M/Y MIRACLE

Location: Turkey

Asking price: EUR 13,900,000

VAT status: Unpaid

Shipyard:	**CMB Yachts**
Exterior designer:	**Espen Oeino International Design**
Naval architect:	**CMB Yachts**
Build:	**2016**
Length overall:	**46.5 m / 152.56 ft**
Beam:	**8.9 m / 29.2 ft**
Draft:	**2.47 m / 8.1 ft**
Displacement:	**300 t**
Gross tonnage:	**495**
Hull material:	**Composite E-glass/Epoxy/ PVC-Corecell foam**
Class:	**RINA Charter Class Unrestricted Notation MCA LY3 Code**
Engines:	**2 x CAT Acert 32 1450 hp @ 2300 rpm**
Max speed:	**15 kt**
Cruise speed:	**10 kt**
Range:	**3000 nm**
Accommodation:	**5 Staterooms for 10 guests + 9 crew**
Tenders and toys:	**Chase Tender**

The 46 meter M/Y Miracle boasts a design from Espen Oeino, renowned naval architect for superyachts & more, and is due for delivery in 2016. Amongst M/Y Miracle’s notable features are spacious deck areas, particularly on the bridge deck which comes complete with a bar and lovely partially shaded outdoors dining area, as well as plenty of comfortable seating areas. Elsewhere, the sundeck is equally as inviting, with a sizable hot tub to the aft of the deck surrounded by plush sun loungers. At the front of the sundeck, a sophisticated seating area is found with three stone grey sofas positioned around two coffee tables.

FULL MAKER'S LIST AVAILABLE ON DEMAND - 7 MONTHS FROM COMPLETION

Electrical

GENERATOR SETS
Make: KOHLER
Rating : 2 x 70 Kw, 1 x 50 Kw (Harbour Generator) – Fully Synchronized
Engine: 1500 RPM, fresh water-cooled
Alternator: 380/220V, 50Hz., Three Phase

GENERATOR EXHAUSTS
Exhaust silencers from Centek and Halyard separate water and gas for noise reduction. Cooling water from generators lead down from the injector assembly to a water-trap muffler and then water and gases are separated by a water separator. The gases are discharged available point above the waterline in the engine room hull. The cooling water is discharged through a discharge point below the waterline.

SHORE POWER SYSTEM
The shore connection will be 220 VAC, 90 amp, 50 Hz, ASEA Model AC90 Shore Power converter is used, 90 KVA, 400V, 50Hz and 3 phase. Shore power converter is seamless transfer type with in synchronizating of generators. Voltage intake and frequency is available for the 170-520 V and 40-70 Hz. Voltage outlet is available 230/400 VAC and 50Hz in 3 phase. Shore power intake from a locker on the stern. Care will be taken to ensure that all cables are routed from the shore so as avoid obstruction on deck or to the gangway. Glendenning, will be fitted with loose shore supply cable 30 meters long.

24 VOLT BATTERY SYSTEM - VICTRON
Emergency bank Gel 12/220Ah, (4 pcs.) - Navigation bank Gel 12/220Ah, (2 pcs.) - Service bank Gel 2V/1000Ah, (12 pcs.) - Main engines starts battery bank AGM 12/220Ah (4 pcs.) - Generator engine start battery bank AGM 12/220Ah (6 pcs.)

BATTERY CHARGER & INVERTER - VICTRON
Emergency bank 60A, 24/60-3 - Navigation bank 60A, 24/60-3 - Service bank 100A, 24/100-3 (2 pcs.) - Main engines bank 60A, 24/60-3 - Generator engine bank 60A, 24/60-3

A Victron inverter of 3000 W, Phoenix 24/3000 is used.The entertainment automation system and audio/video system is feeding from inverters with the backups of its own ups. The converter 24/12-20 is combined with the package.

Communications and navigational equipment

FURUNO and NAVISYSTEM is used for the navigational and satellite system. With availability of MCA rules, to be met on the availability of GMDSS A1+A2+A3 areas. Navigational, Satellite, Santral and Camera System Package. Full specifications on demand.

Mechanical, propulsion and engine room equipment

MAIN ENGINES
Make: CAT - C32 Acert, C Rating
Rating: 1080 kW @ 2300 rpm

GEARBOX
Two A-drive gearboxes, directly mounted to the engines are fitted;
Make: ZF - 5050V
Reduction: 1 : 3.49
The gearbox is delivered ready coupled to the engine by CAT. Flexible Coupling is used for thrust vibrations. PTO pumps are used for additional feedings on main hydraulic units.

PROPELLERS
BT Marine - Aquaskew (5 blades)
Material: NiAlBr
Diameter: 1350 mm.
Rotation: 1 x RH, 1 x LH
D.A.R.: 105 %, skew 25 degrees
Bore: 114,3 mm., taper 1:16 with keyway
Finish: ISO 484, class 1

SHAFTS
Make: BT Marine/England-Netherland
Type: Tail shaft
Material: Stainless Steel Temet 25
Diameter: 114,3 mm.
Shaft is double tapered, complete with keyways, keys, a bronze propellernut and a steel nut at the coupling side. According to Rina rules, the keyway at propeller end is spooned. Shaft is to be complete delivered with a Zinc ring anode.

STERN TUBES
Make: Tide seal
Type: Water lubricated flexible stern gland
Tube: GRP Stern Tube
Stern tube outer diameter is 181 mm., 2 rubber cutless bearings with spiral inside are mounted in tube, forward end is machined for the fitment of the inboard seal. Inboard seal is a dripless seal and with temperature alarm.

BRACKETS
Make: BT Marine/England-Netherland
Type: Pin type welded, V-Bracket
Material: Stainless Steel
Shaft Diameter: 114,3 mm.
Brackets are made and welded from following parts:
Stainless steel 316 bracket boss, diameter 230 mm.
2 struts arms stainless steel 316, section 300x40mm.
Rubber bearing with spiral inside and with flange and to be mounted with epoxy resin into the bracket.
Rope guard between to propeller to bracket.

EXHAUST
Marine Exhaust System - USA production, Exhaust system for the engine, complete with fixed supports and stabilizer supports, made of stainless steel AISI 316 L, with its fireproof insulation and grp type mufflers, with class approved details and measures. Main engine exhaust system is designed to comply with CAT’s maximum backpressure requirements at all engine speeds.

STEERING
A DATA 2 x 1000-PS 380V electro-hydraulic steering system is installed. The system consists of twin helm stations. The main controller on wheelhouse and the emergency controller on lazarette. A hydraulic pump drives two rudder rams attached to the rudder tiller cross heads. The hydraulic pumps and associated piping will be resiliently mounted and stored inside stb. Cabin in lazarette. The hydraulic pump is located in the steering compartment. The hydraulic unit of steering system includes of one piece of 3kw.-1500rpm., 380V AC pump and one piece of 2kw.-1500rpm., 24V DC emergency pump for use in the case of loss of A/C power. Emergency steering will be provided by a manual hand pump in line with the hydraulic steering piping. The means of changing from main to emergency steering will be very simple, with minimal valves required to be operated. All related valves will be clearly marked and readily accessible. Steering changeover instructions will be posted at the emergency steering location. Steering controls and rudder indication are installed at each steering station (wheelhouse, two bridge wings and emergency steering position) In addition to controlling the steering from the tiler, there will be non follow-up (NFU) and autopilot steering controls at the bridge console. A switch for selecting steering station will be provided on the bridge console.

BOW THRUSTER
A 24” hydraulic bow thruster of 100 kw, is installed from American Bow Thrusters. The tunnel is made from E-glass and epoxy by American Bow Thrusters. The tunnels have removable gratings. Zinc anodes are mounted on propellers of thrusters and also mounted over the stabilizer fin.
The thruster controls are fitted in the pilot house and on wings port and starboard sides and have start-stop function and joysticks. There is lock switch on joysticks to prevent the thrusters from freewheeling, not possible to operate the thrusters without chosing the start/stop switches.

STERN THRUSTER
A 20” hydraulic stern thruster of 80 kw, is installed on the transom from American Bow Thrusters. The tunnel is made from E-glass and epoxy by American Bow Thrusters. The tunnels have removable gratings. Zinc anodes are mounted on propellers of thrusters and also mounted over the stabilizer fin. The thruster controls are fitted in the pilot house and on wings port and starboard sides and have start-stop function and joysticks. There is lock switch on joysticks to prevent the thrusters from freewheeling, not possible to operate the thrusters without chosing the start/stop switches.

ZERO SPEED STABILIZERS
A zero speed stabilizer system from Arcturus Marine, TRAC Model 370 is installed with 4 x fins. The system is designed for us both at-anchor and whilst underway. Actuators are placed in a watertight compartment under the beds inside the double guest cabins. Trac Integrated Hydraulic System is used for the main hydraulic system, feeding the thrusters, stabilizers and capstans. The quiet, high efficiency hydraulic piston pumps are used in system. The pumps are driven from the generators and additional power from specialized pto’s (power take-offs) that have become on gearboxes. All trac hydraulic power pack include high capacity cooling that allows all equipment to be operated continuously without overheating. System alarm warn operators of low oil level or high temperature situations. Power pack has resiliently mounting and each pump has compressed silencer tubes of Parker. The high pressure hydraulic and steel hoses and pipes, from Manuli and Parker, 4000PSI typed is using on the hydraulic system. The stainless steel piping is using on the pto line. ABB frequency drives are used inside of integrated hydraulic unit. LCD touch screen control panel is stated in wheelhouse, simply operated with one tocuh activation, automatically adjusts for changes in sea-state, wave angle and vessel speed.

Entertainment equipment

Berker, Crestron and/or similar entertainment automation system is applied for all areas. The lightings, all speakers, music system, dvd and special film system, TV controlling, sound, airconditioning, blinds are controlled with the wireless control wall touch panel, iPod or iPad in each areas.
Cat5/6 network cable and RG6 coaxial cables will be used for the automation system cabling. It would be prudent to run two lengths of cable capable of gigabit speeds to many areas and a suitable switch in the system room, for future AV or IT use.

Deck equipment

ANCHOR WINDLASS
2 x DATA 3300 H KR-20L Q20,5 mm hydraulic windlasses with capstan and gypsy are fitted, Each unit has electric remote control cables, opposite balance valve, foot buttons and anchor counter on remote control unit. The controlling of anchor windlass is only operated on bowdeck closed to windlasses with remote control unit. Chain will be easily put down with manually. Speed will be provided as in the standart of equipment. The maximum continuous tensile force is 3300 kg. and the brake force is 9500 kg. The continuous tensile speed is 14m/min. The system has its own hydraulic power pack under the foredeck operated with Danfoss hydraulic motor. All external components is 316L mirror polished stainless steel.

ANCHORS & CHAIN
Certificated anchors and chain cables complying with the Classification Society’s requirements is to be provided. Two Stainless Steel 316L bow anchors each of between 310 kg – 330 kg. kedge high holding power type, each with swivel shackle. Anchor chain 1 x 150 m. and 1 x 200m., 20,5 mm diameter hi-tensile and galvanized (hotdipped), located in chain locker. The chain is painted with different colours according to rules for showing the marking of length of chain cable. Each chain is washed with sea water at four angled spreyed installed in each hawse pipe.

AFT DECK CAPSTANS
2 x DATA 3000 HKr hydraulic capstans are fitted on the main deck aft at a suitable distance from the bollards for mooring operations. They are feeded from the Trac integrated hydraulic power pack during with our without of operating of main engines. Electric foot-operated deck push buttons for each, All external components is mirror polished 316L stainless steel.

MOORING ARRANGEMENTS
8 x Bollards are highly mirror polished, 316L stainless steel and installed adjacent to fairleads. Fairleads are highly polished 316 Stainless steel to and set fair into the bulwark. Mooring ropes complying with the Classification Society’s requirements to be provided and not less than four 50 metre lengths and four 35 metre lengths of black polyamide each with one sheathed eye. Eight large cylindrical fenders (type F11) and four spherical fenders (type A4) to be provided. Each is to be provided with two black covers of the correct size and a suitable length of line. Eight fender attachements (custom made similar design of Fenderhooks, Megafend) to be provided.

OTHER EQUIPMENTS ON DECK

Rescue boat crane on fore deck from Opacmare 3078/45 (MCA certified with SWL 500 kg.). Rescue boat crane is made in AISI 316 stainless steel, white painted, automatic lifting arm by means of hydraulic cylinder, telescopic arm made in Aisi 316 stainless steel, lifting hydraulic hoist with textile cable according the Class Register RINA requirements. The nominal loading capacity SWL 500kg. indicated on data plates, and the total loading capacity is 1100 kg. with crane installed in statice conditions according to MCA requests.

Opacmare Model 2146 with certified, 316L Stainless Steel painted electronic flat door with 4 wings is installed at the entrance to the Saloon on main deck.

Opacmare Model 2118 with certified, 316L Stainless Steel painted electronic flat door with 6 wings is installed at the entrance to the Skylounge on bridge deck.

Opacmare Model 2T61 with certified, 316L Stainless Steel painted electronic flat door with 4 wings is installed at the entrance of balconies in skylounge on bridge deck both sides.

Freeman manual sliding door with painted are installed on ps. and stb. main deck.

Sanguineti three element passarelle is installed on the top stair at starboard side. It is a telescopic model which extends approx. 5-6 meters. Hydraulically operated with its own pack. Remote controlled operation. The pasarella stows into a watertight box.

Besenzoni SI 407 automatic beach step ladder. Hydraulically operated with its own pack. Remote controlled operation. 7 self leveling steps with Handrails, powder coated aluminium black coloured, A:2020, B:3160, D:1240 mm. dimensions. Stows into watertight box. Watertight box has small removable panels for servicing and refittings of it. The hydraulic unit of swimming ladder is stored in cabin inside of lazarette portside. The control unit of ladder is on portside aft area closer to stairs.

Hydraulic Jetski and tender garage door with crane launchings. The ceiling crane is Besenzoni type G427 Mammoth. 1500kg. max. Capacity. The ceiling crane is mounted on ceiling in garage transversely and operated to portside opening, has its own hydraulic power pack and operated with remote control from inside onf garage.

The garage door system is installed on yacht with custom made inhouse system, with cutting and using the structural hull as a garage door opening part. The watertightness flanges and details are structural laminated on hull and align the locks, hinges, rubber seals and pistons. Then cutting the hull as for garage door usage. The door is opened to upward with 2 pieces of pistons with 2 pieces of hinges and has 8 pieces of lock cylinders, additional manuel locks for class requirements, and has its own hydraulic power unit with remote controller handset operated from inside of garage.

The Castoldi Jet 21 (6,25m.) tender and Kawasaki Jetski are fixed inside garage with a fixed support and move only with Besenzoni Mammoth ceiling crane.

Underwater lights from Lumishore LED (10.000 Lumens) as 10 pieces. There will be 4 pcs of underwater light on aftside of yacht below the swimming platform and 3 pcs of both aftsides with the spaces of 2500mm. between to each other.

Besenzoni SI405 automatic boarding ladder. Hydraulically operated with its own pack. Remote controlled operation with Handrails, powder coated aluminium black coloured, Stows into watertight box. The borading ladder is opened from starboard side and also its control unit is on starboard side.

Besenzoni SI409 manual boarding ladder with the available height from main deck of yacht to harbour deck is provided for the portside embarking.

Safety and security equipment

All fire prevention, detection and extinguishing systems will fully comply with the relevent Class and Flag requirements. Eucaro and Geberit, Cunife piping is used for complete system. A G&R ACM-502 BT 400V 3phase, self priming pump provides the system with sea water. Strainer acuplied type suction flange will be used in suctions. On board there are five fire stations, 18m. hoses with type approved for each and with suitable jet and spray nozzle. G&R MBMA-N50/160B, portable diesel engine pump with rope start is installed in the fore peak inside of anchorage area for emergency use, with a dedicated seawater inlet with strainer grill type suction flange. The diesel engine pump has no electrical connection, start with rope by the diesel engine pump.
FM 200 fire extinguishing system is installed in the engine room. Catef Fire Alarm and Monitoring is used in each spaces with detectors. Main panel is stated in wheelhouse. Repeater panel is in crew area, under the crew corridor stairs and has visual/sound alarm unit inside the crew mess. G&R Fans, fire flaps and fuel pumps are automatically stopped in emergency fire situation, means are provided for remote manual operation outside the engine room and from the shut down room, outside the engine room, main starboard aftdeck room through the escape route. SAFEZONE products are applied in all spaces and get the MCA fire proof certification with RINA approved.

WARRANTIES

For a period of five (5) years warrants the structural elements of the hull and superstructure of the Yacht against any and all defects whatsoever due to design defects, defective Equipment and/or incompetent workmanship.

For a period of one (1) year warrants the Yacht’s paint system against any and all defects whatsoever due to design defects, defective Equipment and/or incompetent workmanship.

For a period of one (1) year warrants the Yacht’s main engines (CATs) against any and all defects whatsoever under the guarantees and authority of the engines’ manufacturer’s (CAT) warranties.

For a period of one (1) year warrants the Yacht’s generators (KOHLERs) against any and all defects whatsoever under the guarantees and authority of the generators’ manufacturer’s (KOHLER) warranties.

For a period of two (2) years warrants all mechanical Equipment, used in piping and system arrangement and electrical Equipment, used in main switchboards and distribution panels, and all other elements and the Yacht’s Equipment against any and all defects due to design defective Equipment and/or incompetent workmanship.

All other elements and the Yacht’s Equipment manufactured by third parties are under the guarantees and authority of the relevant supplier / manufacturer companies warranties with their own warranty periods.


MIRACLE