



## DESCRIPTION

### THE EXPERT'S VIEW

*Accommodations for up to 20 guests in 6 staterooms. Large helicopter deck, submarine hanger, 1,400 GT. One of the world's most proven research yachts, featured on such TV shows as Blue Planet II, among many others, ALUCIA has seen over 2,000 dives under her current ownership.*

US duty paid.

55.78 M / 183'00"

### SPECIFICATIONS

BUILDER	AUROUX CHANTIER ET ATELIER
BUILT/REFIT	1974/2016
LENGTH: (M/FT)	55.78 / 183'00"
BEAM (M/FT)	11.89 / 39'00"
DRAFT (M/FT)	4.3 / 14'01"
HULL MATERIAL	STEEL
STATEROOMS	6
GUEST	20
CREW	22
CRUISING SPEED	11 KNOTS / 12 MAX

All speeds, measurements, capacities, consumptions, etc. may be approximate or estimated. Specifications provided for information only. Data was obtained from sources believed to be reliable and is not guaranteed by owner or brokers. Buyer assumes the responsibility to ascertain the correctness of all data contained herein and otherwise provided and must instruct his agent and surveyors to confirm all details for accuracy prior to purchase. Subject to prior sale, price and inventory change, or withdrawal from market without notice.

## SPECIFICATION

## BASIC DETAILS

Name	ALUCIA	
Type	Research Yacht	
Builder	Auroux Chantier et Atelier	
Launched	1974	
Refit	2008 and 2016	
IMO Number	7347823	
LOA	183'00"	(55.78m)
Breadth Overall	39'00"	(11.89m)
Minimum Draft	14'01"	(4.3m)
Maximum Draft with Transponder	17'01"	(5.2m)
Hull Material	Steel	
Flag	Marshall Islands	
Class	Bureau Veritas Special Service/Research Ship Unrestricted Navigation BV Ice III, 15-year surveys 2016 SOLAS/MARPOL	
Interior Design	Joseph Artese Design	
Exterior Design	Joseph Artese Design	
Main Engines	2 x Cummins KTA50M2 1600hp @ 1800rpm (2009). Rebuilt at 20,000 hours April 2018	
Generators	3 x Detroit series 60 400bhp @ 1500rpm w HUG ceramic filters (2009). Rebuilt 2017/2018 gens and HUGs	
Electrical	50hz and 60hz throughout	
Propellers	2 x four blade 81" (2009)	
Bow Thruster Engine	MTU series 60 535bhp @1800rpm (2009)	
Bow Thruster	Gil Jet 440kw 360 degree thrust (2009)	
Stabilization	Quantum QC 1800 active fin system (2009)	
Sewage Treatment	Omnipure model I2MC (2009)	
Oily Water Treatment	Village Marine Tec model 2.2-11 GPM (2009)	
Water Makers	2 x Sea Recovery SRC Coral Sea 2800GPD 3" (2009)	
Ozone Water Treatment	Chem Free C-15ADC/HO (2009)	
Ultraviolet Water Treatment	Ultradynamics 8012-GIE50 (2009)	
JP5 Filling System for Heli Fuel	5,000 USG	(18,927 L)
<b>Tankage</b>		
Fuel	92,500 USG	(350,151 L)

Fresh Water	22,690 USG	(35,891 L)
Ballast Water	99,328 USG	(375,997 L)
Helicopter JP5	5,000 USG	(18,927 L)
Max Speed	12 knots	
Cruising Speed	11 knots	
Range	6,000 nm	
Load Displacement	1,857 ton	
Gross Tonnage	1,396 GT	
Guest Accommodations	20 Guests in 6 Staterooms	

## OVERVIEW

We are very proud to present the private expedition yacht and submersible support ship ALUCIA. Unique in the world today, she is a true hybrid – combining state of the art exploration, scientific and filmmaking capabilities with five-star accommodation and comfort. At 183 feet, she offers the working versatility of vessels many times her size. Originally bearing the name Nadir, she was commissioned as the support ship for the French research submersible Nautile. Under the management of IFREMER, Jacques Cousteau's government sponsored research organization, she has shown a long and successful track record in the field of global, deep oceanographic research and under her current owner for the last eight years she continues that.

ALUCIA has seen the redesign and replacement of almost 100% of her pipework, wiring, machinery, joinery and equipment, as well as the addition of many new systems. A thorough reworking of her superstructure has given ALUCIA a submersible hangar, a sundeck and a helicopter pad. Every piece of steel in her hull and critical structure has been tested and brought into accordance with class requirements, and she has benefited from the application of yacht-quality finish.

### Pilot House

To an observer sitting in the Pilot-House's comfortable settee, ALUCIA's bridge is an overwhelming and impressive array of flat-screen monitors, switches, lights, dials, levers, handsets and keyboards, all nestled into a 34-foot sculpted, metallic graphite bank beneath her six forward-raked windshields.

Twin rudders capable of moving independently can be controlled manually or via the ship's autopilot, enabling effective manual station keeping when used in conjunction with her two 1600 horsepower main engines powering twin fixed pitch propellers and powerful 360-degree diesel MTU bow thruster, which is capable of propelling the vessel at 2.5 knots, making light work of slow close quarters navigation. Modern Quantum active zero speed roll-stabilization makes for a steady platform underway and while at anchor, minimizing stress on passengers and equipment. Powerful communications are available on the bridge and in the adjoining Radio Room. Her sonar capabilities are without parallel among yachts of any size and offer a critical lens through which to map potential

deep-dive opportunities. With the highly sophisticated equipment represented in her scientific and submersible capability, nothing has been skimmed on or left to chance in the execution of ALUCIA's onboard electronics, power generation, navigation, communication, security and control systems.

### **Mission Control Room**

The Mission Control room is the brain-center for all sonar, ROV and submersible operations. Here scientists and technicians can coordinate, monitor and record activities on deployed underwater assets, the bridge, dive deck, tenders, remote teams, and the world at large via hard-wired radio and satellite communications. Four independent workstations share access to a wall-mounted array of five 42" LCD monitors and a 7 terabyte server, allowing powerful collaborative control of multi-beam sonar and other science-related operations. Centrally located, it overlooks all dive and submersible operations and is adjacent to the Media Room and Laboratory spaces. State of the art systems converge here in a climate-controlled, richly appointed suite designed with the long-term comfort of its operators in mind.

### **Media Room**

The Media Room is similarly futuristic. Two completely independent workstations allow simultaneous post-production in almost any digital format, from still images to uncompressed high-definition video. Massive RAID storage of 10.5 terabytes and automatic tape backup systems offer flexibility and security while a large common monitor and the ship's satellite capabilities facilitate collaborative workflow with resources aboard and ashore. Sound quality is appropriate to a high-end creative suite. This Apple driven editing studio will make any professional filmmaker feel entirely at home.

### **Aquarium Room**

Also adjoining the submersible hangar is an insulated and fiberglass-lined walk-in Aquarium Room. Specially designed for research and documentation of sea creatures in their natural environment, This space is light-tight, fully climate controlled and provides dedicated work-surfaces and storage for husbandry supplies and equipment. All plumbing for these systems is dedicated and designed to minimize contamination and acquisition of unwanted metals. A protein skimmer and professional-grade filters along with a reservoir tank and powerful coolers allow for safe deep habitat replication even in tropical waters.

### **Laboratories**

Across the hangar, a two-room suite provides the bulk of ALUCIA's multi-use Laboratory Workspace. Numerous 120V and 240V outlets support flexible bench-style work-surfaces and extensive cabinet storage. In the wet lab, a professional fume extraction system, fresh and salt water plumbed into stainless-steel sinks and counters. A self-draining floor allow for messier projects. The adjoining Dry Lab provides access to the ships interior and protection for owner and client-provided equipment.

### **Medical Room**

Centrally located, ALUCIA's medical room provides a single evaluation bed as well as provision to mount a table-height stretcher/spine-board suitable for both water-rescue and air-evacuation. Cabinets and drawer storage, as well as a sink, provide easy access to materials required for patient stabilization or diagnosis.

### **Machine Shop**

A large compartment provides space for owner-provided tools and spares and workspace for maintenance of the ship's electrical and mechanical systems. Space and power has been provided for the installation of a lathe, mill/drill, parts washer, and other owner-provided equipment. This well-lit room's proximity to the Engine Room, generators and Dive Locker make it an ideal multi-use space for keeping ALUCIA in top mechanical form.

### **Waste Disposal**

For operations in sensitive habitats, effective waste-management is of paramount importance. A special room houses a clean burning, high-temperature incinerator for all non-metallic garbage, which exhausts through the ship's stacks. All wastewater is treated aboard in a sophisticated, chemical and bacteria-free electrolytic processor, creating a clean emissions vessel suitable for use in polar, coral and estuarine environments. This system meets the USCG and IMO standards as a type-2 treatment facility. Oily water and sludge are also handled aboard, maximizing tank space and reducing the frequency, volume and expense of disposal ashore.

## **ACCOMMODATIONS**

Sleeps 12 guests in "owner mode" in 6 staterooms and up to 20 in owner/mission/research mode. Normal crew complement is 15-16 but she can accommodate up to 22 in mission mode.

Comfort and accommodation are unparalleled aboard ALUCIA for a working vessel of her size. Above the hangar deck, six spacious staterooms have been outfitted to super-yacht quality. All are quarters befitting guests accustomed to five-star hotel accommodations with en-suite head and shower, granite counters, full carpet, world-class custom maple joinery, individual climate control, desk and storage space and a full complement of media and communication options. Large windows offer natural light and panoramic views of the ship's surroundings.

Four of these guest cabins are fitted with two twin-sized berths with an option for a further two guests/scientists in the form of cleverly hidden pop up bunks. The other two staterooms, a Master and a VIP are larger and provide a settee, extra storage and double sinks. Master boasts a double shower and king-sized bed, the VIP a queen-sized bed and a jacuzzi tub. Also on this level (and to this standard) are the guest office and the Captain's Stateroom, both extensively connected to the ship's communications, operations and security networks. The Captain's Stateroom doubles as an intrusion

resistant safe-room with independent emergency communications and a robust safe. Unifying this deck is a spacious carpeted hall with gallery lighting for wall-hung exhibits.

The deck above houses the ship's bridge and a large salon. The lounge/salon has floor-to-ceiling windows overlooking the heli-deck and submersible launching A-frame. A unique wall is composed of luminescent panels, adding to the open feel of the space. Design styling carries the carpet and joinery of the rooms below and adds three distinct seating arrangements, providing areas for reading, socializing, planning or watching the 42" built-in flat-screen TV. A flexible banquet table provides meeting or dining space for 10, 12 or 14 people and is serviced by a discreet and stylish bar with integral dishwasher, fridge and wine cooler and dumbwaiter. Floor hatches access large storage areas for wine and other essentials. A stainless-steel spiral staircase provides access to the fly bridge/sundeck above via a windowed foyer in the ships stack.

The fly bridge or sundeck is ALUCIA's party-deck. Half clad in artificial teak with the remainder covered in a tough, attractive, nonskid, it allows rail viewing on all sides and supports two food service areas – one comprised of a huge, custom, stainless steel barbecue with dumbwaiter access to the galley below. Comfortable furniture for eating and lounging can be added and the area is specially lit for nights in the tropics. A Lexan windscreen overlooks the large sundeck in front of the bridge.

Even in her modern crew quarters, finish quality is very high and incorporates the use of sound-dampening materials, easily maintained wood and composite surfaces. All accommodation includes access to head and shower facilities with resin floors, tiled showers and modern glass and chrome fittings. A common mess area provides seating for a full rotation and includes heated buffet facilities, coffee and beverage services. A large television connected to the ships media system with IT connectivity to facilitate lectures and presentations. In addition, there are monitors being fed from the Bridge, Mission Control, CCTV system and VHF radio to allow security watch while in port. An electric dumbwaiter from this room services the lounge and bridge and the fly bridge/sundeck above.

## GALLEY

Designed and specified by chefs with long expedition experience and five-star credentials, ALUCIA's efficient galley is a marvel of space-saving solutions and professional-grade equipment. A door allows access to the Crew Mess and a second door into a passage accesses a dedicated chef or crew head. Down and forward, a large dry-stores locker with aluminum shelving is located opposite a refrigerated room with adjoining walk-in freezer. Together these areas provide a provisioning endurance for a full complement of crew and guests equal to the physical endurance of the ship.

## LAUNDRY

A dedicated laundry has three industrial washer/dryer units, a sink and a professional press for high-end hotel services. There is ample space for organizing, ironing and folding. Two additional laundry units are located in the Machine Shop.

## TENDERS

With her efficient use of available space and heavy-lift capabilities, ALUCIA is able to support a capable and diverse fleet of tenders. Man-rated lifting gear allows deployment and retrieval of tenders with operators aboard, adding efficiency and safety to off-ship operations. A filling station on the aft deck for diesel fuel is plumbed directly from the ship's tanks for operational endurance appropriate to that of the ship. A low stern with handrail and a Starboard embarkation ladder facilitate safe and easy access to tenders already afloat.

In addition the rescue boat storage on the heli deck, the main deck can accommodate a number of craft along with two elevated racks on the port and starboard sides have been constructed to accommodate owner-provided full-size personal watercraft of up 2,000 lbs. on each rack.

### **Zodiacs**

A matched pair of fully inflatable Mark-V military-spec Zodiacs (1 included) can be carried inflated and ready for deployment by crane. Designed to carry 10 French "SEAL" commandos, these rugged and dependable craft are the key to successful landings on remote coasts and are excellent scuba platforms. Completely soft hulls are essential for close interaction with submersibles at the surface.

### **Rescue Boat**

A fully equipped, SOLAS approved, Zodiac rescue boat stands ready at all times with its own redundantly powered davit. A very capable, 40hp outboard driven RIB, it is specially designed, built and classed for in-water rescue and emergency support, and stands aside from the ships normal operations to serve only this function if needed.

## SUBMERSIBLE VESSEL SUPPORT (SUBMERSIBLES NOT INCLUDED)

Conceived and designed as a scientific, submersible support vessel, ALUCIA has worked in this mode throughout her career. *She is the only ship in the world capable of carrying three deep-diving manned submersibles* and this, in conjunction with her decompression chamber, mixed-gas dive support, powerful sonar and tenders, make her one of the most sophisticated sub-sea exploration platforms ever built. Each submersible is cradled by its own powered trolley for transit between the hangar and the launching area and each may be given a dedicated charging set-up for system redundancy and rapid turnaround between dives. The large ventilated hangar, equipped with a full roll-down door for security and inclement weather, also houses an elevated platform supporting the ship's decompression chamber. The hangar can also accommodate a helicopter. A fully equipped

workshop below the chamber is designated as an O<sub>2</sub>-clean room for service and maintenance of critical electronics and high-pressure gas delivery systems.

### **Lifting Equipment**

The heart of a purpose-built submersible support ship is her lifting gear. It's why she is there. ALUCIA's hydraulic system has been rebuilt from the ground up to support the safe and efficient handling of her submersibles, ground tackle and equipment aboard. The main lifting A-Frame is man-rated to 22.5 tons – well in excess of the demands placed on it by the Deep Rovers and the ship's tender. A 25,000 lb. tugger winch sits at the forward end of the hangar to manage subs and tenders. Brute strength is applied with sensitivity and control via three one-ton constant-tensioning winches to stabilize submersibles and tenders to enable operations in a wider range of sea states. A 9-ton crane adds versatility to this capability and supports scientific and operational tasks on either side of the vessel, as well as the aft deck and heli-deck. An additional 1-ton foredeck crane enables efficient provisioning via a hatch leading directly to the ships stores.

### **DIVE SUPPORT CAPABILITIES**

A large Dive Locker below decks is accessible to the dive deck via a hatch and associated cage-lift system, keeping equipment protected while allowing easy maneuvering of bottles, diver propulsion vehicles and other equipment. In addition to workspace and extensive below-floor storage, this room houses twin 20hp air/nitrox compressors, a 25hp nitrox maker, a triox/heliox blending panel with booster pumps for oxygen, helium and argon, and two 135,000 liter, high-pressure, gas storage banks. Offering security to divers throughout her operating region, ALUCIA also carries a four person, 54-inch, twin deck lock decompression chamber with a third, medical access lock and a NATO transfer flange -- allowing mating with a hyperbaric stretcher for helicopter transport.

### **SCIENCE SUPPORT CAPABILITIES**

Laboratories, Aquarium, WET lab Sonars and bottom profiling equipment, UNOLS system for equipment interface, CTD, of ship communications for telepresence and 3<sup>rd</sup> party interface and data processing.

### **APPLIANCES**

Crew Mess

Cold pan (drop in) – Delfield, Model N8130B

Hot well (drop in) – Duke manufacturing, Model AD1-3E-SW

True refrigerator model TST3

Water machine and ice maker – Hoshizaki – 230HE – UK

Liebherr under counter freezer – GNPI066

Dishwasher – Electrolux EUCADDROW

### Main Salon

- Wine chiller – U-Line, Model Wine Captain 1175WC
- Ice maker – Hoshizaki, Model AM-50BAE
- Refrigerator (undercounter) – Beverage Air, Model UCR20

### Galley

- Stove – Lang Manufacturing Co. 6 burner + stove
- Stove hood – Captive Aire Systems, Model 1577 EX-BS
- Refrigerator (reach-in) – Fisher & Paykal 368S21322
- Refrigerator (full size) Stainless Steel
- Combi-Steamer – Rational, Model SCC 61
- Mixer (under counter) – Univex, Model SRM20 (20qt)
- Dishwasher – Jackson MSC, Model TEMPSTAR
- Food processor – robot coup
- Commercial mixer – waring
- Dehydrator
- Bakbar deep fryer
- Ice-cream machine
- Acrobalenolle pasta machine
- Sous vide
- Zojirushi rice cooker
- Panini sandwich grill – Breville
- Microwave oven LG MC 8084NL
- Walk-in refrigeration room located below galley in crew area forward
- Walk-in freezer located below galley in crew area forward

### Laundry

- Washing machine – Miele- W5740 marine x 3
- Drier Miele – T8722 x 3
- Rotary press – Miele

## NAVIGATION & COMMUNICATION EQUIPMENT

### COMMUNICATION EQUIPMENT

VSAT global C-Band w Dual BUK.

Sea Tel 9707 NOTE: BDE (Below Deck Equipment) is leased as part of the service contract with Omni Access. If the buyer stayed with this service provider the equipment would stay, if they change it will be removed.

VSAT global KU-Band

2 x Sea Tel

Iridium phone	2 x ST4120, 5 x 9575 (hand held)
Voice/Fax/Email	2 x Inmarsat Sailor Fleet 77
GSM fixed phone	1 x Tellular SX5E, 1 x GSM station, 2 x GSM amplifier
Digital phone	PABX Panasonic TDA100
Loudhailer	Valcom connected to PABX
VHF AM aircraft	Icom200B, 4 x 202D (hand held) + headsets
VHF Handhelds	3 x Icom IC-M88, 3 x UHF Icom
Subsea Comms	Dual frequency, high-output UWT + spare unit
Inmarsat-C	2 x Furuno Felcom 15
MF/HF DSC SSB	Furuno FS1570 150 Watts
VHF DSC class A	Furuno FM8900S, FS2575C
VHF DSC class D	Sailor 6216, SAILOR 6222
<b>NAVIGATIONAL EQUIPMENT</b>	
Science GPS positioning	Max, C-nav and F180 DGPS (Nav backup)
S-Band Radar	Furuno FAR-2837S/10
X-Band Radar	Furuno FAR-2117
ECDIS:	Transas Navi-Sailor ECDIS 3000i
Chart Folio	Transas Navi-Sailor World Coverage
DGPS	Furuno GP-37, 1 x AIS, 1 x SAT Compass
NAVTEX	Furuno NX-7001
Echosounder	Furuno FE-700, NOBELTEC
Gyrocompass	SG Brown Pro Nav
Thermal Camera	2 x Night Navigator
Speed Log	Furuno DS80

## COMPUTER SYSTEMS

Vessel Network  
 2 x SYNOLOGY RAID NAS 10 TB  
 2 x DELL Edge server  
 4 Printers BROTHER color laser  
 Cat 6 & Cat 7 cabling enabling up to 1 Gb network speed + fibre optics 10Gb  
 Both wired (80 Jacks) and specific locations (15) wireless access  
 Off-Ship connections: V-Sat, Fleet 77, Iridium, WiFi

Science Network  
 8 computers located in Mission Control Room  
 Cat 6 & 7 cabling enabling up to 1 Gb network speed + Fibre 10Gb  
 Off-Ship connections: V-Sat, Fleet 77, Iridium, WiFi

Media Production Network  
 3 x Apple Systems  
 50 TB storage via high-end Apple Raid 5  
 Off-Ship connections: V-Sat, Fleet 77, Iridium, WiFi

#### AUDIO & VISUAL EQUIPMENT

TV'S: 6 x 54", 2 x 48", 4 x 21", 15 x 22"  
 Arcam audio video control center 5 units  
 Marantz audio video control center 4 units  
 Kaleidescape music server system capable of 3,500 DVD's or 4,500 CD's w/10-zones into all areas + 2 x Carousel

#### MECHANICAL EQUIPMENT & ENGINE DETAILS

Main Engines 2 x Cummins KTA50M2 1600hp @ 1800rpm (2009). Rebuilt at 20,000 hours April 2018

Generators 3 x Detroit series 60 400bhp @ 1500rpm w HUG ceramic filters (2009). Rebuilt 2017/2018 gens and HUGs

#### Bow Thruster

Gill Jet 440-KW multi directional thruster driven by Detroit 60 series FWC Diesel rated @ 500 bhp @ 1500 RPM w/ZF gear ZFW350-1 w/steel drive shaft w/universal joints at each end.

Bow Thruster has Dual Racor model #75/900MAX fuel & water separator

Bow Thruster has Walker Air Sep air filtration system w/crankcase vent recovery

Bow Thruster is Air start

Bow Thruster has PTO off the back of engine that drives the hydraulic pump

#### Stabilization

Quantum model #QM-1800 Zero Speed stabilization system w/Quantum model QP20.20CD hydraulic power unit w/55 Square Ft. steel stabilizer fins (2).

#### Bilge Separator

Village Marine Tech model #2.2-11 GPM oily water bilge separator w/River Trace type OCDCM oil content detector

#### Sewage Treatment

Omnipure model #12MC U.S.C.G. approved sewage treatment plant rated @ 12 cubic meters per day. Ser #05-12MC-Doo6503.

Sewage system has 3-#SCT-1000, 1.5 hp., 380 VAC 50 cycle tank transfer pumps.

Sanitary System Pumps

2-Lowara #SV207n11t/a 1.1 KW

Sanitary system flushing water expansion tank - Dayton #4MY-64 119 gallon

Potable Water Pumps

2-Ebara EVMU85 3hp. 380 VAC

Potable water expansion tank - Dayton #4MY-64 119 gallon

Hot Water Heater

Hubble #MH350-405LT3 40KW 380 VAC

Hot water circulating pump - Grundfos CR3-4

Watermakers

2 x Sea Recovery #SRC Coral Sea-2800 GPD

Electric Air Compressors

2 x Quincy #QR325500149 belt driven 380 VAC, 3-phase, 50 cycle, 5hp

Ship's Service Air Tanks

2 x Manchester Tank 200 gallon

Hydro Chlorine Generator

Chloropac type M5-5 Sea Chest

Fuel Purifier -

Alpha Laval MMB-305S-11 fuel centrifugal purifier #4079923

Main Fire Pump

Ampco #3X2X2CH2, 30 HP, 380 VAC, 3 phase, 50 cycle, 10"centrifugal

Fire Pump

Cascade Pumps #TX1-5X10H204BF, 380 VAC, 50 cycle, 3 phase, 9"centrifugal

Bilge Pump

MP Pump #FLOMAX15, 7.5 hp, 380 VAC, 3 phase, 50 cycle #06F0015

Main Ballast Pump

MP Pump #FLOMAX15, 5 hp., 380 VAC, 3 phase, 50 cycle #06J0381

Air Conditioning

Carrier Transicold #90YEM7R20 dual chillwater unit rated at 89.4 ton or 1,072,800 BTU's of cooling capacity

Incinerator

Teamtec #OG120CSW# rated @ 108,000 kilo calories per hour #14550-01 w/ welded steel exhaust w/discharge at top of stack

Fixed Fire Suppression Systems

Engine Room: Western Fire and Safety Co. 1,000 lb. w/10 bottles located in the CO2 locker on the main deck behind the stack

Generator Room: Western Fire and Safety Co. 200 lb system w/2 bottles located in the CO2 locker on the main deck behind the stack

Incinerator Room: Western Fire and Safety Co. 100 lb. w/1-bottle located in the CO2 locker on the main deck behind the stack

Emergency Generator Room: Western Fire and Safety Co. 100 lb. w/1-bottle located in the CO2 locker on the main deck behind the stack

#### Fans

Engine Room Exhaust Fan: 2 x Aerovent type W, size 25W7, 3-hp, 220VAC, 3 phase, 50 cycle inline ducted vane axial fans rated @9,000 cubic feet per minute

Engine Room Intake Fan: 2 x Aerovent type W, size 30W7, 7.5 hp, 380 VAC, 3 phase, 50 cycle inline ducted vane axial fans rated @ 13,000 cubic ft. per minute

Axiliary Generator Intake Fan: Aerovent type BE, size 25W7, 3-hp, 380 VAC, 3 phase, 50 cycle inline ducted vane axial fan rated @7,000 cubic ft. per minute

Exhaust Blower Fan: 3 x American Fan Co. type SC-600, ¾ hp, 380 VAC, 3 phase, 50 cycle centrifugal type head exhaust blowers w/ducted suction ring main w/discharge to the stack. These fans service guest area, one on upper crew forward, one is booster w/discharge to the mast

Ozone Water Treatment System  
Water Tank Treatment

Delta T Systems Chem Free type C-15ABC/HO  
Ultra Dynamics #8102-G1E50 ultraviolet light

#### Hydraulic System

Maximum performance hydraulic designed main hydraulic system w/Eltech/PFI control. System consists of: 250 KW main hydraulic pump, 2-56.5 KW auxiliary hydraulic pumps, 1-37.5 KW light duty pump/aft deck crane pump, A Frame emergency hydraulic pump, 800 gallon main hydraulic tank. Hydraulic system is interconnected via SS pipe hydraulic loop. Main system provides power to: CTD winch, A Frame, Trawl winch, 3-CT winches and aft crane. Micro control A10 hp hydraulic foredeck crane.

Hydraulic Pumps

2 x Motersener Maschoenf type SNH66CR40 ½ windlass electro

#### Fuel Transfer Pumps

Main Fuel Transfer Pump: Roper type 1, 380 VAC, 3 phase, 50 cycle, 5 hp

Backup Fuel Transfer Pump: Flowserv #3GAFMIDO 380 VA, 3 phase, 50 cycle, 1 hp

Sludge Pump: Flowserv #3GAFMIDo, 380 VAC, 3 phase, 50 cycle, 2-hp

Fuel Transfer Pump: Roper #2AM06, 7 gallon per minute, 2-hp AC JP5

Auxiliary Fuel Tank Transfer Pump: Roper #2AM06, 7 gallon per minute, 2-hp

Fuel Transfer Meter

Liquid Controls #M-7-1

Washdown Pump

Saltwater Pump: Ampco Pump[s#2X11/2KX2, 380 VAC, 3 phase, 50 cycle 5-hp  
Freshwater Pump: Ampco Pumps #2X11/2KC2, 280 VAC, 3 phase, 50 cycle 5-hp  
Freshwater Expansion Tank: Manchester Tank 60 gallon

#### Main Engines

Masson SA ZF type ZFW7300 reversing gears w/5.494:1 reduction  
Mains have fully blanketed dry stack exhaust  
3-Crast grease lubricated pillow block bearings on each drive shaft  
Mathers disc type #SB32-06614 pneumatic actuated hydraulic shaft brakes  
Alfa Laval #M10-MMFG heat exchanger  
EMI electronic engine control interface into the dynamic positioning system  
Racor dual 75/1000 Max fuel water separators  
Mains are air start  
2-Ampco #T2X11/2KC2, 2-hp, 380 volt, 3 phase, 50 cycle AC shaft cooling pumps  
Kim Hot Start block heaters  
Coolant header tank with sight gauges  
2-Dupont Engineering #HB-1004-91185 gearbox coolers

#### DECK EQUIPMENT

Swinging stern A-frame for launch and recovery - SWL 22.5 ton block-rigged jack  
Pullmaster M50 Hydraulic winch on A-Frame, 22.5 ton pull (optional)  
Lifting jack with soft line: SWL 22 ton  
Aft Crane: SWL 9 ton  
Fore Crane: Marine crane Model MPHI-20K - SWL 1 ton  
Pullmaster M25 Hydraulic Winch, 12.5 ton  
Rail system imbedded into deck for submersible and tender trolleys  
Fully enclosed hangar with stainless steel door capable of housing 3 submersibles and Eurocopter 135

#### Tenders

1 x Zodiac Mark V HD, 20' inflatable w/ 60 hp Yamaha outboard  
1 x Zodiac Fast Rescue Boat with 40 hp Yamaha outboard

#### Diver Support Systems

There is a separate dedicated room for the dive compressors  
2 x 20 hp Air/nitro compressors  
25 hp Nitrox maker w/nitro blending system  
Diver propulsion vehicles for snorkeling and scuba (not included)  
Dedicated 54" twin lock decompression chamber w/medical lock and NATO transfer flange  
Nitrox, oxygen, triox, trimix or heliox high pressure storage tanks w/270,000 liters capacity

Trimox/heliox partial pressure blending panel w/integrated oxygen compatible and helium boost pump

6 sets of SCUBA equipment

## ADDITIONAL FEATURES

### **Scientific and Media Support**

Multibeam Sonar: Reson 8111 ER (installed and optimized for 0-1200 m depth)

Applied Microsystems SV Plus sound velocity profiler (5000m rated)

Applied Microsystems SV Micro sound velocity profiler (for multibeam, 4500m rated)

Full automatic tape back-up system with independent server enabling simultaneous back up for multibeam Sonar

6 terabyte RAID storage for running multibeam data storage

10.5 terabyte Apple Raid 5 storage for uncompressed Media storage

Full automatic tape Media back-up system w/ independent server

## REMARKS

Arguably the most capable deep-sea expedition yacht ever built; ALUCIA exudes an aura of pure functionality from every facet of her multi-role design. In 2008 she was stripped to her core design elements, and then rebuilt to a modern day expedition ship on her solid and dependable structure. The result is a uniquely versatile hybrid – a yacht that offers the opportunity to explore and discover the oceans in a way never before seen outside of government programs. Her components, all sourced from the top end of the spectrum, will allow her owners to travel the sea in comfort, and to explore, sample and discover from the surface to depths of 3280 feet (1000m).

ALUCIA was built originally in 1974 by the French Government and in association with Jacques Cousteau. She is one of very few ships, ever built for submersible support. In 2008 she was completely rebuilt, with all new engines, generators, wiring, hydraulics, shafts etc. Her hull was completely ultra sounded and any areas found to be worn, or unable to be given a 25 year life, were replaced in 2016 including most piping. She is classed by Bureau Veritas, light ice and her 15 year surveys were completed in 2016

Her accommodations for owner and guests are of Yacht quality and her operational capabilities far exceed any vessel offered today.

She has the ability to carry three submersible deep diver submarines and a helicopter in a hanger that can close off in heavy weather.

Under her current ownership ALUCIA has been on station for more than 2,000 dives!

ALUCIA is truly a one of a kind.

## EXCLUSIONS

- Exclusions include all of Owner's personal effects -

A detailed exclusion list will be provided pursuant to an acceptable purchase agreement.

## DISCLAIMER

All speeds, capacities, consumption, etc. are approximate or estimated; measurements can also be approximate. Specifications are provided for information only and particulars herein obtained from sources believed to be correct, but are not guaranteed. Buyer should instruct his agent and/or surveyor to check all details for accuracy. Offered subject to prior sale, price and/or inventory change, or withdrawal from the market without notification.

