Tidewater Enabler

Multi-Purpose Platform Supply Vessel

- ***Inspection, Maintenance and Repair***
- ***Drilling Support and Installation***
- ***Light Subsea Construction***
- ***ROV Support***
- ***Flotel***

Vessel Particulars

Length, Overall	311.4 ft	94.9 m
Beam	65.6 ft	20.0 m
Depth	26.3 ft	8.0 m
Maximum Draft	21.9 ft	6.7 m
Freeboard	4.4 ft	1.3 m
Deadweight	4,330.0 lt	4,400.0 t
Clear Deck Space	190 x 54 ft	58.0 x 16.6 m
Clear Deck Area	10,260 sq ft	962 sq m
Deck Strength	2,048.0 lb/ft²	10.0 t/m²
Minimum Height	105.0 ft	32.0 m
Flag:		MEXICO
Home Port		PORT VILA
Official Number		1879
Call Sign		YJVX5
Builder	STX NORWAY OFFSHORE AS Hull Number 67	
Year Built:		2010
Tonnage		4,769 GITCT 1,513 NITCT
Design:		Aker PSV / ROV 06 CD
Class Notation:	ABS A1, OSV, AMS, (E), FFV-1, DPS-2, ACCU, NBLES, HAB(WB), ENVIRO, HELIDK	

Subsea Operations

Vessel is equipped with 100 MT AHC subsea crane, moonpool, reserved ROV deck space and removable starboard bulwarks

Subsea Crane

- MacGREGOR Hydramarine Crane Model HMC 3568 LKO 250-32 (1000-15) AHCt
- Strengthened for DAF of 1.4
- 360 degree unlimited rotation
- Max Combined Trim/List 5˚ +/- 2 degrees

Main Wire

- Active Heave Compensated
- 2,000 m Subsea Hook Travel
- 100 MT Single Line SWL at 15 m
- 75 MT SWL at 20 m
- 25 MT SWL at 32 m
- Auto-tension Lift Mode

Whip Wire

- 500 m Hook Travel
- 10 MT Single Line SWL at 33 m
- 2 MT Man Rated SWL at 33 m

Removable Bulwarks (see Aft Starboard Profile drawing)

- Starboard, fore and aft of subsea crane
- Length: 15.4 m forward and 11.9 m aft

ROV (Tidewater Subsea supplied, see ROV Deck Layout drawing)

- Reserved A-deck space for work class ROV
- Second observation ROV can be added, or second work class system with mezzanine deck extension.
- Power Supply: 3 x 440 V, 500 kVa 800 A Breakers

Moonpool

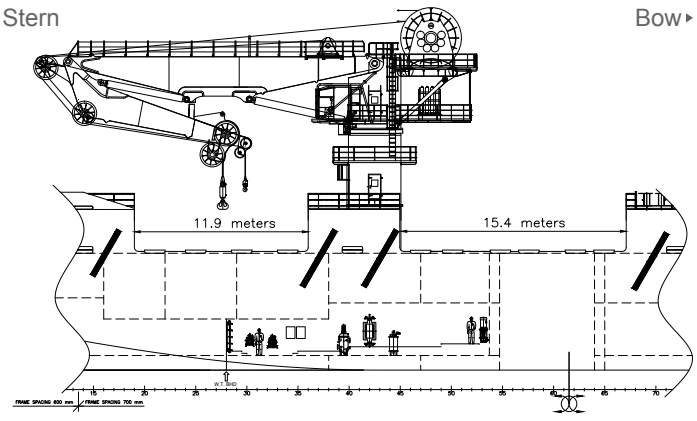
STX design, 6.5 x 6.5 meters, bottom and top hatch

Fast anti heel system

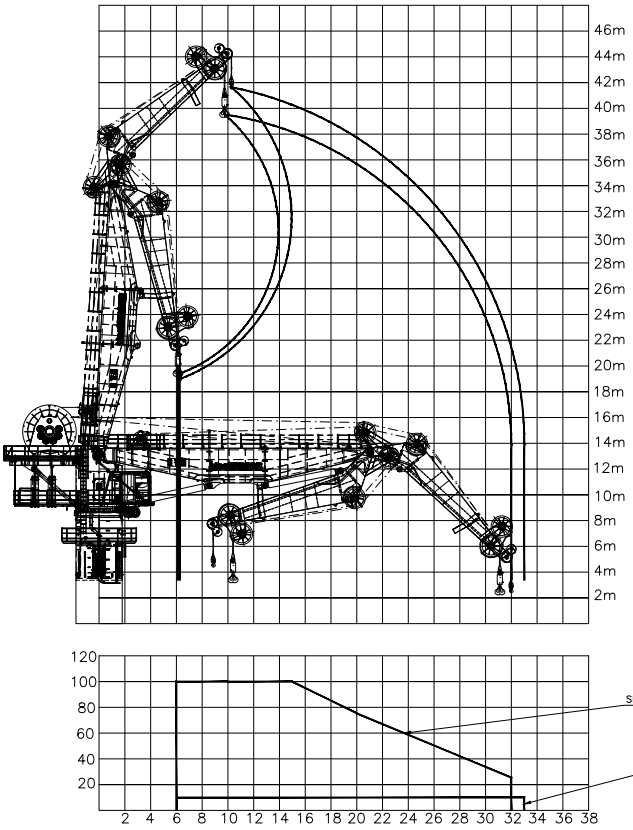
Frank Moen Type RBP 300-3

Aft Starboard Profile

◂Stern Bow▸

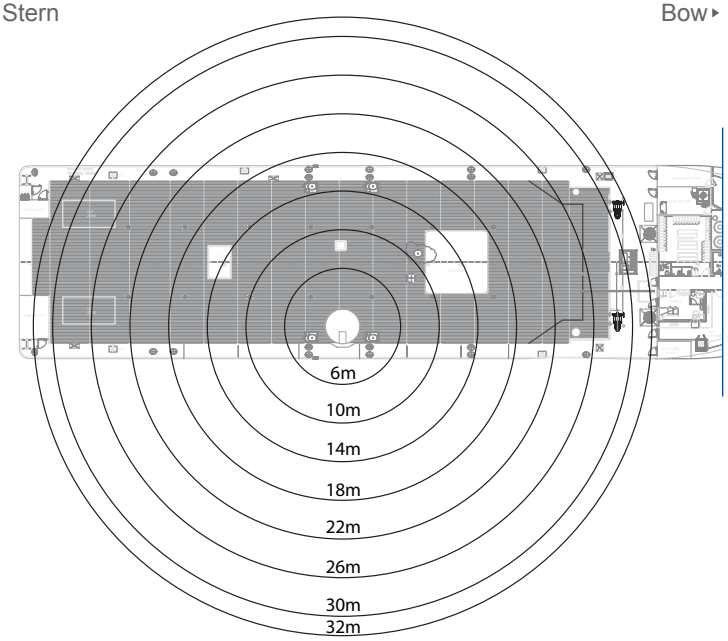


Subsea Crane Hook Height; Radius, and Working Load Chart



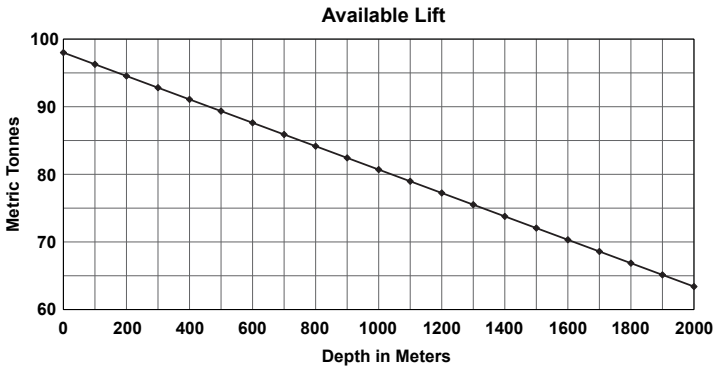
Subsea Crane Radius

◂Stern Bow▸



Subsea Crane Lift vs. Water Depth

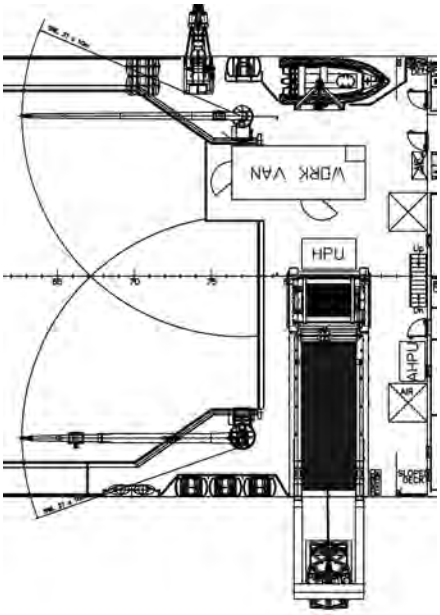
- Does not factor in buoyancy of lifted object
- Please consult Tidewater for lift planning

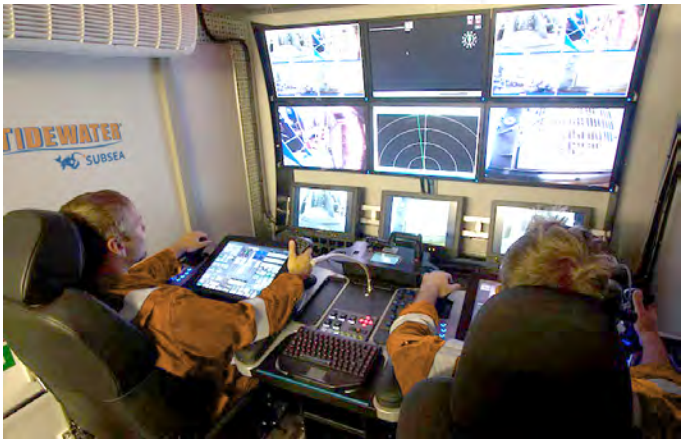


ROV Deck Layout and Built-in ROV Control Room

- ROV provided and installed by Tidewater Subsea
- Layout shown is for Tidewater Subsea work class ROV
- ROV controls shown built-in to vessel A-deck ROV room
- ROV control room installation is optional and for Chaterer's account

◂Stern Bow▸





Supply Vessel Operations and Flotel

Vessel offers full platform supply capacities above and below deck

Deck Capacities

Deck Cargo	2,854 lt	2,900.0 t
Clear Deck Space	190 x 54 ft	58.0 x 16.6 m
Clear Deck Area	10,260 sq ft	962 m²
Deck Strength	2,048.0 lb/ft²	10.0 t/m²

Under Deck Capacities

Cargo Water	628,000 gal	2,375 t	2,400 m³
Fuel Oil	300,000 gal	960 t	1,130 m³
Potable Water	172,750 gal	654 t	650 m³
Base Oil	92,400 gal	300 t	350 m³
Bulk Tanks (6) Total	13,800 ft³	-	390 m³
Drilling Fluid/Brine[1]	5,210 bbl	-	828 m³
Brine (Category Z)[2]	1,380 bbl	-	220 m³

[1] Dual use tanks: Liquid mud or Cat. X/Z brine

[2] Dual use tanks: Water ballast or Cat. Z brine

Figures vary from Cargo Tank Plan due to rounding.

Transfer Rates

Assumed Head	@ 278 ft	@ 85 m	@ 85 m
Cargo Water	660 gpm	150 t/h	150 m³/h
Fuel Oil	1,100 gpm	210 t/h	250 m³/h
Potable Water	660 gpm	150 t/h	150 m³/h
Bulk	28 cfm	–	48 m³/h
Drilling Fluid	440 gpm	–	100 m³/h

Cargo System Features

Drilling Fluid or Brine	2 Segregated liquid mud systems (4 oval tanks) 1 Each (440 gpm at 278 ft) pump per system, pumps are two speed. All tanks piped for recirculation using the cargo pump. Oval tanks fitted with mechanical agitators. Dual use tanks for drilling fluid or Cat. X/Z brine.
Brine	2 Segregated dual use water ballast or Cat. Z brine tanks. ABS ENVIRO notation is deleted to carry Cat. Z brine in these tanks.
Bulk	2 Segregated bulk product systems (80 psi).Can discharge 2 different products simultaneously.
Glycol	Carried in liquid mud tanks

Discharge Stations

Port side, Mid	Cement, Liquid Mud, Brine, FW, FO, DW, Base Oil
Port side, Aft	Liquid Mud, Brine, FW, FO, Base Oil, Cement
Starboard Mid	Cement, Liquid Mud

Fresh Water Making Capacity

- 2 x 15 m³/day reverse osmosis water makers
- Water maker system designed for muddy water operation

Stores Crane

- 1 x 3.0 Tonne @ 10 meters
- 1 x 2.0 Tonne @ 10 meters

Deck Machinery and Mooring

Tugger winches	2 x Aker Brattvåg Winch	22,000 lbs	10.0 t
Windlasses	2 x Aker Brattvåg Winch 50K3, forward		18.4 t
Mooring winches	2 x Aker Brattvåg Winch, aft	22,000 lbs	10.0 t
Anchor and chain	2 x 4050kg, 522,5m. 50mm-K3		

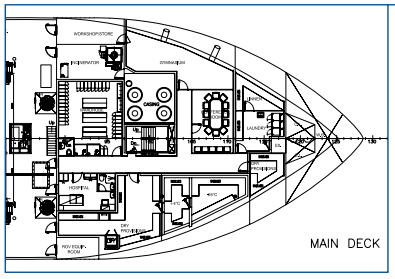
External Fire fighting

- ABS FIFI-1 Classification
- Water capacity of 2,400 m3/h
- Fire water supplied by two electrically driven pumps
- Fire water delivered by 2 x FFS 1200 remote controlled monitors mounted above wheelhouse

Flotel Accommodation

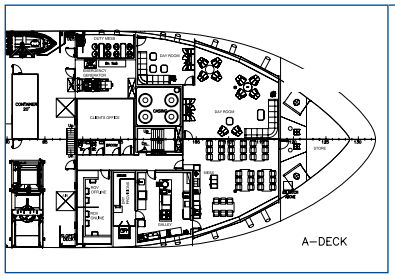
Vessel is equipped for and certified to carry 69 personnel. There are (17) 1 man staterooms/cabins, (14) 2 man cabins, (6) 4 man cabins, Mess Seating (36), Duty Mess Seating (8), 2 x day rooms, conference room, 2 x customer offices, ROV room, large change room, gym, hospital.

Main Deck



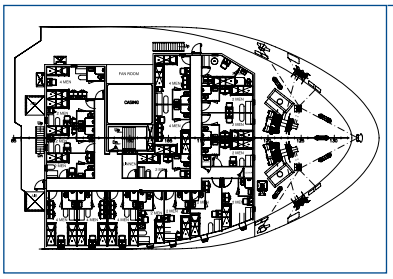
Hospital
Conference Room
Change Room
Provisions Storage
Gymnasium
Laundry

A Deck



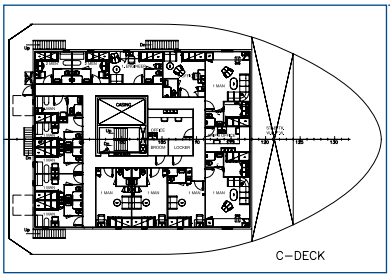
2 x Day Rooms
ROV Room
Client Office
36 Seat Mess
8 Seat Duty Mess
Galley

B Deck



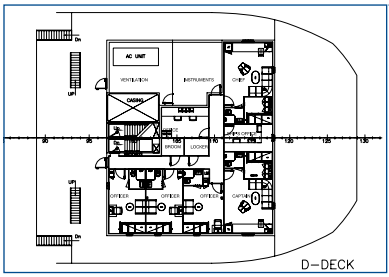
12 x 2 man cabins
6 x 4 man cabins
48 Total Berths on “B” Deck

C Deck



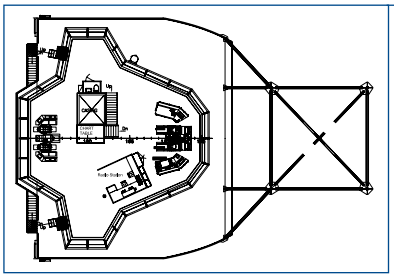
Ship’s Office
Second Office
2 x 2 man cabins
12 x 1 man cabins
Stability Tank
16 Total Berths on “C” Deck

D Deck



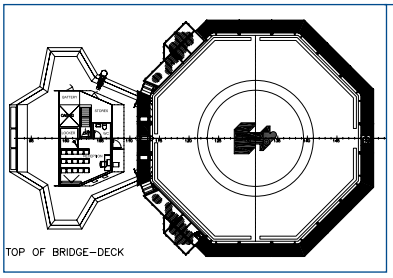
Captain’s Stateroom
Chief Engineer’s Stateroom
3 x Officers’ Staterooms
Ship’s Office
Engineering Office
5 Total Berths on “D” Deck

Bridge-Deck



Dual Redundant Control
Separate Radio Station
Chart Table / Writing Desk
Head
Coffee Station

Top of Bridge – Deck



21 M Helideck,
Sikorski S 92 rated
15 seat waiting / receiving area
Reception desk
Head
Luggage locker

Station Keeping

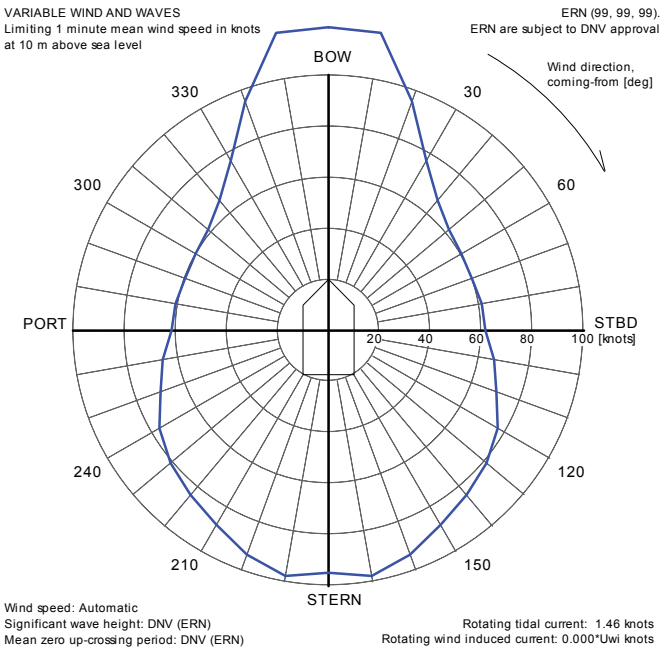
Vessel is classed ABS DP-2

Dynamic Positioning System

- Kongsberg Maritime DPII syst. K-Pos DP-21

Position Ref. Systems	Model
DGPS	Kongsberg DPS 700
Radius	Kongsberg RADius 1000
Fan Beam	Kongsberg Fanbeam™ 4.2
Gyros	Anschütz
MRUs	Seatex MRU 5
HPR	Kongsberg HiPAP™ 500
LW Tautwire	Lightweight Taut Wire MK15B
Wind Sensors	Gil Windobserver™ II Ultrasonic Anemometer

DP Capability Plot



#	Thruster	X [m]	Y [m]	F+[tf]	F-[tf]	Max [%]	Pe [kW]
1	TUNNEL	36.9	0.0	18.0	-18.0	100	1200
2	TUNNEL	33.5	0.0	18.0	-18.0	100	1200
3	AZIMUTH	27.6	0.0	16.0	0.0	100	883
4	AZIMUTH	-41.2	5.0	29.4	0.0	100	2200
5	AZIMUTH	-41.2	5.0	29.4	0.0	100	2200

Propulsion, Navigation and Communication

Vessel propulsion is diesel electric with Z Drives and three bow thrusters

Propulsion Systems

All propulsion is electric motor driven		BHP	kW
Main Engines	(4) Cat 3516C, Marine Diesel	11,720	8,752
Propellers	(2) Rolls Royce Azimuthing Z Drives	5,900	4,400
Bow Thruster	(2) Rolls Royce Tunnel Thruster	3,220	2,400
Bow Thruster	(1) Rolls Royce Drop-Down Thruster	1,180	883
Primary Gens	(4) 690 volts 60 hertz	11,264	8,400
Emergency Gen	(1) 690 volts 60 hertz	311	232

Speed vs Fuel Consumption

(Assuming Fair Weather)		gal/hr	t/day	m^3/day
Maximum	about 14 knots	375	28.96	34.07
Cruising	about 12 knots	325	25.10	29.53
Economical	about 10 knots	275	21.24	24.98
Standby	(Generator Only)	120	9.27	10.90

Range at 12 knots is about 9,000 nautical miles

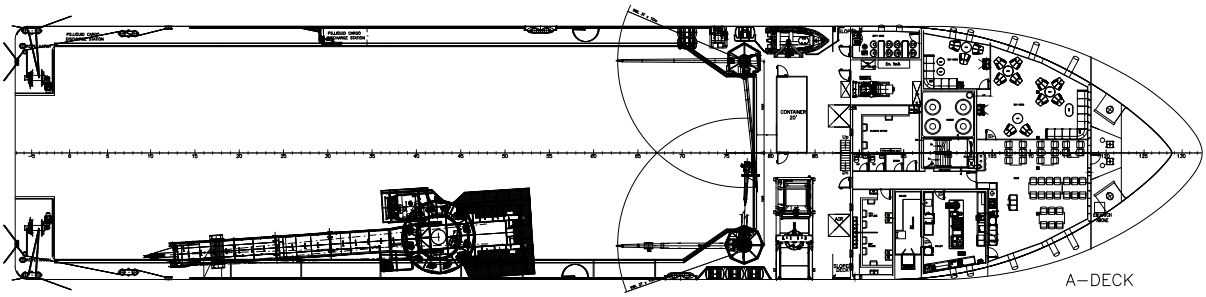
Instruments and Electronics

One 10cm S-Band & one 3cm X-Band ARPA radar, Magnetic Compass, 3 x Gyro Compass, Echo sounder log, AIS, VDR & HPR Radio, INM-C Satellite com., VHF, UHF, SEVSAT™ Ku Band VSAT

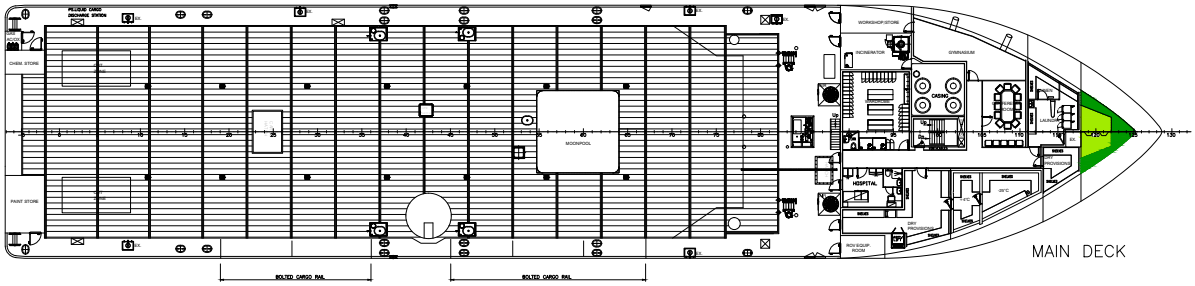
Cargo Tank Plan

Tank ID #	Name	Contents	Capacity (m³)	Bulk	Liquid Mud	Fuel Oil	Fresh Water	Base Oil	Brine	Drill Water
1	WB FOREPEAK	WB	162.1							
2	FW DBWT1_PS	FW	123.6				123.6			
3	FW DBWT1_SB	FW	107.0				107.0			
4	WB DBWT2_PS	WB	175.7							175.7
5	WB DBWT2_SB	WB	195.2							195.2
6	WB DBWT3_PS	WB	160.1							160.1
7	WB DBWT3_SB	WB	160.1							160.1
8	WB DBWT4_PS	WB	73.1							73.1
9	WB DBWT4_SB	WB	73.1							73.1
10	WB DBWT5_PS	WB/CAT Z BRINE	107.9						107.9	107.9
11	WB DBWT5_SB	WB/CAT Z BRINE	112.7						112.7	112.7
12	WB DBWT6_PS	WB	93.6							93.6
13	WB DBWT6_SB	WB	93.6							93.6
14	WB DB7	WB	11.0							11
19	HEELING SB	WB	161.3							161.3
20	HEELING PS	WB	161.3							161.3
21	FW WT8 PS	FW	93.1				93.1			
22	FW WT8 SB	FW	93.1				93.1			
23	FW WT9 PS	FW	84.3				84.3			
24	FW WT8 SB	FW	84.3				84.3			
25	WB AFTPEAK PS	WB	92.2							
26	WB AFTPEAK SB	WB	93.2							
38	FO CT1 PS	FO	222.1			222.1				
39	FO CT1 SB	FO	222.1			222.1				
40	FO CT2 PS	FO	99.2			99.2				
41	FO CT2 SB	FO	151.9			151.9				
42	FO CT3 PS	FO/BO	176.3			176.3		176.3		
43	FO CT3 SB	FO/BO	176.3			176.3		176.3		
44	FO CT4	FO	80.9			80.9				
45	STAB 1	WB	359.5							359.5
46	STAB 2	WB	206.7							206.7
47	STAB 3	WB	233.0							233.0
48	CEM 1	CEM	65.0	65.0						
49	CEM 2	CEM	65.0	65.0						
50	CEM 3	CEM	65.0	65.0						
51	CEM 4	CEM	65.0	65.0						
52	CEM 5	CEM	65.0	65.0						
53	CEM 6	CEM	65.0	65.0						
54	MUD1_PS	MUD/BRINE	222.5		222.5				222.5	
55	MUD2_PS	MUD/BRINE	207.1		207.1				207.1	
56	MUD1_SB	MUD/BRINE	206.4		206.4				206.4	
57	MUD2_SB	MUD/BRINE	192.3		192.3				192.3	
78	FWCT_1	FW	68.6				68.6			
		Total Capacity (m³)		390	828	1,129	654	353	1,049	2,378
		Total Capacity (Cuft)		13,773	29,251	39,863	23,096	12,452	37,042	83,975
		Total Capacity (Barrels)		2,453	5,210	7,100	4,114	2,218	6,597	14,957
		Total Capacity (Gallons)		103,027	218,814	298,197	172,769	93,147	277,090	628,175
		Total Weight (Tonnes)		936	2,278	959	654	293	2,884	2,378
		Specific Gravity (typical)		*2.40*	*2.75*	*0.85*	*1.00*	*0.83*	*2.75*	*1.00*

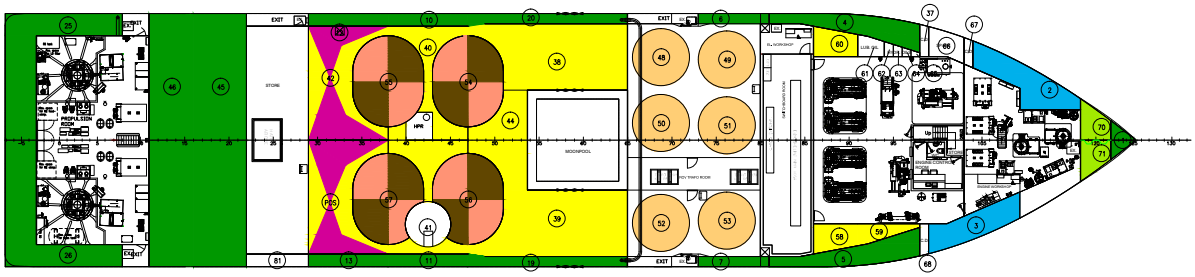
General Arrangement Drawing



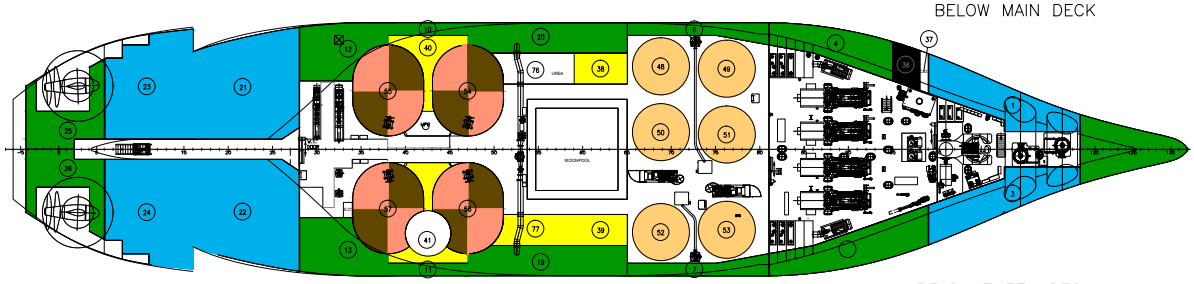
A–DECK



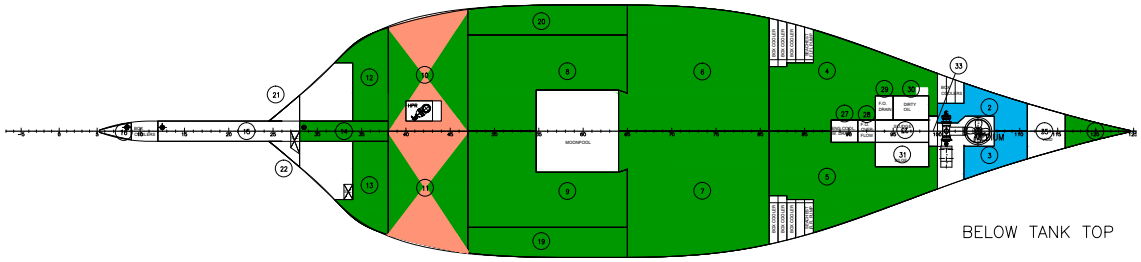
MAIN DECK



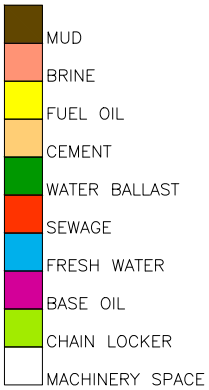
BELOW MAIN DECK



BELOW TWEEN DECK

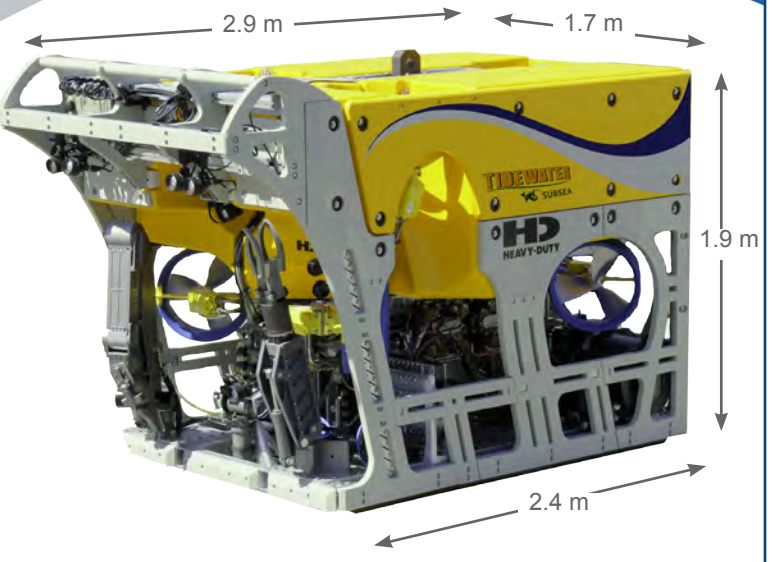


BELOW TANK TOP



1. Tidewater Enabler - Multi-Purpose Platform Supply Vessel 2. Forward Navigation Console 3. One man stateroom
4. Aft Maneuvering Console 5. Four man cabin 6. Two man cabin 7. Mess Room 8. Change Room 9. Engine Room
10. Conference Room 11. Helideck - rated Sikorsky S92

HD ROV Technical Specification



Overall

Depth Range	3,000 msw
Water Temperature Range	-5 to +32 C
Vessel Power	400 - 480 VAC 60 Hz
Frequency	60 Hz +/-0.5%

Vehicle

HPU	150 shp
Dimensions	2.9 m x 1.7 m x 1.9 m
Through-Frame Lift	3,000 kg
Safe Working Load	6,700 kg
Weight in Air	3,600 Kg
Manipulators	TITAN 4 seven-function (Schilling) RigMaster Five-function grabber
Payload	250 kg
Thruster (Forward/Aft/Lateral)	900 kgf
Thruster (Vertical-up/Down)	850 kgf
Low Light Camera	Insite-Mercury
Color Zoom Camera	Insite-Pegasus
Docking Camera	Insite-Aurora
Dept/Heading Sensor	CDL INSense2
Doppler	RDI-Navigator 1200 KH
Strobe	Novatech-ST400AR
Sonar	Tritech-DFS
Lights	120 VAC MV-LED (ROS) 120 VAC QLED (ROS)

Hydraulic System

MAIN SYSTEM PUMP	
Main Pump	Linde - 135 cc
Nominal Operating Pressure	207 Bar - 3,000 psi
System Flow, at 3,000 psi	216 lpm / 57 gpm
Maximum Pressure	275 bar / 4,000 psi
TOOLING VALVE PACK	
Proportional High Flow (1)	72 LPM max at 3,000 psi
NG6 Proportional (2)	32 LPM at 3,000 psi
NG3 Proportional (6)	8 LPM at 3,000 psi
AUXILIARY TOOLING INTERFACE	
Aux Pump	Rexroth - 45 cc
Maximum Operating Pressure	78 L at 3,000 psi

Tether Management System

Type	Top Hat
Length	425 or 850 m
Color Zoom Camera (2)	Insite-Pegasus
Color Camera (2)	Insite-Aurora

Optional length of 1600 m

TIDEWATER® SUBSEA

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