



## M/V Pacific Hornbill

- ▶ **Brake Horsepower** 8,686 BHP
- ▶ **Clear Deck Space** 1,000 m<sup>2</sup>
- ▶ **Deadweight** 4,697-4,706 tonnes
- ▶ **Deck Cargo Capacity** 2,400 tonnes

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## General Information

Built:	USC Japan, August 2012
Flag:	Singapore
Call Sign:	9V9594
IMO No.:	9579119
Classification:	DNV-GL +1A1 Fire fighter(I) Supply vessel Clean(Design) COMF(V-3) DK(+) DYNPOS(AUTR) E0 HL(2.8) LFL(*) NAUT(OSV(A)) SF

## Dimensions

Length, overall:	88.1 metres
Length, BP:	78.1 metres
Breadth, moulded:	19.0 metres
Depth, main deck:	8.0 metres
Design draft:	5.9 metres
Maximum draft midship:	6.6 metres
GT:	4059
NT:	1627
Length between P.P.:	78.14 metres
Breadth:	19.0 metres
Draft minimum:	3.15 metres
Draft maximum:	6.638 metres (Summer Draft)

## Capacities

Deadweight (maximum):	4,702 tonnes
Clear Deck Area:	1,000 m <sup>2</sup> (62m x 16.13m)
Deck Strength:	10 T/m <sup>2</sup> Aft of Frame 30 5 T/m <sup>2</sup> Fwd of Frame 30
Deck Cargo:	2,400 tonnes
Fuel:	953.3 m <sup>3</sup>
Ship Fuel:	953.3 m <sup>3</sup>
Potable Water:	525.3 m <sup>3</sup>
Ballast Water / Drill Water:	3,445 m <sup>3</sup>
Brine / DMA / Glycol / Liquid Mud:	979.6 m <sup>3</sup>
Special Liquids:	Methanol - 167.4 m <sup>3</sup>
Drilling Brine:	980 m <sup>3</sup> , Sg 2.8
Dry Bulk:	322 m <sup>3</sup> - 6 tanks
Base Oil:	139 m <sup>3</sup> (held in 2 base oil tanks) + 167 m <sup>3</sup> (held in 2 methanol tanks)

## Machinery

Main Engines:	4 x 1,620 kW = 6,480 kW (8,686 BHP) @ 900 rpm, Wartsilla 9L20 diesel electric generators for optimal fuel efficiency
Propulsion:	2 x 2,200 kW Azimuth (2 x 2,949.06 BHP), high efficiency contra rotating (CRP) propellers for fuel savings of 10-15%

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Azimuth Thruster:	1 x 880 kW (1,180 BHP) Retractable AZI Thruster, electric motor driven. Hydraulic Ram for lifting/lowering.
Bow Thrusters:	1 x 880 kW (1,180 BHP) electric motor driven tunnel type, FPP, frequency controlled 1 x 880 kW (1,180 BHP) azimuth electric motor, driven retractable type, FPP, frequency controlled
Emergency Generators:	1 x 370 Kw @ 1,800 rpm / 450V / 3 ph / 60Hz (also harbour generator)

### Deck Machinery

Tuggers:	2 x 10 tonne x 20 m/min
Forward Tuggers :	2 x 10 tonne x 20 m/min
Capstans:	2 x 10 tonne x 24 m/min
Windlass:	2 x electric motor driven Hawser Drum - 17m x 10 m/min Cable Lifter - 12.5 ton x 12 m/min (Grade K3) Warping Drum - 2 sets
Bow Mooring:	2 x Stockless bow anchor + chains 2 x 276.25m (total 552.5m), Grade 3
Crane Capacity:	2 x small handling cranes 1 x 5T @ 10m radius, 1 x 1T @ 10m radius Max outreach: 10 metres

### Electronics

Main Radar:	JRC-JMA 922B 6XA
Auxiliary Radar:	JRC-JMA 9132 SA
Auto Pilot:	1 x Yokogawa Adaptive Autopilot PT500A-P-Analog
Gyro Compass:	3 x Yokogawa CMZ900D
Magnetic Compass:	1 x Yokogawa SR-165
Echo Sounder:	1 x JRC JFE680
DGPS :	2 x JRC JLR-7800
Anemometer :	2 x Gill Instruments - Wind Observer 2 Ultrasonic
Speed Log:	1 x Yokogawa EML500-HV1
Communications:	GMDSS 1 x HF / MF SSB radio telephone (150W) - JRC JSS-296 1 x NBDP telex station - JRC NDZ-127 1 x Navtex receiver - JRC NCR333 2 x International VHF radio telephone NCM-1770 1 x Inmarsat C - JRC JUE-85 1 x EPIRB - JRC JQE103 3 x Two Way VHF radio telephone JHS - 7 UHF transceiver system - MOTOROLA GM360 - 1 set with 3 fixed stations and numerous portable transceivers (GM 328)
ECDIS:	2 sets - JRC-JAN 901B
Navtex Receiver:	NCR 333
Weather Fax:	1 set - JRC JAX 9B

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Satellite Communication:	FBB: Sailor 500 VSAT: Sailor 900
Datalink :	Fleet Broadband (FBB)
AIS:	JRC 182 AIS system, integrated into the RADAR and ECDIS system.
Voyage Data Recorder(VDR):	JRC-JCY 1800
VRU:	3 x Teledyne DMS RP 30
BNWAS:	UniSafe 802 - Bridge watch 800

### Discharge Pumps

Fuel Oil:	2 x 150 m <sup>3</sup> /hr @ 90 m head (Electric, 2-speed)
Base Oil:	2 x 78 m <sup>3</sup> /hr @ 90 m head (Electric, 2-speed)
Potable Water:	2 x 150 m <sup>3</sup> /hr @ 90 m head (Electric, 2-speed)
Ballast / Drill Water:	1 x 250 m <sup>3</sup> /hr @ 90 m head (Electric, 2-speed)
Liquid Mud:	2 x 100 m <sup>3</sup> /hr @ 90 m head (Electric, 2-speed)
Drilling Brine:	2 x 100 m <sup>3</sup> /hr @ 90 m head (Electric 2 speed)
Dry Bulk:	80 m <sup>3</sup> /hr @ 5.6 bar
Cargo Flow Meters :	Fuel oil, Base oil, Fresh water
Special Liquids:	Methanol
Special liquid (Methanol):	2 x 78 m <sup>3</sup> /hr @ 90 m head (Hydraulic)
Nitrogen System:	Nitrogen system for Inert gas over Methanol
Hose Connections :	Fuel-midships port and stbd 4 inch Todo male Fuel aft stbd 3 inch Todo male Liquid mud-midships port and stbd 5 inch Weco fig 50 male Port aft 4 inch Todo male Brine-midship pt and stbd 5 inch weco fig 50 male Aft port 4 inch Todo male Methanol - 4 inches Todo male Drill Water - 5 inches Weco Fig 50 Female Potable Water - 5 inches Weco Fig 50 Female Cement - 5 inches Weco Fig 50 Female Base Oil - 4 inches Weco Fig 207 Female

### Performance

Speed / Fuel Consumption:	15.6 knts / 30.5 mt/day @ 5.5 m draft
Full Speed:	15.6 knts
Economical Speed:	10 knts / 7.5 mt/day @ 5.5 m draft
In Port:	1.5 mt
DP Speed:	2.0 mt

### Dynamic Positioning

Type:	Duplex DP with IJS and Advanced Ship Follow (ver.6.24 build 2)
Reference Systems:	2 x DGPS (Veripos LD2S & C Navigator 3050) 1 x Cyscan Mk 4 1 x Radascan Mini microwave position reference sensor
Control Modes:	2 x Aft control stations

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Joystick: Port, Starboard, Central IJS

### External Fire Fighting

Capacity:	1 x 2400 m <sup>3</sup> /hr
Monitors:	2 x monitors remotely operated from wheelhouse
Throw Length:	120m
Throw Height:	50m
Drenching System:	Fixed water spray 1,050 m <sup>3</sup> /h
Foam Tank :	1.8 m <sup>3</sup> for Methanol

### Standby Rescue Equipment

1. 1 x SOLAS Type Approved FRC Merlin 615 Norsafe with 144hp inboard diesel engine water jet propulsion. Max: 13pax. Speed with 3 persons approx. 27 knots. Davit for quick launch and recovery.

### Anti-Pollution

Dispersant Tank:	10.8 m <sup>3</sup>
Spray Booms:	1 spray boom each side
Spray Nozzles:	2 nozzels each boom

### Accommodation

Berths:	10 x single cabins
	13 x double cabins
	4 x single / double pullman style cabins
	Total Berths 44

### Environmental Features

1. 1 x Incinerator
2. Ballast Water Treatment System
3. Garbage Compactor
4. Sewage Treatment Plan
5. Oily Water Separator Unit 1 x 1 m<sup>3</sup>/hr

### Miscellaneous

1. 6 Liferafts, 25 persons per raft
2. BNWAS System
3. Agitators with hydraulic drives are installed in the cylindrical mud tanks
4. Incinerator 20kg/hr solids only. No waste oil.

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### FUEL EFFICIENCY

#### FUEL OIL CONSUMPTION ON PASSAGE

Fuel Oil Consumption (t/24 hours)-Seastate 4 <sup>φ</sup>				
Draft(m)	10.00 knot	12.00 knot	14.00 knot	15.00 knot
4.00	9.40	11.52	14.81	18.86
5.00	11.59	13.92	17.91	22.89
5.50	12.68	15.13	19.48	24.82
6.00	13.61	16.37	20.89	26.91
6.33	14.27	17.09	21.89	28.01
6.66	14.77	17.70	22.57	29.09

**φ: Seastate 4 is Moderate breeze, 11–16 knot wind, 3.5–6 ft wave height**