



Technical Specification

MEASUREMENTS

Length o.a.	86.00 m
Length b.p.p.	73.50 m
Breath moulded	19.90 m
Depth moulded	8.80 m
Design draft	6.80 m
Draught, max.	7.30 m
Freeboard, min	1.51 m
Corresponding DWT	3671 t
Gross tonnage	4727 t
Net tonnage	1418 t
Light Ship	4177 t
Displacement	7848 t

CLASSIFICATION

DNV 1A1, Tug, Supply Vessel, Eo, SF, Dyn Pos AUTR, TMON, Comf(V3), Clean Design, ICE C, OILREC, LFL, NAUT-OSV(LOC)

CARGO CAPACITIES

Deck cargo	1200 t
Deck area max	40.0m x 16.60m = 664 m ²
Deck strength	10 t/m ²
Fuel oil	930 m ³
Liquid Mud	SG 2.8 695 m ³
Brine	SG 2.8 1023 m ³
Base oil	180 m ³
Pot water	1170 m ³
Ballast / Drill water	3356 m ³
Special Product	271 m ³
Dry bulk	235 m ³ : 4 vertical tanks
Anti Rolling System	2 x Stabilizing tanks
ORO	1358 m ³ NOFO 2004 under deck NOFO 2005 on deck
Urea	86.4 m ³
Cargo Manifolds	Main deck: Midship both side Main deck: Aft both side
Agitators	In all Mud tanks: El.driven

DISCHARGE RATES

Fuel / ORO	1 x 2-spindle screw x 0-200 m ³ /h 9 bar
Fuel/Base Oil	1 x 2-spindle screw x 0-100 m ³ /h 9 bar
MUD / ORO	2 x Eccentric screw x 0-75 m ³ /h 24 bar
Brine	2 x Eccentric screw x 0-75 m ³ /h 18 bar
Base Oil/Fuel	1 x 2-spindle screw x 0-100 m ³ /h 9 bar
Pot. water	2 x 2-spindle screw x 0-200 m ³ /h 9 bar
Ballast / Drill	1 x 2-spindle screw x 200 m ³ /h 9 bar
Ballast / ORO	1 x 2-spindle screw x 0-200 m ³ /h 9 bar
Special Prod:	2 x 2-spindle screw x 0-75 m ³ /h 9 bar 2 x Centrifugal x 0-75 m ³ /h 9 bar
Dry bulk	2 comp. x 25.6 m ³ / min, 5.6 bar
ORO	2 x 2-spindle screw x 0-200 m ³ /h 9 bar 2 x Eccentric screw x 0-75 m ³ /h 24 bar
Flow Meters	Flow meter for fuel with printer Flow meter for base oil with printer

MACHINERY / PROPULSION

Main Engines & Propulsion Aft	2 x 6000 kw Bergen Diesel Type : B32:40V12P
Auxiliary generators	2 x 910 ekVA 440V 60Hz Diesel
Aux / Harbour generator	1 x 425 eKw 440V 60 Hz
Main generators	2 x 3000 kw 380-440V 50- 60 Hz
Emergency generator	1 x 99 eKw 440V 60Hz Diesel
Bow thruster	1 x 883 kw CP
Azimuth thruster bow	1 x 1500 kw CP
Stern thruster	2 x 736 kw CP
Urea catalyzer for all engine	
Incinerator	1 x Teamtec

PERFORMANCE / CONSUMPTION

Bollard Pull	195 t main propellers only 207 t included forward azimuth
Max. speed	17.5 knots
Speed fully loaded	15.7 knots / 57.9 t / day
Econ speed fully loaded	12.0 knots / 22.7 t / day
AH operations	16.1 t / day
DP operations	10.0 t / day
Harbour mode	1.2 t / day

PROPELLERS / STEERING

Twin controllable pitch propellers 4100 mm diameter with fixed nozzles
2 x Independent RRM High flap rudders
2 x RRM steering gears. Each with 2 x El. pump

DP/JOYSTICK CONTROL

Dynpos AUTR	
2 off Kongsberg SDP21	1 off Fanbeam 1 off Radius
1 off DPS 200	1 off DPS 132
2 off wind sensors	1 off Hipap 350
1 off Furuno Conning System, 4 monitors	

ANCHOR HANDLING EQUIPMENT CAPACITY

1 x Towing drum cap: 1732 m of 84 mm wire.	400 t pull / 550 t brake
1 x AHT drum cap: 5000 m of 84 mm wire.	400 t pull / 550 t brake
1 x AHT drum cap: 2759 m of 84 mm wire.	400 t pull / 550 t brake
2 x Secondary winches capacity each:	138 t pull
- 11 000 m of 76 mm wire	
- or 2557 m of 150 mm rope	
- or 2471 m of 160 mm rope	
- or 1565 m of 203 mm rope	
- or 1261 m of 210 mm rope	
4 x Towing pins	Strength designed according to bollard pull.
2 x Centring device	
4 off Rig chain lockers	Total chain Capacity 630 m ³
2 x 2050 m 76 mm & 2 x 2100 m 76 mm chain or	
2 x 1550 m 84 mm & 2 x 1680 m 84 mm chain	
2 x RRM hydr rail crane with chain claw, wire twister	5 t / 10.0 m
and bracket for SDO tool (travelling on cargo rail)	3 t / 14.3 m
2 x Stern Roller each: Dia 4.5 m x L 3.0 m	550 t MWL
2 x RRM Anchor Handling Tong	650 t SWL
4 x RRM Towing pins	
2 x 76 mm Gypsies	Fitted on winch

2 x 84 mm Gypsies	Stored on board
1 x 95 mm Gypsies	Stored on board
1 x 120 mm Gypsies	Stored on board
2 x Chain Rollers	70 – 165 mm adjustable
1 x J-Hook	250 t SWL
1 x Grapnel	250 t SWL
1 x Smith Bracket	300 t

TOW WIRES / WORK WIRES

1500m x 83 mm wire	Fitted on towing winch
1500m x 83 mm wire	Fitted on AH winch
500m x 83 mm wire	Fitted on AH winch
1500m x 83 mm wire	Spare tow wire
1500m x 83 mm wire	Spare tow wire

STRETCHER ETC

1 x 150m towing line	330 t. To be used on smaller vessel etc.
1 x Jack Up wire	50 m 77 mm wire

NAVIGATION EQUIPMENT

1 x Radar	Furuno FCR-2837S ARPA (Chart radar)
1 x Radar	Furuno FAR-2827 ARPA
3 x Gyro Compass	Anschutz STANDARD 22 Digital
1 x Auto Pilot	Anschutz ADAPTIVE NAUTOPILOT 2025
2 x Electronic Chart Plotter	Furuno ECDIS, Model TECDIS
1 x AIS	Furuno AIS Transponder, Model FA-150
1 x GPS	Furuno DGPS Navigator Model GP-90
1 x Speed Log	Furuno Doppler Log, Model DS-80
1 x Echo Sounder	Furuno Navigational (IMO Approved)
1 x Magnetic Compass	Plath Magnetic. Type, Reflecta 1 Fiberline
1 x Weather Faximil	Furuno Weather Faximile, Model FAX-207
1 x VDR	Furuno VDR VR-3000
1 x Sound Reception	Zenitel Sound Reception System, VSS-111
1 x Bridge Watch Monot.	Kongsberg Bridge Watch Monot ,BA-11

COMMUNICATION EQUIPMENT

GMDSS AREA A3	
1 x SSB Radio HF/MF/DSC	Furuno 250 W Simplex
2 x VHF / DSC	Furuno FM 8800S
3 x VHF Portable	Jotron Tron TR-20
2 x VHF	Furuno Model FM2721
1 x VHF Slave In Hospital	Furuno
2 x Inmarsat C	Furuno Felcom 15
1 x Navtex	Furuno NX-700B
1 x EPIRB	Jotron Tron 40 S
1 x EPIRB	Jotron Tron 45 SX
2 x Radartransponder	Tron Sart
1 x Inmarsat Mini M	Thrane Thrane
4 x VHF Portable	Motorola GP 380 -EX
2 x UHF Bridge & ECR	Motorola UHF GM380
4 x UHF Portable	Motorola GP 380 -EX
2 x Mobile phone Norway	Type GSM
1 x V-Sat 128 kbit/s	Type Sea

MOORING & DECK EQUIPMENT

Windless	2 x 15 t Deepwater winch
Anchors	2 x 3780 kg
Chain	2 x 48 mm (abt 260 m each)
Tugger winch forward	2 x 24 t + 1 x 20 t
Tugger winch / Capstan aft	2 x 12 t hydraulic
Crane	15 t / 15 m radius. Starbord side
1 x Rope reel	10 t

LIFERAFT / RESCUE BOAT

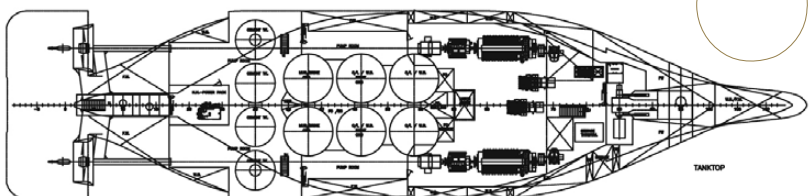
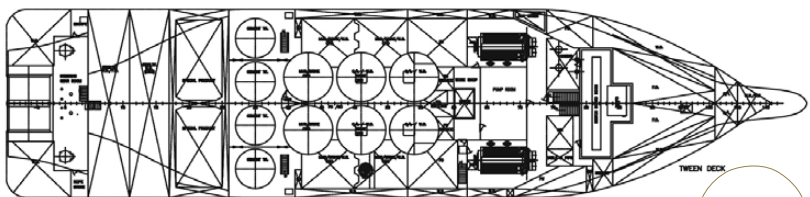
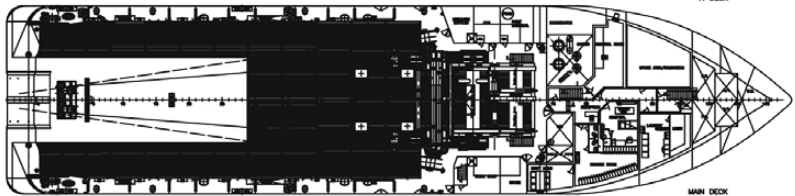
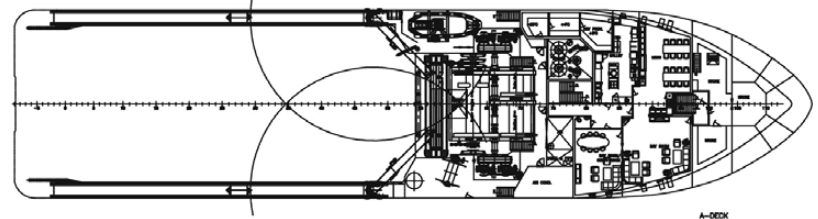
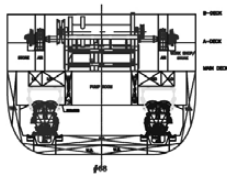
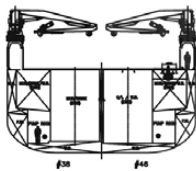
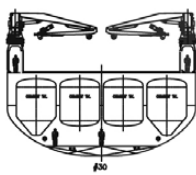
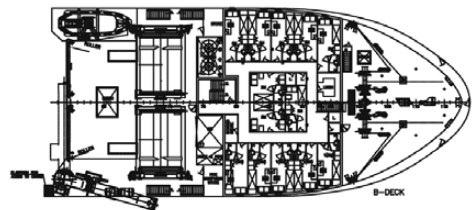
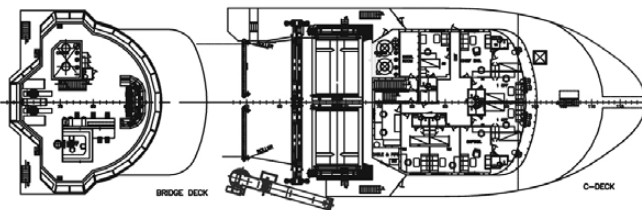
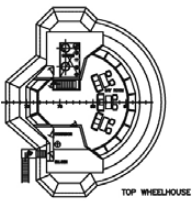
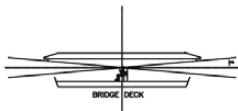
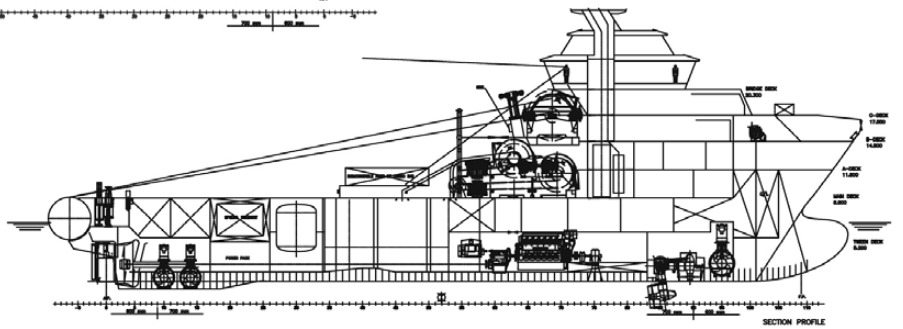
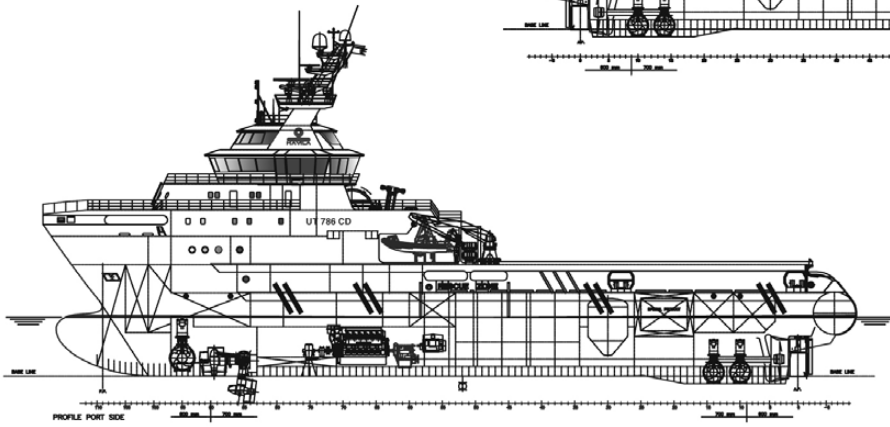
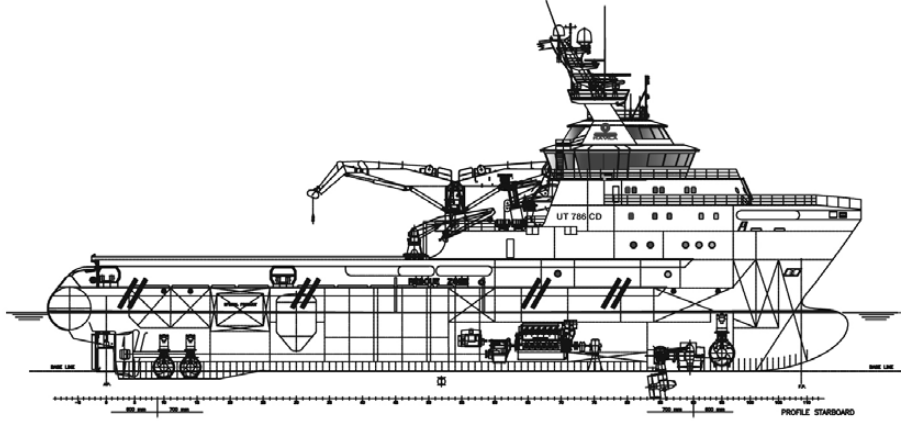
Safety Certificate	33 persons
Survivor capacity	300 persons
1 x Alusafe 770 MOB boat	
1 x Rescue boat davit: Type TTS Marine HL9D	

ACCOMMODATION 33 PERSONS

Cabins	7 single cabins + 13 x 2 men cabins
Dayroom	1 off
Sky Lobby / Dayroom	1 off
Dayroom for smokers	1 off
Dirty Mess	1 off
Conference room	1 off
Ships Office	1 off
Gymnasium	1 off
Hospital	Yes
Cool Store / Freezer	Yes

ENTERTAINING EQUIPMENTS

Sat TV Sea Tel	
Rack with 5 x Tuners	
1 off TV in all Crew cabins	
1 off Radio/CD inn all cabins	



CARGO CAPACITY PLAN

TANK NR.	Volume M ³	Fuel M ³	Pot Water M ³	Ballast water M ³	Mud SG 2.8 M ³	Brine SG 2.8 M ³	Base Oil M ³	Spec. prod M ³	Dry Bulk M ³
1	194.4		194.4	194.4					
2 SB	83.9		83.9						
2 PS	165.7		165.7						
3 SB	173.1	173.1							
3 PS	175.9	175.9							
4 SB	68.0			68.0					
4 PS	88.0			88.0					
5 C	77.5	77.5							
5 SB	47.8			47.8					
5 PS	47.8			47.8					
6 SB	94.5		94.5						
6 PS	91.7		91.7						
7 C	33.8	33.8							
7 SB	99.5			99.5					
7 PS	101.7			101.7					
8 SB	43.2			43.2					
8 PS	43.2			43.2					
9 C	180.1	180.1					180.1		
9 SB	97.4			97.4					
9 PS	97.4			97.4					
10 SB	77.8		77.8	.					
10 PS	77.9		77.9						
11 SB	57.6			57.6					
11 PS	57.6			57.6					
12 SB	44.2			44.2					
12 PS	45.9			45.9					
13 SB	31.2		31.2						
13 PS	31.2		31.2						
14 SB	130.3			130.3					
14 PS	129.6			129.6					
15 SB	86.5	86.5							
15 PS	101.1	101.1							
16 SB	158.4			158.4					
16 PS	158.4			158.4					
17 SB	81.4			81.4	81.4	81.4			
17 PS	93.8			93.8	93.8	93.8			
18 SB	163.9			163.9		163.9			
18 PS	163.9			163.9		163.9			
19 SB	100.6			100.6	100.6	100.6			
19 PS	100.6			100.6	100.6	100.6			
20 SB	159.4				159.4	159.4			
20 PS	159.4				159.4	159.4			
24 CD	284.4			284.4					
25 Stab	335.2			335.2					
26 Stab	321.6		321.6	321.6					
34 SB	135.8							135.8	
34 PS	135.8							135.8	
57 DAY	27.8	27.8							
58 DAY	27.8	27.8							
59 Setl	46.6	46.6							
CEM 1	61.8								61.8
CEM 2	55.9								55.9
CEM 3	55.9								55.9
CEM 4	61.8								61.8
TOTAL	5765.7	930.1	1169.9	3355.8	695.2	1023.0	180.1	271.6	235.4

1 M³ = 6.289 BARREL (BBL) = 35.315 F3