameter Work Drum Capacity: 1200 m x 64 mm (2.5 inch) diameter Chain Gypsy Cable Lifter: 1 x 76 mm (3 inch) diameter chain

Stern Roller: 1 x 2 m diameter x 4 m width, SWL 250 tonnes

Tow Pins / Guide Pins: 1 x set hydraulic Karmoy, remotely controlled from wheelhouse

Wire Chain Stopper: 1 x retractable Karmoy, SWL 250 tonnes, controlled from wheelhouse (32 - 76

mm chain)

Deck Machinery

Tuggers: 2 x 10 tonnes MacGregor-Plimsoll

Capstans: 8 x tonnes x 15 m/min MacGregor-Plimsoll; Drum - 10 tonnes x 10 m/min Windlass: 1440 kg high holding power anchor, 328.8 m x 30 mm chain each side

Bow Mooring: 1 x mooring drum capacity 220 m x 38 mm synthetic rope Crane Capacity: 5 SWL 1500 kg @ 8 m radius, make: Helia, model: HM25-8F

Electronics

Main Radar: 1 x Furuno X-band, 21 inch colour LCD, ARPA, AIS interfaced, with a repeater

display installed

Auxiliary Radar: 1 x Furuno S-band, 21 inch colour LCD, ARPA, AIS interfaced, with a repeater

display installed

Auto Pilot: 1 x Tokyo Keiki PR-6000-e

Gyro Compass: 1 x Tokimec TG-8000 with 4 repeaters

Magnetic Compass: 1 x Tokimec SH165A1
Echo Sounder: 1 x Furuno FE-700
DGPS: 1 x Furuno GP-150

1 x Veripos DGPS LD5 Integrated Mobile Unit

Anemometer: 2 Gill Ultrasonic Speed Log: Furuno DS-80





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Communications: G.M.D.S.S. (Global Maritime Distress & Safety System)

Area - A1, A2, A3

2 x VHF DSC Transceiver - Furuno FM 8800S MF/HF DSC Radiotelephone - Furuno FS2570 2 x Inmarsat - C MES- Furuno Felcom 15 3 x GMDSS VHF Portable - McMurdo R2 3 x VHF Portable - Motorola GP328

1 x EPIRB - McMurdo E5

2 x SART - McMurdo S4 Rescue SART Integrated PA Phone - Steenhans SPA-M6S

Intercom - Vintor VMP 430

Battery less Telephone - Vingtor VSP-213-L

1 x Navtex - Furuno NX-700 Broadband internet System

Weather Fax:
Satellite Communication:
FBB: Sailor 500
VSAT: Sailor 900
AIS:
Furuno FA 150

BNWAS: Navguard

Discharge Pumps

 Fuel Oil:
 1 x 100 m3/hr - 7.0 bar

 Dirty Oil:
 1 x 10 m3/hr - 2.0 bar

 Potable Water:
 1 x 150 m3/hr - 7.0 bar

 Drill Water:
 1 x 150 m3/hr - 7.0 bar

 Liquid Mud:
 1 x 75 m3/hr - 18 bar

 Brine / Mud:
 1 x 75 m3/hr - 18 bar

Dry Bulk: 2 x 78 m3/hr - 5.6 bar, 80 psi

Hose Connections : Fuel - 4" Camlock

Potable Water - 4" Camlock Drill Water - 4" Camlock Liquid Mud - 5" Camlock Dry Bulk - 5" Camlock

Performance

Speed / Fuel Consumption: Maximum speed 13.5 knots free running at 100% MCR - approximate fuel

consumption 19 m3 per day

Economical speed 10 knots - approximate fuel consumption 10.5 m3 per day

Idle at sea - approximate fuel consumption 2.3 m3 per day Idle in port - approximate fuel consumption 0.8 m3 per day

Dynamic Positioning

Type: GE Power Conversion Simplex Dynamic Positioning System (DPS) "C Series"





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Reference Systems: 2 Differential GPS

1 Acoustic system interface sonardyne

1 Cyscan laser interface

Control Modes: Joystick Manual/Auto Heading, Dynamic Positioning, Model Control, Simulation,

DP Minimum Power, Auto Track, Ship Follow.

Joystick: Independent

External Fire Fighting

Capacity: $2 \times 1200 \text{ m}3/\text{hr} = 2400 \text{ m}3/\text{hr}$

Monitors: 2 x 1200 m3/hr mounted on wheelhouse top, remotely controlled from

wheelhouse

Throw Length: 120 m

Throw Height: 50 m at 70 m distance

Standby Rescue Equipment

1. 1 x Vanguard VG 6.0 FRW, 15 persons, SOLAS approved FRB with inboard diesel waterjet propulsion.

2. Rescue Zones on both Port and Starboard side, main deck, with scrambling net and personnel transfer swing ropes.

Anti-Pollution

Dispersant Tank: 9.190 m3

Spray Booms: 4 x spray nozzles (2 at each side), outreach: 12 m

Accommodation

Berths: 4 x 1 berths

5 x 2 berths 2 x 4 berths 22 berths in Total

1 x combined messroom/recreation room

1 x galley

All living space fully air-conditioned, design 45 deg C / 70% RH outside, 25 deg C / 50% RH inside

Environmental Features

- 1. Real time main engine fuel consumption monitoring, ensuring maximum fuel efficiency and emissions reduction.
- 2. Coffin 5 ppm oily water separator, effluent quality exceeds the 15 ppm current legislation requirements.
- 3. 1 x Omnipure sewage plant, complies with latest 2010 IMO Resolution MEPC 159(55).
- 4. Cargo load / discharge stations with saveall to inboard tank.
- 5. Low residue design bulk tanks.
- 6. Mud tanks with dedicated recirculation pumps.







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7. Macerator fitted in galley. Provision for recycling of waste.

Miscellaneous

- 1. Design complies to latest rules and regulations from SOLAS 1974, and IMO 469 (XII) "Guidelines for the design and construction of offshore supply vessel".
- 2. Bulk systems remotely controlled from wheelhouse.
- 3. Fitted with 3 halogen searchlights (1 fwd, 2 aft), each 2000W, on wheelhouse top and electrically operated from inside wheelhouse, 8 x 1000W floodlights for cargo deck.
- 4. Deck power supplies:
 - 4 x 250A, 440V, 3phase
 - 1 x 63A, 440V, 3phase
 - 1 x 32A, 220V, single phase
- 5. Wood sheathed main deck for aft area, which is steel plated for anchor handling. Supplied with anchor grapnel.
- Welding / cutting equipment and lathe in workshop.
- 7. Fresh water ultra violet sterilizer.
- 8. CO2 fire extinguishing system fitted in the engine room / paint locker / hydraulic pump room / emergency generator room. Independent CO2 system for Galley.
- 9. Fire detection system Tyco Marine T126W.
- 10. Statutory liferafts, life-jackets, pyrotechnics.
- Removable crash rail sections on main deck (PS & SB) to facilitate R.O.V. operation.
- 12. H2S gas detection system Honeywell Zareba touchpoint 4.