AHTS APOLLO Z – Specifications

18300 BHP, 86m, 210T BP, DP2, FIFI 1

ABOUT

The multi-functional AHTS Apollo Z is a Rolls-Royce UT786 CD design, retrofit 2023, with an estimated bollard pull of 210 tonnes, designed to ensure high quality anchor handling capabilities in demanding offshore environments, and one with as little environmental impact as possible.

A powerful deepwater anchor handler that also has full supply capability and excellent standby rescue capacity. In addition, the ship is equipped for firefighting, rescue, oil recovery and ROV operations.

The low resistance hull form has been optimised to achieve low fuel consumption, built to achieve DNV's environment-conscious Clean Design class notation, and equipped with catalysers to reduce NOx emissions to very low levels.

KEY FEATURES

DNV/GL Classed AHTS

210T continuous Bollard Pull

Ice Class "ICE C" – FIFI Class 1

Accommodation for 33 persons

400t pull first layer, 550t brake capacity

Dynamic Positioning Class 2 – New DP System

APOLLO Z

DESIGN	UT 786 CD
CLASSIFICATION	DNV 1A1, TUG SUPPLY VESSEL, E0, SF, DYN POS AUTR, TMON, COMF(V3), CLEAN DESIGN, ICE C, OILREC, LFL, NAUT-OSV (LOC)
BUILDERS	HAVYARD LEIRVIK
PORT OF REG.	RIO DE JANEIRO
FLAG	BRAZIL
MMSI	710006669
IMO NO	9364265
DELIVERY DATE	NOVEMBER 2007
CALL SIGN	3E2598

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	2400
GROSS TONNAGE	4727
NET TONNAGE	1418
LIGHT SHIP	4177 t.
DISPLACEMENT	7848 t.

PERFORMANCE / CONSUMPTION

BOLLARD PULL	210 t main propellers only
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

ACCOMMODATION 33 PERSONS

CABINS	**7 x single cabins** **13 x 2-men cabins**	CONFERENCE ROOM	1 off
DAYROOM	1 off	SHIPS OFFICE	1 off
SKY LOBBY / DAYROOM	1 off	GYMNASIUM	1 off
DAYROOM FOR SMOKERS	1 off	HOSPITAL	Yes
DIRTY MESS	1 off	COOL STORE / FREEZER	Yes

CARGO CAPACITIES

DECK CARGO		1200 t.
DECK AREA MAX		40.0m x 16.60m = 664 m2
DECK STRENGTH		10 t/m2
FUEL OIL		930 m3
LIQUID MUD	SG 2.8	695 m3
BRINE	SG 2.8	1023 m3
BASE OIL		180 m3
POT WATER		1170 m3
BALLAST / DRILL WATER		3356 m3
SPECIAL PRODUCT		271 m3
DRY BULK		235 m3: 4 vertical tanks
ANTI ROLLING SYSTEM		2 x Stabilizing tanks
ORO		1358 m3 NOFO 2004 under deck NOFO 2005 on deck
UREA		86.4 m3
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 m3/h 9 bar
FUEL/BASE OIL	1 x 2-spindle screw x 0-100 m3/h 9 bar
MUD / ORO	2 x Eccentric screw x 0-75 m3/h 24 bar
BRINE	2 x Eccentric screw x 0-75 m3/h 18 bar
BASE OIL/FUEL	1 x 2-spindle screw x 0-100 m3/h 9 bar
POT. WATER	2 x 2-spindle screw x 0-200 m3/h 9 bar
BALLAST / DRILL	1 x 2-spindle screw x 200 m3/h 9 bar
BALLAST / ORO	1 x 2-spindle screw x 0-200 m3/h 9 bar
SPECIAL PROD:	2 x 2-spindle screw x 0-75 m3/h 9 bar 2 x Centrifugal x 0-75 m3/h 9 bar
DRY BULK	2 comp. x 25.6 m3 / min, 5.6 bar
ORO	2 x 2-spindle screw x 0-200 m3/h 9 bar 2 x Eccentric screw x 0-75 m3/h 24 bar
FLOW METERS	Flow meter for fuel with printer Flow meter for base oil with printer

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

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

PROPELLERS / STEERING

TWIN CONTROLLABLE PITCH PROPELLERS 4100 MM DIAMETER WITH FXED NOZZLES

2 X INDEPENDENT RRM HIGH FLAP RUDDERS

2 X RRM STEERING GEARS. EACH WITH 2 X EL. PUMP

DP/JOYSTIC CONTROL

DYNPORS 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	

LIFERAFT / RESCUE BOAT

SAFETY CERTIFCATE	33 persons
SURVIVOR CAPACITY	300 persons
1 X ALUSAFE 770 MOB BOAT	
1 X RESCUE BOAT DAVIT: TYPE TTS MARINE HL9D	

ENTERTAINING EQUIPMENTS

SAT TV SEA TEL.

RACK WITH 5X TUNERS

1 OFF TV IN ALL CREW CABINS

1 OFF RADIO/CD INN ALL CABINS

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:	
- 11 000 M OF 76 MM WIRE	
- OR 2557 M OF 150 MM ROPE	138 t. pull
- 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 m3
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	5 t / 10.0 m
TWISTER 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

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.

TOW WIRES /WORK WIRES

1500M X 83 MM WIRE	Fitted on towing winch	**1500m x 83 mm wire**	Spare tow wire
1500M X 83 MM WIRE	Fitted on AH winch	**1500m x 83 mm wire**	Spare tow wire
500M X 83 MM WIRE	Fitted on AH winch		

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

CARGO CAPACITY PLAN

TANK NR.	Volume M³	Fuel M³	Pot Water M³	Ballast water M³	Mud SG 2.8 M³	Brine SG 2.8 M³	Base Oil M³	Spec. prod M³	Dry Bulk M³
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	77.7		77.7						
11 SB	57.6			57.6					
11 PS	57.6			57.6					
12 SB	44.2			44.2					
12 PS	45.8			45.8					
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 (BBLS) = 35.315 F3