

1	General informations	2
1.1	Sailing vessel AMEL SANTORIN MIA-Amara.....	2
2	Basic Equipment from AMEL.....	3
2.1	Overview AMEL SANTORIN Ketch.....	3
2.2	Hull/on deck.....	3
2.3	Rig	4
2.4	Sails	4
2.5	Ankergeschirr	4
2.6	Engine	4
2.7	Electric.....	5
2.8	Sanitary Facilities/Pantry	5
2.9	Instruments.....	5
2.10	Interior Design	6
2.11	2.11 Safety/Emergency.....	6
3	Additional installations, building conversions, changes	6
3.1	Hull / on deck.....	7
3.2	Rig	8
3.3	Sails	8
3.4	Anchor Harness.....	8
3.5	Motor / Engine.....	8
3.6	Energy supply.....	9
3.7	Sanitary Facilities/Pantry	9
3.8	Instruments.....	10
3.9	Interior Design	10
3.10	Safety/Emergency.....	11
3.11	Inventory (additional equipment)	11
3.11.1	Charters and Manuals	11
3.12	Spare Part List	12
4	Additional equipment, refit and maintenance in Chaguaramas, Trinidad, 06/2016 – 11/2016.....	12
4.1	Stainless steel work: Arch/Davids, swimming platform, etc.	12
4.2	Canvas work: All Covers, Sun Awning etc.	12
4.3	Wooden works: Teak slats	13
4.4	Engine Services	13
4.5	Bottom paint: Epoxy primer and antifouling	13
4.6	New hull painting, strengthening of the stern side	13
4.7	New B&G Triton System	14
4.8	Electrical installations: Alarm system, solar panels, galvanic isolator etc.	14
4.9	New VHF radio	14

1 General informations

1.1 Sailing vessel AMEL SANTORIN MIA-Amara

Length of hull	13.94 m
Breadth	3.93 m
Draught	1.90 m
Built in	1996
SerialNr	135/0030017SN135
Engine	VOLVO PENTA MD22L-A
Engine No.	868732 5100 689798
Month of launching	09/1996
Engine hrs:	ca. 3330
Watertank	800 l
Dieseltank	380 l
Fecestank	80 l
Certificate No. of the ship: Nr.	031322
Registered in Germany	
VAT paid for Europe	

4 bunks in 2 separate cabins: 1 bow cabin for guests and 1 stern cabin for the Capt.
 Each cabin with separate WC and shower
 1 pilot bunk in the salon

The Amel Santorin is considered to be one of the safest and perfects cruising yachts in the World.
 Safety, ergonomics and comfort are the outstanding features of this exceptional ketch.

Why an AMEL?

Thread safety:

High-strength carbon fiber is the material with which the hull is built. The internals are fixed together laminated individually with hull and deck and not only in the body. This results in an enormous stiffness of the entire hull with light weight.

Six independent bulkheads shall ensure that reserves in the event of a collision, the vessel its buoyancy and is thus virtually unsinkable.

The rudder is triple in a sturdy Skeg mounted and protected against flotsam and grounding.

All sails and manoeuvring equipment be electrically operated from the steering station. Thus, nobody must leave the protective cockpit especially in heavy weather, to reef or to perform other work.

A continuous massive metal railing backs up the entire crew.

Topic of ergonomics:

The cockpit is very deep and ergonomically shaped like at any other central cockpit yacht of this size. You can sit by when there are strong waves, in the quietest of the vessel.

The fixed windscreen and large Bimini, allow comfortable sailing.

While already the Oilskin is attracted to other yachts, you can sit on an Amel still in T-shirt and shorts.

The Amel Santorin is designed as a owner yacht, rather than bulk charter vessels.

Two separate cabins with separate toilet and shower, closet space (57 cabinets), large tank capacity and the well-thought-out concept, make this yacht to a safe and ideal for cruising yacht.

2 Basic Equipment from AMEL

2.1 Overview AMEL SANTORIN Ketch

- **Built no. 135** (from the Santorin were built ca. 140, one of the latest Santorin), **month of launching 09/1996**
- Sizes: 13.94 x 3.93 x 1.90 m
- Weight empty 11,000 kg (specification from AMEL)
- Engine VOLVO PENTA MD 22L-A, 50 PS, consumption ca. 3 Liter/hr
- Retractable electric bow thruster (very effective)
- Water tank in the keel, 800 litres with 3 cleaning holes
- Diesel Tank 380 liter, Equinox with dipstick

2.2 Hull/on deck

- Fiberglass full laminate in manual laying
- Hull color white light tinted, therefore very easy to care for
- Circulating reeling completely from equinox tubes (also upper end)
- Very massive rotating scrubbing strip
- Hull and deck are laminated from the inside together. In these vessels, the hull is removed from the mould only when all stiffeners are laminated and the deck is firmly connected to the hull.
- The fixtures and fitting were made after the deck was set up.
- Deck covering Amel specific checkered and longitudinal stripes.

- Bracket for AB-motor at the back railing
- Adjustable get points for the Genoa sheet ropes from the aft ship.
- 2 large sheet wiches for the Genoa, or the cutter jib.
- 2 small sheet wiches for the mizzen staysail
- Railing at the back to open
- 4 Deck Hatches type GOIOT
- side windows in the forecandle, saloon and aft ship
- 3 windows to open (pantry, toilet, aft ship)
- 2 large deck storage space on the forecandle
- 1 Very large locker
- 1 storage space for the life raft and spare sails to port side
- 1 very large deck storage space on the aft ship (bicycles fender etc.)
- All deck storage compartments are lockable from the inside
- 3 cleats on the forecandle, on each side 2 spring cleats, 2 cleats aft

2.3 Rig

- Masts and booms, white burn-in lacquered. These mast profiles were developed by AMEL over 20 years ago. They have proven themselves very well and are still being built by the shipyard itself today.
- Mizzen and large sails are rolled into the mast.
- The power discharges on the masts and in the fuselage are technically perfectly solved. The rig is very strong/stable.
- Electric rolled sailing equipment for Genoa
- Main sails and Genoa are electrically rolled. Alternatively, manual operation is also possible.
- The mizzen as well as the cutter jib are manually rolled from the cockpit.
- Amel-specific Passat and Spinnaker booms
- The AMEL's rolling jib system is designed to allow two sails to be struck at the same time (for-wind course with the balloonner).
- Case of Winch Lewmar, self-fetching, two-course

2.4 Sails

- See additional installations, building conversions, changes

2.5 Ankergeschirr

- Electrical anchor winch LOFRANS TIGRES to use at the anchor winch or from the cockpit panels

2.6 Engine

- VOLVO PENTA MD22L-A 868732 with ca. 3300 hrs (01/2018)

- Reverse gearbox ZF/HURTH
- Drive type AMEL, an angular gearbox that pushes the ship at the keel.
- The engine room is easily accessible from the cockpit. It is "walkable", the machine is accessible all around.
- Cooling water filter Type VETUS
- The engine compartment is completely soundproof and is waterproof to the rest of the vessel body.
- Standard engine instruments from Volvo (touring counter/operating hours)
- Supply and exhaust fans

2.7 Electric

- Land connection 230v with power protection switches and FI-switch
- Measuring device DCC 4000, Volt and ammeters as well as ammeters hr counting
- Shaft Generator
- Steam light at the main mast
- Three-color lantern in the mast
- All-round light in the mast (anchor light)
- Deck Headlights

2.8 Sanitary Facilities/Pantry

- Gas Cooker Two cooker type ENO, with oven, pot holders, cardanic hung
- Pressurized water system cold/warm with copper lines and large pressure compensation vessel (2003)
- Boiler 20 litre, (2003 new) Type Rheinstrom, is heated by the motor or electrically
- 2 identical wet cells with WC, shower, sink, mirror cabinet
- 2 waste water tanks for the WC's, with suction nozzle on deck or drain into the ocean
- Drinking water tank 800 litre with measuring device and 3 inspection openings

2.9 Instruments

- B + G, log, echo sounder, wind measuring system
- Autopilot Autohelm 7000 with chain drive/hydraulics on the rudder
- Radar FURUNO 1831
- VHF/FM radio (with DSC)
- Radio/CD with internal and external loudspeakers
- FM antenna for radio on the main mast
- Barometer, 2 x Clocks (1x local time, 1x UTC), Hygrometer/Thermometer
- Compass with dimbar lighting, compensated with deviation table

2.10 Interior Design

- 2 berths each in the front and aft ship, 1 berth in the salon, all with bunk planks
- A lot of storage space in boxes and under the bunks
- Floor Coverings Teak
- Large Salon table with one retractable part to enlarge
- Very many interior lamps
- Cockpit table Large in teak
- A lot of storage space for tools, spare parts etc. In the corridor to the aft cabin
- Diesel air heater Eberspaecher D3LC/D3LP
- Bed of Back cabin can be changed to one large bed with an retractable part
- Bed of front cabin can be changed to one large bed with an retractable part

2.11 2.11 Safety/Emergency

- The fuselage has a total of 6 compartments waterproofed:
 - Behind the Chain box
 - Between the forecastle and the salon with a watertight closed door
 - The entire engine room
 - Between the saloon and the aft ship with a watertight closed door
 - Between the aft ship and the eighth storage space
- Emergency Tiller
- Bilge Pump Electric
- Bilge Pump manual

3 Additional installations, building conversions, changes

Many ships are being tinkered with a lot of stuff and things w/o documentation and more or less probably in an unprofessional manner that e.g. technical failures may result from the combination of various changes, failures could be impossible to be tracked down using the workshop manuals etc.

Laymen with a lack of experience, but above all with absence-the technical understanding, tinkering unfit solutions.

All changes to our ship have been carefully planned and managed by professionals. The main works were carried out by the **Cantiere Navale Se.Ri.Gi. In Aquileia**. This shipyard exclusively builds custom built ships from 36 to 80 feet long.

The AMEL Santorin is of excellent quality, but is only partially equipped as a long-term cruising ship. Some examples:

- The standard Santorin has to be sailed from Marina to Marina because of the insufficient energy management. Ours has been equipped accordingly.
- Diesel filters and cleaning holes in the tank are missing by default.
- The control instruments of the machine are insufficient.
- A cruise ship with only one Genoa, which must be rolled in at strong, is efficient and probably more questionable in terms of safety.

All these many small and big details have been corrected or supplemented and are really functional, useful and facilitate life on board in everyday sailing.

Take care when you look at other Santorin. You will not find any other Santorin that is equipped in this form!

3.1 Hull / on deck

- Gangway Alu Burn-in lacquered, 3.0 m long, with Treadmaster topping (to exit over the stern; very non-slip; dock side with rollers)
- 2 additional windows on the port and stern side to open in the aft cabin, type GOIOT (like all other windows; for better ventilation/air circulation on warm days)
- Bimini top is fixed on enox frame. Screwed with Mizzen. This can be closed sideways in 2 stages in bad weather and also in the back in winter. It serves as a well ventilated sun roof, but also as an addition to the Sprayhood in bad weather. This is a very tried and tested idea developed in several variants.
- Second Bimini as winter cover
- Outboarder
- Inflatable dinghy TINKER with fixed floor, 2times foldable
- tailored made pillows and back rest for the cockpit coloured with all other canvas works
- Solid stainless steel grating for use in the companion way
- Seawater deck wash pump with hose connection on the forecastle
- Swimming platform for relaxing at the sunrise
- Pressure water connection for water hose in the cockpit
- Stainless steel theft protection for the decline
- Position lamps on the pulpit and at the rear
- 4 large fenders
- 5 Mooring lines
- Water hose with Gardena-coupler 20m
- 1 Boat Hooks

3.2 Rig

- Cutter Jib as storm fock, parallel to Genoa on a manual rolling machine type FURLEX 300S (2003)
- Professional installed and insulated aft stakes (flexibly adjustable) for the storm
- Retractable stainless steel bowsprit with additional line for the Genaker
- Reinforcements in the forecastle area to absorb the force of the additional Cutter Jib
- 2x insulated stern stakes on the mizzen as antennas for SSB radio and NAVTEX receiver FMD56P
- Flag mast on the top of the mizzen

3.3 Sails

- Main Sail Doyle (2007)
- Main sail Original Amel GATEFF sail as replacement
- Cutter Jib ELVSTRÖM (2004) 25 M2 480g/m2
- Genoa by Doyle (2007)
- Genoa V + M sails as a replacement
- Mizzen-Sail Doyle (2007)
- original Amel GATEFF sail as replacement
- Mizzen Jib sail
- Ballooner

3.4 Anchor Harness

- 80m stainless steel chain 10mm (2003) WASI, GL tested. At the factory, the ship was equipped with a steel 50m 8mm chain.
- Chain connector powerball, WASI; GL Checked
- Chain Hook made of stainless steel
- Iron Anchor stainless steel 30 kg (2003), WASI. At the factory, the ship was equipped with a 22kg CQR anchor.

3.5 Motor / Engine

- Large cleaning opening in the diesel tank (doesn't exist)

- Separate starter battery which is loaded via a Alternator 60A. At the factory, the ship was equipped with only one circuit for consumers and engines.
- Diesel Filters,
- Double filter system type RACOR
- Sterilization filter (Volvo Penta) (there were no pre-filters)
- Bleed valve in cooling water system type VETUS (doesn't exist)
- Oil pressure gauge and indicator for cooling water Temperature (2003) (doesn't exist)

3.6 Energy supply

- Prosine 1000/1800 inverter 12v/230v 1800W, real sine wave
- Separate consumer batteries 540Ah, industrial batteries (EXIDE gel) placed directly above the keel
- 2 Wind Generators Air Breeze , each 160W, 12V
 - one on the mizzen mounted on white burn-in lacquered bracket, 2x soundproofed
 - The second is mounted on the arch.
- Board charger Pro, BL 12/48, battery charger PHILIPPI, 40A (for land power connection)
- Additional Alternator 120A with STERLING regulator on the machine for charging the service batteries
- 3 solar panels, each 155W = 465Watt on extremely torsion-resistant arch with additional transverse brace.
- VICTRON BlueSolar charge controller MPPT 100/50
- Galvanic Isolator
- Battery control system Magnetronic DCC4000

3.7 Sanitary Facilities/Pantry

- 1 Electric toilet in the aft cabin Jabsco 58500 Lite Flush Electric toilet
- 1 Manual toilet Jabsco 29090-2000 in the front
- Gas remote switch TRUMATIC, when not in use, disables directly the gas cylinder as the gas bottle
- Drinking water filter SEAGULL stainless steel: Cleans the water from the tank is therefore odorless and easy to drink. Several replacement cartridges.
- New fridge approx. 100 litres, super-insulated, with top cover and small front door
- Cooling unit water cooled, needs about 35% less energy alternatively to switch to ventilated

- The factory built-in refrigerator is disabled, since the produced heat is dissipated into the room. Moreover, it is insufficiently insulated and when opened the door collides with the cardanic vibrating stove.
- Cooling system is FRIGOMATIC K35F

3.8 Instruments

- Map Plotter RAYMARINE, C120, 12 "Display, NAVIONICS (2004)
- GPS RAYMARINE to the map plotter
- GPS Garmin 126 at the navigation table (also provides data to the EPIRB)
- RF Marine transceiver GW/KW transmitter receiver ICOM M800, 150w output power, ICOM HF automatic antenna tuner at-120
- New B&G Triton Wind, Depth & speed
- NAVTEX FURUNO NX 500 with printer
- AIS easyTRX2-is A050 Class B AIS CS Transceiver
- Sea-ME dual band active radar reflector
- Kompass2 remote control for the Bowthruster RadioCommand 2 channels
- Ray Gyro RY40 Seymo Gyro (installed but not yet connected to the helmet computer)

3.9 Interior Design

- Additional Storage space (4 large areas) in the ground: the hard-screwed floor boards were subsequently opened, so that 4 additional storage spaces exist in the ground floor.
- Floors are designed with carpets for the most part. Best quality ANKER PERLONRIPS, Margins are leather-upholstered
- Additional storage space under the stern side seats in the salon. This was firmly screwed on the shipyard side.
- Halogen reading lamps (now partly with LED bulbs) at the berths and at the navigation table
- LED light strips for kitchen and salon, partly multi-coloured and with remote control
- Additional bookcases, 2x in the Salon, 1x in the aft cabine, 1x above the diesel tank in the corridor to the aft cabin
- Additional cockpit table (smaller than the standard table: the AMEL standard table still exists) for 2 people on flexible stainless steel brackets
- Safe Electrolux Safe SKE 160, small safe with the ship firmly connected
- Courtesy lights in guest cabine, Kitchen and Cpt.-Corridor
- Three-part Plexiglas viewing window for the companion way

- JVC Radio-/CD-Player, KD-S73RE
- United CD-PlayerDVD8097
- TechniSat DigiMod T1, for connection of DVB-T programs
- Antenna mounted on the main mast
- TV (AMEL Standard)

3.10 Safety/Emergency

- Swimming Ladder made of stainless steel mounted under the swimming platform, 4-stages
- Water alarm in the engine bilge
- EPIRB (COSPAS/SARSAT), rapid fix, connected to GPS
- Life raft BFA PACIFIC, 6 pers. With entry ramp, 2011 serviced
- LIFESLING Mountain Facility
- 2x Fire Extinguisher 5 kg
- Smoke & alarm system in back and front cabin and in the salon
- Installation of the alarm system FS701 (from flagship Marine security) with three deck Sen-sors, one motion detector, one door opening sensor (for Companion way) including a siren, amber lights and three bright lights. Installation of the horn/siren for normal use via press button. Incl. 2 remote controls. 1 deck sensor as spare. Installed functions:
 - panic button
 - Pre-warning
 - Boarding Light
 - Flashing light.
 - possible to connect to GSM text Messenger.
- Additional companion Way locker from inside (AMEL standard is only one little lock)

3.11 Inventory (additional equipment)

3.11.1 Charts and Manuals

- Extensive map set from the south of France to Tunisia, Italy, Adriatic, Aegean, Dardanelles to Istanbul, Ionian Sea, Greece, Turkey to Antalya, according to separate compilation (map with marked map excerpts)
- NAVIONICS Card modules for C120 Plotter:
 - Africa,
 - Med. Sea & Black Sea
 - South America
 - Middle America (Caribbean, Mexico etc.)

- United States
- Canada

3.12 Spare Part List

See separate list

4 Additional equipment, refit and maintenance in Chaguaramas, Trinidad, 06/2016 – 11/2016

4.1 Stainless steel work: Arch/Davids, swimming platform, etc.

Power Boat Mutual Facilities Ltd.

Mervyn Joseph

1. New Arch with Davids for Solar panels and wind generator
2. Rod for oven
3. Bracket for gangway
4. Locking mechanism inside for companion way
5. Swimming platform with ladder
6. Seat / pullpit in front of the yacht

US\$ 4,250

4.2 Canvas work: All Covers, Sun Awning etc.

The Upholstery Shop

David Mahabir

1. Sun Awning
 - a. 3 sections, to cover the complete yacht, with side curtains and connected with zippers
2. 4 Hatch Covers and 4 side hatch covers.
3. Enclosure repairs
4. Instrument and wheel cover
5. Dinghy Cover
6. 6 Cockpit cushions > hinged seats with wedged backs
7. Helm Seat
8. Outboard cover, rope spool cover and key hole covers
9. Fender covers
10. Main sail and mezzan sail covers

11. 2 After deck mattress'
12. Special overstuffed/upholstered main seat in the cockpit
13. Winch covers
14. Used fabric as spare, ca. 1m x 2m

US\$ 8,350

4.3 Wooden works: Teak slats

Allan and Gerard Yacht Works

1. Making and Installing Teak Slats for swimming platform
2. Making and Installing Teak seat for the front

US\$ 1,300

4.4 Engine Services

Raymond Marine Mechanics

Raymond

1. Change raw water pump
2. New Temperatur sensor
3. New Fuel Injectors
4. Change Belt
5. Pressure Test main engine
6. Clean/Service Heat Exchanger
7. Inspection of all engine hoses
8. Remove exhaust elbow to search for water jackets

US\$ 1,200

4.5 Bottom paint: Epoxy primer and antifouling

Laine Company Boat Works Ltd.

Peter Laine

1. Preparation of the bottom, 5 coats of interprotect epoxy primers and 3 paints with SeaHawk Islands 44

US\$ 1,300

4.6 New hull painting, strengthening of the stern side

Yacht Maintenance Services Ltd.

Allen Dowden

1. Removing all the old copper coat
2. New hull paint in AWL Grip Egg Shell colour, bottom stripes in Dessert Sand, Top repainting of the hull in red
3. Strengthening of the stern side for the arch.

US\$ 7,300

4.7 New B&G Triton System

Sure Power TT

1. Installing of a new B&G Triton Speed, Depth, Windspeed incl. 4.1 inch Display

US\$ 2,200

4.8 Electrical installations: Alarm system, solar panels, galvanic isolator etc.

Caribbean Marine Electrical Ltd.

Jesse Gangasingh

1. Installation of 3 Courtesy lights
2. Installation of a Galvanic isolator
3. Services on Windgenerators, 2 Mainboards for Wind generator Air Breeze 12V (1 to repair wind generator, 1 as spare)
4. 3 x 155 Watt Solar Panels
5. Blue Power Solar MPPT50A12/24
6. Installation of the alarm system FS701 (from Flagship Marine Security) with three deck sensors, one motion detector, one door opening sensor (for companion way) including a siren, amber lights and three bright lights. Installation of the horn/siren for normal use via press button. Incl. 2 remote controls. 1 deck sensor as spare. Installed functions:
 - a. Panic button
 - b. pre-warning
 - c. boarding light
 - d. flashing light.
 - e. Possible to connect to GSM text messenger.

US\$ 7,650

4.9 New VHF radio

Standard Horizon Eclipse GX1300

25W VHF/FM Class D DSC Marine Transceiver

US\$ 250