



MERMAID

**MERMAID VAN GOGH**  
DIVING SUPPORT AND  
CONSTRUCTION VESSEL

[mermaidsubsea.co.uk](http://mermaidsubsea.co.uk)



The vessel is designed according to the class notation "Clean Design" and SPS Code, and high focus is given to low fuel consumption, which reduces emissions to the environment. FO tank arrangement according to "Clean Design" and MARPOL - oil fuel tank protection.

The vessel is designed to fulfil following duties:

- Diving operations with an 18 person (single bell) SAT dive system rated at 300 msw
- ROV and seabed construction work.

The vessel features 1 WROV and 1 Obs ROV with LARS in the hangar. The vessel can also perform normal field support duties.

**MAIN DIMENSIONS**

Length o.a.:	111.58 m
Length b.p.p.:	103.70 m
Breadth mid.:	23.00 m
Depth main deck:	10.00m
Depth shelter deck: max	12.80 m
Draft midship (SWL):	7.00 m
Corresponding freeboard:	3.00 m

**CLASS / AUTHORITIES**

DNVGL + 1A1 - SPS - ED - Dynpos AUTR - DK(+) - HELDK-SH, COMF-V(3) - CLEAN DE- SIGN - DSV-SAT DSV SURFACE - CRANE - ICE C - NAUT OSV(A) - BWM-T- RECYCLABLE  
Flag: BAHAMAS

**SPEED**

Fuel capacity	approx. 90 days' duration
Econ. transit ≈10 k	≈18 - 20 t / day
DP operation	8-10 t /day
Port	3-5 t / day

**TONNAGE**

Gross tonnage (GRT):	≈9200t
Net tonnage (NRT):	≈2760t

**ACCOMMODATION**

Accommodation for 120 persons, 28 x 1 man cabins, 46 x 2 men cabins

**Tween Deck**

Sat control room, dive system switchboard room, pantry store, dive pantry, diver suit dry, diver suit wash, switchboard room, workshop store, toilet

**Main Deck**

Locker room, wardrobe, toilet x 6, laundry work cloth., engine control room, store x 3, linen, laundry, tech. library, incinerator, tech. workshop, dive tech. store, techs. office, project office, client office, air dive chamber, dive control, dive store/workshop, ROV workshop, ROV transformer room, dive hangar area, paint store, rigging store, deck workshop.

**Shelter Deck**

Reception, dry provision x 3, cool, freeze, galley, bakery, scullery, mess room, dayroom, day room smokers, ROV control room, waste trunk, broom closet, toilet x 3

**Forecastle Deck**

Client and crew cabins, laundry, linen x 2, instrument room

**Boat Deck**

Client and crew cabins, instrument room, store, toilet, broom closet, hospital, gymnasium. Capt. deck: client and officers cabin, instrument room, broom closet, laundry, linen, ship's office, lounge, conference room

**Bridge Deck**

Bridge/manoeuvre consoles fore/ aft, survey areas in bridge wings, office area in lowered level, radio station, toilet, kitchen, store top of wheelhouse sky lounge, sky lobby, reception/TV-room, heli suites, battery room, store, toilet

**ROV HANGAR**

1 WROV LARS over SB side 1 Obs ROV LARS over PS

**MOON POOL**

1 of moon pool for dive bell 3.9 m x 3.9 m

**CARGO CAPACITIES**

Deadweight at max d.: ≈ 5500 t

**CARGO TANK CAPACITIES**

Fuel oil:	approx ≈1550 m <sup>3</sup>
Fresh water:	approx ≈1550 m <sup>3</sup>
Water ballast:	approx ≈5500 m <sup>3</sup>
Anti heeling:	approx ≈1550 m <sup>3</sup>
Lubricating oil:	approx ≈50 m <sup>3</sup>
Misc.tanks: (incl. bilge)	approx ≈800 m <sup>3</sup>
Potable water:	approx ≈300 m <sup>3</sup>

**WORKING DECK AREA**

Main work deck (aft of hangar): cargo ≈ 1000m<sup>2</sup>  
Deck max width.: 23m  
M. deck load: stem- fr.74: 10Vm<sup>2</sup>  
M. deck load: fr.74-fr.113 removable 5Vm<sup>2</sup>  
Bulwark according to GA

**MAIN ENGINES/ GENERATORS**

2 x MAN 8L32/40 each	3840 ekW
2 x MAN 7L32/40 each	3380 ekW
Total:	14440 ekW

**EMERGENCY. GEN. SET DIVE**

1 x CAT C32 1360 ekW at 1800 rpm.

**EMERGENCY. GEN. SET SHIP**

1 x CAT C32 910 ekW at 1800 rpm

**DISTILLED AND MAKE-UP WATER SYSTEMS**

2 x FW reverse osmosis plant, capacity approx. 20 m<sup>3</sup>/24h to be arranged  
2 x LO separator for each main generator set  
2 x DO separators

**PROPELLERS**

2 x Azimut FP, each 3000 kW, frequency controlled

**THRUSTERS FORE**

3 x tunnel thrusters, FP, 1800 kW, el. driven  
1 x retractable thruster, FP, 1200 kW, el. driven, thrusters are freq. controlled

**ELECTRICAL MAIN SWITCHBOARDS**

Hareid Elektriske /Siemens/ABB.

The ship's electrical power is generated by the main generator sets. The power levels are divided into 4 different voltage ranges 6600 V-60Hz, 690V- 60Hz, 440V-60Hz, 230V-60Hz and 24VDC.

### HELICOPTER DECK

Helicopter deck of aluminium for Sikorsky S92 acc. to HELIDK class notation, IMO regulation and UK Aviation Authorities UK 437 regulation. Sky lobby allocated for in/out going passengers.

### LIFE SAVING EQUIPMENT

Life rafts:	acc. to rules. SPS
SPS survival suits for safety equipment:	120 men acc. to SOLAS for 120 pers.
1 x rescue mob boat (lifeboat PS)	
2 x life boats:	2 x 60 pers.
2 x hyperbaric life boat:	2 x 18 pers.

### DECK EQUIPMENT/CRANES

Integrated Automation System (IAS)  
The system consists of the following functionality and sub systems:

Alarm and monitoring system	
Power management system (PMS) interface	
Wind/mooring:	
2 x rauma or similar, min	15t
2 x capstan/mooring winch aft.	15t

#### Deck cranes:

1 x main AHC offshore crane:	
150t@ 10.5 m wire cap. for AHC cranes 3000 m., arr. with pers. lifting/remote access	
1 x crane	1Dt@ 12.5m
2 x foldable crane	2t@15m

### ROLL REDUCTION SYSTEM

A passive anti-roll system. 1 x roll reduction tank

### FIRE DETECTION SYSTEM

Stand-alone addressable fire detection central for all compartments and cabins

### ANTI HEEL SYSTEM

Pump: 2x 1200 m <sup>3</sup> /h	≈ 10 mwh
Anti heeling tk. cap.:	1050m <sup>3</sup>

### FLOW METERS

Flow meter for fuel oil with printer

### DP CONTROL AND NAVIGATION EQUIPMENT

#### DP System: Kongsberg K-Master

- Kongsberg independant. joystick system.
- Kongsberg dynamic pos. system (Dynpos AUTR) Dynamic Positioning system DnV AUTR, IMO Class II. Position reference systems: DPS132, DPS232, laser reference system, two hydro acoustic reference units Hipap 500 mounted in steel trunks with remote operated gate valves
- Kongsberg I.A.S.

Radar equipment, satellite navigator, chart system, conning, compass system, autopilot, echo sounder speed log, sat log AIS, VDR, radio equipment TV parabol, helicopter beacon, monitoring system - acc. to rules and high class standard requirements

Navigation equipment according to NAUT OSV radio installation acc. to GMDSS - area A3 Satcom C, Fleet-77. Two V-Sat communication antennas, internal communication ULSTEIN COM® common distribution of automatic telephone, data network and satellite TV antenna signal to all offices and cabins. Battery-less telephone system, separate PA, DECT TV satellite antenna

#### LOADING COMPUTER

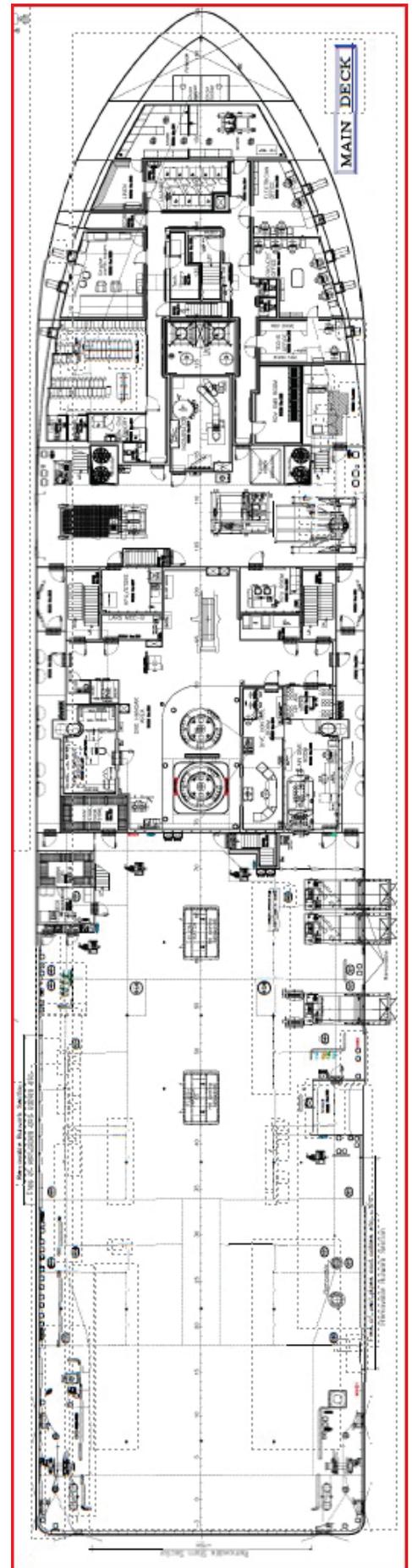
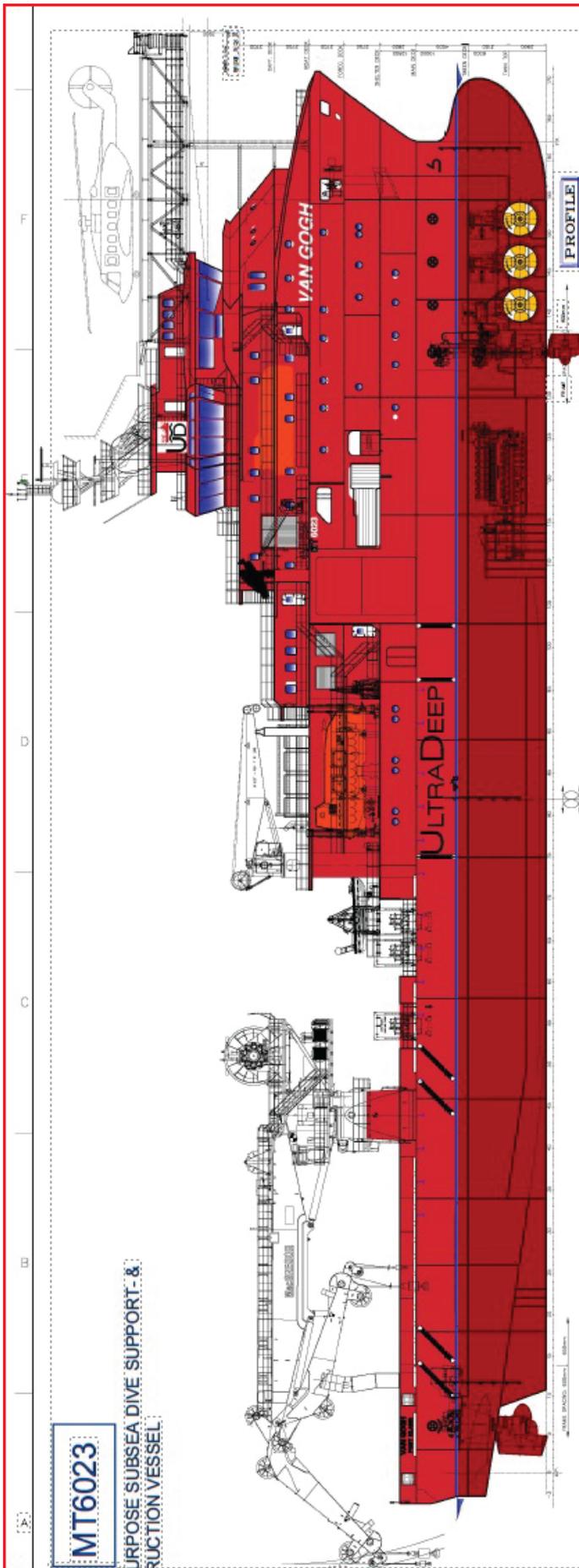
Marin Teknikk: MT-Shipload

#### SAT DIVE SYSTEM

The system is designed and built to DNV Class  
Depth rating 300 msw  
Capacity 18 man  
Bells 1 X 6.5 m<sup>3</sup>  
Chamber configuration 6-6-6 man

#### AIR DIVE SYSTEM

1 x Built-in air dive system consisting of 1 x DCC, dive control room, 2 x LARS units. The system is designed and built to DNV Class and exceeds the current IMCA guideline requirements.



Mermaid Subsea Services (UK) Limited

Pavilion 11, Kingshill Park  
Venture Drive, Westhill  
Aberdeen  
AB32 6FL

[ukinfo@mermaid-group.com](mailto:ukinfo@mermaid-group.com)

+44 (0) 1224 002480

[mermaidsubsea.co.uk](http://mermaidsubsea.co.uk)



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