



## MAIN DIMENSION

Length O.A	84.80 m
Length WL	79.70 m
Length BP	75.00 m
Beam/Ht fr Keel	22.00 m / 39.58 mtrs
Depth	8.30 m
Designed Draft	6.00 m
Max. Draft	6.80 m
GRT/ NRT	5174 / 1552
Lightship	4518.52t

## GENERAL

Type & Application	AHTS / PSV/ MPSV
Key Features	<ul style="list-style-type: none"> <li>➤ Mechanical and Electric <b>Hybrid propulsion</b> for optimal operation &amp; flexibility to reduce fuel consumption</li> <li>➤ Comfort Class for accommodation.</li> <li>➤ Green Passport</li> <li>➤ Deck space - 900 m<sup>2</sup></li> <li>➤ Oil recovery capability</li> <li>➤ Methanol tanks</li> <li>➤ Foundation provided for             <ul style="list-style-type: none"> <li>○ AHC of 100T SWL for IMR duties</li> <li>○ Moonpool of 4.7m<sup>2</sup>.</li> </ul> </li> <li>➤ Able Remote fuel consumption monitoring system</li> </ul>
Flag	
Classification notation	<b>ABS</b> ⚠A1 (E), ⚠AMS, Towing vessel, Offshore support Vessel AH, FIFI CLASS 1, DPS-2, OIL REC. CLASS 1, ENVIRO, ACCU, GP, HAB(WB), BP, for Unrestricted Services
Designer	Wartsila Ship Design
Builder	
Keel Laid	16 <sup>th</sup> Nov 2011
Built	2021

## PERFORMANCE

Speed	15.4 knots in ballast condition on mechanical and electric.
Economic speed	12 knots mechanical propulsion.
Range	8600 NM at economic speed
Endurance	30 Days (with provision and supply)
Painting Scheme	5 years cycle
Bollard Pull	<ul style="list-style-type: none"> <li>➤ 168.8 MT Static Ahead with both mechanical &amp; electric drive.</li> <li>➤ 133.5 MT on mechanical drive alone.</li> </ul>
<i>Certification in 25 Aug 2013</i>	

## TANK & LOADING CAPACITY [100% (APPX\*)]

Deadweight	4598t	
TYPE	CAPACITY (100%)	<u>PUMPS / DISCHARGING SYSTEMS</u>
Cargo Deck Area	900 m <sup>2</sup>	
Deck Strength	Uniform 7.5 t/ m <sup>2</sup>	
Deck Cargo	2100T	
All cargo machinery – Remote control & monitoring from wheelhouse		
Remote tank gauging systems for all cargo tanks		
Potable Water	525 m <sup>3</sup>	1 x 150m <sup>3</sup> /hr @ 90m head, centrifugal, vertical self priming pump c/w meter <b>Itur ILN 80/200B</b>
Cargo Fresh Water	440 m <sup>3</sup>	
Cargo Fuel Tanks	1331 m <sup>3</sup>	2 x 150m <sup>3</sup> /hr @ 90m head. Vertical centrigal electric driven + Flow

Deck Connection	4" dia.	meter <b>Leistritz L2NG 140/196</b> Self sealing <b>TODO</b>
Ballast/ Drill Water	2677 m <sup>3</sup>	2 x 150m <sup>3</sup> /hr @ 90m head, centrifugal pump, vertical self priming pump <b>ITUR ILN 80/200B</b>
Rig Chan Lockers / Drill Water	454 m <sup>3</sup> (2 tanks)	
Dry Bulk Tanks	310 m <sup>3</sup> (4 tanks)	c/w gauging <b>UMAS</b> , pneumatic control from wheelhouse  2 x aircompressor cap-25m <sup>3</sup> /m @ 5.6 bar c/w air dryer including 1 mucking ejector  <b>UNISLIP</b>
<b>2 Segregated Systems with loading/ discharge station for each system. Able to load 2 grade simultaneously</b>		
Connection	5"	Self sealing
Liquid Mud/ Base Oil/ Brine/ORO	<b>838 m<sup>3</sup></b> <b>(4 tanks)</b>	2 x 100m <sup>3</sup> /hr screw pump @ 22.5 bar, flushing by air compressor  <b>PG NS70-12V</b>
Agitator		Fixed in each tanks  <b>PG Submix 80</b>
Methanol	202 m <sup>3</sup> (2 tanks)	2 x 100m <sup>3</sup> /hr @ 90m head  <b>PG : PG66/200-AT</b>  Hydraulic-driven. Deep well pump single stage submerged centrifugal mission C pump
Tank wash system [For Mud & Slops]		4 set of Junior Jetstream rotating cleaning machines c/w 1x 200kW x 3000 ltr electric calorifier, eccentric screw pump

Passive Anti Rolling Stabilising System		20m <sup>3</sup> /hr, chemical dozing pump & tank, duplex filter.  1 x Mud Slop Pump  17 m <sup>3</sup> /h x 1Mpa  1 x Hot Water Washing Pump (For mud tank washing)  10 m <sup>3</sup> /h x 1Mpa  Pumps cap - 800m <sup>3</sup> /hr @ 25m head Flume System
Slop Tank	61 m <sup>3</sup>	
Lub Oil Tank	9.4 m <sup>3</sup>	
Sewage Tank	19.9 m <sup>3</sup>	
Bilge Holding Tank	12.7 m <sup>3</sup>	
Deck Foam Tank	10.5 m <sup>3</sup>	
Fifi Foam Tank	22.9 m <sup>3</sup>	

#### DECK, TOWING / ANCHOR-HANDLING & MOORING EQUIPMENT

Anchors Windlass and Chains	2 x 3780kg stockless anchor 54mm x <b>12 lengths.</b>  <b>BRATTVAAG/BFMG22054</b>
Towing/ Anchor Handling Winch	Max Line Pull 300mt, Braking 450mt  1 x Double waterfall electrohydraulic low pressure winch.  2 x drum size for both 2000m x 70mm dia. IWRC wire cap.  <b>ROLLS ROYCE, BRATVAAG BSL300/SL300W</b>
Ratchet	1 x 76mm gypsies for Rig chain  1 x 84mm gypsies for Rig chain
Shark Jaw / Towing Pin	2 x 350T Shark Jaws & Angular Tow Pins Combined Unit  <b>MACGREGOR: P4875_1-MG-STA-350-S</b>
Storage Rope Reel	2 x 2000m x 70mm wire capacity, lines pull 6.7t pulls, 32m/min
Tugger Winch	2 x 15mt @ 15m/min electro hydraulic,  <b>BRATTVAAG/LAKMX41015</b>
Capstan	2 x 10mt @ 10m/min electro hydraulic,  <b>BRATTVAAG/CX4115</b>

Service Crane	1 x knuckle 2t @ 10m outreach; <b>PALFINGER</b>
Gobeye	1 x c/w trolley beams for P&S of winch, <b>SWL 3t</b>
Stern Roller	1 x Size 5400mm x 2500 dia. SWL min 400t
Cargo Rail	3200/ 3550mm height
Deck covering	Hardwood wooden sheathing
Lashing Lugs	20 x SWL 20t
Reefers connection	8 x 380/3/50-60Hz 8 x 220/1/50-60Hz

### PROPULSION & MACHINERY

	All engines exhausts are fitted with spark arresting silencer
Propulsion / Drive Modes	CPP Hybrid mode 4560kW per shaft Diesel on mechanical & Diesel Electric. <b>WARTSILA / LIPS CPP 4D1000</b>
	Mechanical and Electric combined via AFE Transistor based frequency converters for PTI & PTO
Power Management System	For Mechanical and Electric Propulsion <b>WARTSILA</b>
Marine Engine	2 x 3060kW, at1000rpm direct drive <b>WARTSILA 9L26D</b>
Gearbox	2 x with PTO/ PTI <b>Wartsila SCH 95-SD58</b>
Starter	Air start for both main engines & gensets
Bow Thruster	2 x FPP 800kW motor 12MT Thrust, VFD Drive; 690v/3/60 <b>WARTSILA LIPS FT175M - D</b>
Stern Thruster	2 x FPP 600kW motor 10MT Thrust, VFD Drive <b>WARTSILA / LIPS FT175H - D</b>
Power Take-In/off Motor/ Take off/ Shaft Generator	2 x 1500kW @ 1400 rpm 690/3/60 water cooled IP54 <b>WARTSILA</b>
Main Generator	2 x 1950kW @ 900 rpm, 690v 3ph 60hz <b>WARTSILA 6L26D</b>
Harbour/ Emergency Genset	1 x 320kW, 440/3/60@1800rpm

### **VOLVO D12-MG**

#### Other Pumps & Equipment

As per Class

Water Maker	1 x 30 t/day, Reverse Osmosis type <b>Aquamar/AQE-30MD</b>
UV Sterilizer	1 x capacity 3.8 - 6.1 m3/hr <b>JOWA/UV-4</b>
Ballast/ Drill Water Pump	2 x 150 m <sup>3</sup> /hr x 90m <b>ILN 080 / 200B</b>
Bilge/Fire/Gen. Service Pump	3 x 50 m <sup>3</sup> /hr @ 40/80m <b>LNC 050 / 200B</b>
Lub Oil Purifier	2 x capacity 900 L/hr c/w electric heater each <b>MITSUBISHI/ SJ 10G</b>

### WHEELHOUSE, NAVIGATION & COMMUNICATION

Dynamic Position	DP 2 <b>KONGSBERG K-POS DP-21</b>
Reference System	Acoustics <b>KONGSBERG HIPAP 500</b> 2 x DGPS 1 x FANBEAM <b>Kongsberg</b>
Control	Navigation & Communication Equipment complied with SOLAS GMDSS A3 both Fwd & Aft
Searchlight	3 x 2000W Xenon Hule
Radars	1 x S-Band <b>FURUNO FAR 2137</b> 1 x X-Band <b>FURUNO FAR 2117-D</b>
ECDIS	1 x <b>FURUNO FEA-2807</b>
AIS/ SSAS	1 x <b>FURUNO FA-150</b>
Echo Sounder	1 x <b>FURUNO FE-700</b>
Gyrocompass	3 x Sperry marine NAVIGAT x MK 1 Digital multi distributor for operation on DC 10.8 - 31.2 V
GPS	1 x <b>FURUNO GP-150</b>
Speed Log	1 x <b>FURUNO DS-80</b> doppler speed log
Auto-pilot	1 x <b>ANSCHUTZ PILOTSTAR D IP56</b>
BWNAS	1 set <b>FURUNO BR-500</b>

VDR	1 x <b>FURUNO VR-3000</b>
Earth Mobile Station Inmarsat C	1 x <b>FURUNO FELCOM 15</b>
VHF	2 x <b>FURUNO FM 8800S</b>
SSB	1 x <b>FURUNO FS-2571C</b>
Sat Communication	1 x <b>FBB FELCOM 500</b>

### POLLUTION CONTROL

Oily water separator – MARPOL I	<b>Sewage treatment plant</b> <b>DELTA PRP-595</b>
Sewage Pollution - MARPOL IV	<b>Garbage processing equipment (Food Waste)</b> <b>A-PLUS Engineering Co., Ltd : 515</b>
Prevention of Pollution by Garbage - Marpol V	
Dispersant System	<b>20 m<sup>3</sup> storage capacity</b>   <b>Spray nozzle type.</b> <b>TETRA</b>

### SAFETY & FIREFIGHTING EQUIPMENT

	<b>In compliance with SOLAS, Class &amp; requirement of Flag administration.</b>
Engine Room Flooding System	<b>CO<sub>2</sub> system and water mist system</b>
FiFi System and Water Curtains	<b>FiFi 1 PTO 2x cap 1800m<sup>3</sup>/hr pumps and 2 x 1200m<sup>3</sup>/hr monitor X throw length 120m</b> <b>Jason</b>
Noxious Gas Detection System	<b>H<sub>2</sub>S gas detection system installed</b>

Lifeboat + Davit	<b>2 x 40-men</b>
Liferaft	<b>4 x 20-men</b>
Fast Rescue Craft	<b>6 men with outboard engine c/w Davit</b>

### IMDG

**IMDG certified**

### ACCOMMODATIONS & OTHER UTILITY

**Fully centralised airconditioned**

<b>Total Complement</b>	<b>78 berth</b>
<b>Hospital</b>	
<b>Office</b>	
<b>Officer / Recreation Room</b>	
<b>Gym</b>	
<b>Changing Room</b>	
<b>Laundry room</b>	
<b>Freezer / Chiller</b>	
<b>Cabins / Galley / Messroom</b>	
<b>Provision Store</b>	
<b>Paint Store</b>	
<b>Deck Store</b>	