



SUMMARY of BASIC STATISTICS for XPM78-01 Möbius

BOAT NAME: MÖBIUS

BUILDER: Naval Yachts, Antalya, Turkey
DESIGNER: Dennis Harjaama, Artnautica Yacht Design
REGISTERED IN: Bailiwick of Jersey, Red Ensign Group
LAUNCHED:..... February, 2021

OVERALL DIMENSIONS

REGISTERED LENGTH: 22.4m / 73.6' (MCA/Jersey)
LOA: 23.8m / 78.2'
LWL: 23.8m / 78.2'
MAX BEAM 5.13m / 16.8'
DRAFT 1.3m / 4.2'
MAX AIR DRAFT Passage Mode (top of Paravane booms) 8.3m/27.1'
MIN AIR DRAFT Canal Mode (Paravanes, SkyBridge Roof & Arch lowered) 4.6m/15'
DISPLACEMENT (w/ half tanks) 41,000 kg / 90,000 lbs
GROSS TONNAGE (calculated by Bureau Veritas) 66.8 tons
NET TONNAGE (calculated by Bureau Veritas) 50.12

PERFORMANCE

AVERAGE CRUISING SPEED 10.5 kts
MAX. SPEED 12 kts
RANGE @10KTS typical sea conditions w/ 10% fuel reserve 6800 - 7500+ nm
FUEL CAPACITY 14,617 L / 3861 USG
WATER CAPACITY 7091 L / 1873 USG



HULL CONSTRUCTION

HULL..... Welded CNC cut 5086 aluminum plate
6mm and 10mm above WL, 12mm and 15mm below WL

BULKHEADS..... Five (5)

KEEL BAR 25mm thick continuous aluminum plate top of Bow to the transom

FUEL + WATER TANKS..... Full Baffles, Welded Integral to Hull from WL down

PILOT HOUSE GLASS 26mm thick Triple laminated tempered glass set integral AL frames

WT EXTERIOR DOORS2x Bofor watertight aluminum doors

WT INTERIOR DOOR Bofor aluminum door between living areas & workshop/engine room

DECK HATCHES 10x custom aluminum w/ double laminated tempered 16mm glass

ACCESS HATCHES..... Forepeak + Engine Room
Custom aluminum hatches w/ Bofor latches and dogs

PROPULSION SYSTEM

ENGINE: Gardner 6LXB, 112 kW/150HP @ 1650 RPM 100% duty cycle
10.45 Liters, 6 cylinder, mechanical fuel injection, naturally aspirated

ENGINE EXHAUST Halyard wet exhaust, 3" dry stack 5" wet
with combi Silencer/Water Separator

ENGINE COOLING Bowman FG100 heat exchanger w/ Titanium coils

CPP GEAR BOX..... Nogva CPP Model HC-168 2.48:1 reduction

PROPELLER 1m / 39.4"OD Nogva CPP four blade N4-215-65 mm OD prop shaft

THROTTLE + PITCH CONTROLS..... 2x Kobelt twin Elegante@ both Helm Stations

BOW THRUSTER Vetus 22024 Extended Run Time 24V 220 kGF

STEERING SYSTEMS

PRIMARY STEERING X2 Kobelt Designed dual fully redundant hydraulic systems

2X KOBELT ACCU-STEER HPU400 PUMPS

2X KOBELT 7080-B12 BALANCED CYLINDERS

STEERING CONTROLS X2 Kobelt NFU jog levers @ Main & Upper Helms
Kobelt 7176 wired "Walk About" handheld remote station @ both Helms

AUTO PILOTS X2 Furuno 711C Auto Pilots, 2 independent units for redundancy

STEERING BACKUP..... Kobelt manual hydraulic pump @ Main Helm w/ steering wheel
Emergency Tiller stored in ER, attaches direct to Tiller Arm w/ block & tackle controllers

FUEL SYSTEM

FUEL TANKS six (6) baffled tanks integral to aluminium hull framing from WL down
FUEL CAPACITY w/o Day Tank..... 13,950L / 3685 USG
DAY TANK 667L / 176USG aluminium tank outside engine room
FUEL FILTRATION SYSTEM.... 3x Fleetguard 2 stage filters w/ built in WIF (Water In Fuel) detectors
FUEL POLISHING SYSTEMS Alfa Laval MIB303 centrifuge fuel polisher
FUEL TRANSFER PUMPS..... 2x Feit gear pumps 20L/min 5.3USG/min

WATER SYSTEMS; Potable, Black, Grey

WATER TANKS X6 six (6) baffled AL tanks, total potable water capacity = 7090L/1873USG
integral to aluminium hull framing from WL down
EMERGENCY BACKUP POTABLE WATER TANK..... 150L polyUrethane tank
Independent of main water system w/ dedicated faucet @ Galley Sink.
with automated + manual engine, damper + fan shutdown controls
DOMESTIC WATER PRESSURE PUMPS X2..... 24V Aqua Jet Uno
WATER TRANSFER PUMPS X2 Johnson 24V Ultra Ballast Pump
WATER HEATER Kabola Ecoline KB-45 combi diesel boiler
Including hydronic in-floor heating
CALORIFIERWebasto IsoTherm 75L/20USG, dbl heat exchanger + 230v/750w element
HVAC Webasto BlueCool V50 M 50,000 BTU w/ reverse cycle heat
Supplies 4 Webasto air handlers; 2 @ 18,000 BTU 2@ 12,000BTU
HYDRONIC IN-FLOOR HEATING X3Taco pumps one for each 3 interior zones
each zone individually controlled by 3 Azel Switching Relay Thermostats
WATERMAKER..... Delfin Maxi 4500 200 liter per hour
BLACK WATER HOLDING TANKS x2 Dometic HTS-T 151L/40USG
9.5mm thick polyethylene with 24V T series transfer pump
DOMETIC/VACUFLUSH TOILETS x2 in Guest + Master with VG4 Vacuum Generator
Each with BioBidet BB-1000 bidet toilet seats
SWIM PLATFORM SHOWERGrohe w/ hot and cold mixer valve



FIRE FIGHTING SYSTEMS

FIRE EXTINGUISHING EQUIPMENT 6x Maus Klein wall mounted throughout
Maus Xtin Grand-3X wall mounted outside Engine Room door

DETECTORS; SMOKE, HEAT, CO Maretron networked detectors In/Out all interior spaces

FIRE FIGHTING EQUIPMENT 120L-32USG/min Sea water diaphragm pump
Supplies 120L/min to fire house + nozzle stored in HazMat Locker on Swim Platform

ENGINE ROOM FIRE SUPPRESSION SeaFire engine room automated fire suppression system
Using Novec 1230 fire extinguishing agent

VENTILATION SYSTEM

MASTER CABIN VENTILATION..... x4 Dorade Vents on Front Deck
X2 700mm / 28" glass hatches on Front Deck

MASTER HEAD/SHOWER VENTILATION700mm/28" glass hatch on Front Deck

SALON VENTILATION..... x5 overhead directional ceiling vents above Main Helm
direct fed from high pressure zone under PH roof overhang
x5 directional ceiling vents over middle of SuperSalon
Direct fed from wind tunnel under hinged front solar panels

GALLEY VENTILATION X2.....900 CFM Extraction fans both sides of Galley

GUEST CABIN VENTILATION 700mm/28" + 450mm/18" Glass Hatch on Aft Deck

GUEST SHOWER VENTILATION 450mm/18" Glass Hatch on Aft Deck

WORKSHOP VENTILATION x2 700mm/28" + x1 450mm/18" Glass Hatches on Aft Deck

ENGINE ROOM VENTILATION Belimo 24V vent air damper activators
with Mist Eliminators + twin 1100CFM extraction fans



ELECTRICAL SYSTEM

HOUSE BATTERY BANK..... 24V @ 1800AH = 4.32KW
24x FireFly L15+ Carbon Foam 4volt cells
4V cells grouped into 4 banks of 6 cells wired 6S4P

24V ENGINE START BATTERY BANK2X Firefly G31 Carbon Foam 12V batteries

SOLAR PANELS..... 14x LighTec Solar Panels 11x 320W + 3x 295W = 4.14kW

MPPT SOLAR CONTROLLERS..... 14X Victron SmartSolar MPPT 100/20

ENGINE MOUNTED ALTERNATORS.....2x Electrodyne 250A @28V = 7kW w/ remote rectifies

SMART REGULATORS 2x WakeSpeed WS500

ISOLATION TRANSFORMER Victron 3600W Autosense 115-230V

240V INVERTER/CHARGERS..... 3X Victron Multiplus 24/5000/120-100 230V

120V INVERTER/CHARGERS.....2X Victron Multiplus 24/3000/70-50 120V

BATTERY MONITORS..... 3X Victron BMV-712 Smart Battery Monitor

BATTERY CHARGER Victron Centaur Charger 24V@60A Input = 95-265V 45-65Hz

DC/DC ISOLATED CHARGER2x Victron Orion 24/12V @70A

SYSTEMS MONITORING..... Victron Octo GX

PANELS & SYSTEMS MONITORING..... **VICTRON CERBO GX**



NAVIGATION EQUIPMENT

MAIN HELM MONITORS2X LITEMAX NAVPIXEL 19" TOUCHSCREEN 1600 NITS @ 1280 X 1024

1x 43" LiteMax Durapixel sunlight readable 1600 nits @ 3840x2160
1x Samsung 50" SmartTV

UPPER SKYBRIDGE MONITORS X2..... LiteMax NavPixel 24" touch, 1000 nits @ 1920 x 1080

NAVIGATION SOFTWARE X2..... Time Zero Professional w/ Sounder + Radar modules

x1 RosePoint Coastal Explorer
x3 Navionics on Tablets

CHARTS: Full set of Navionics World Mega-Wide charts

MAIN HELM PC Micro ATX tower

Intel I7-9700, 16GB Ram, 1TB SSD, GTX 1660 6G OC Graphics card

SKYBRIDGE PC Kingdell Fanless mini PC, Intel I7-1051 16GB Ram, 512GB SSD

GATEWAYS: RosePoint Nemo, NEMA 0183/2000, TCP/UDP, RS-422, RS-232, RJ45 ethernet

Maretron USB100 USB Gateway
Maretron IPG100 IP ethernet Gateway

AIS X3..... Emtrak A-200 Class A

Standard Horizon AIS B Class in GX6000 VHF radio
Tender = Vesper XB-8000 smartAIS Tansponder w/ WiFi + NMEA2000 gateway

WEATHER STATION Airmar 220 WX

w/ ultrasonic wind, barometer, 3 axis accelerometer, gyro + compass

INFRA-RED NIGHT VISION..... FLIR Gyro stabilized camera M332

RADAR Furuno FAR 1523 Radar Black Box with 6' open array

HEADING COMPASS Furuno SC33 Satellite compass

GPS Furuno GP330 GPS head dedicated to Radar

Standard Horizon GPS Head into GX6000 VHF radio
Standard Horizon GPS Smart Antenna SCU-31
Vesper GPS Head into XB-8000 in Tender

REMOTE CONTROLLERS X2: Furuno MCU004 Monitor Controller on Helm Chairs

Kobelt 7018 "WalkAbout" handheld wired remote @ both Main and Upper Helms

DEPTH SOUNDERS X2

@Bow = Furuno BBDS1 bottom discriminating Black Box w/ 5205PSD transducer
@Stern = Furuno Ultrasonic UDST800 depth, speed, temp traducer



COMMUNICATIONS/MONITORING EQUIPMENT

VHF RADIO Standard Horizon GX6000 w/ AIS + NMEA2000
w/ AIS + SART target display & GPS Compass
RAM 4 remote mic @ Main Helm
Wireless mic w/access point

LOUDHAILER..... Standard Horizon Dual Zone 25W PA / Loud Hailer
with preprogrammed fog signals + Listen Back

HORN Kahlenburg S-330 air horn

SATELLITE COMS **IRIDIUM GO!**

DATA LOGGER Yacht Devices Voyage Recorder YDVR-04

SEARCH LIGHT..... ACR Artex RCL-95 Pan/Tilt/Zoom 500W Searchlight w/ Remote

MONITORING Maretron monitoring system
Including All: bilges, tanks, batteries, engine, fuel flow, smoke & heat, etc.
Viewed on any screen and remotely via Maretron N2K View

ON BOAT NETWORKING..... NMEA 2000 N2K dual backbone 2000 network throughout
Multiplexers for NMEA 0183 + RS432
Gateways via USB & IPG
Victron, and Maretron networks for monitoring

IP CAMERAS Forward facing IP camera mounted on Skybridge roof
Aft Facing camera above swim step
Reolink Bullet IP camera engine room
Reolink Dome IP camera engine room

VIDEO ENCODER Axis Camera Encoder

WIFI ANTENNA Microtik Groove 52 AC Wi-fi antenna

WIFI BOOSTER WeBoost Drive Reach

CELLULAR ANTENNA.....Wilson Wide Band Omni-Directional Marine Antenna for cellular

ROUTER.....Pepwave Max Transit Duo router

NETWORK ACCESS STORAGE Synology NAS Disk Station w/ 2X 8 GB Seagate Barracuda drives



DECK, ANCHORING, MOORING & PARAVANE EQUIPMENT

PRIMARY ANCHOR	Rocna 125 kg/275Lb
GALVANIZED ANCHOR CHAIN	100m/330ft G43 HT 13mm chain
SECONDARY ANCHOR	Fortress FX-125 w/ 100m nylon rode
WINDLASS:	Maxwell VWC4000
	Wired handheld Windlass control @ Bow
	Remote Windlass controllers at both helms
CHAIN STOPPER	Lewmar Deluxe Heavy Duty Chain Stopper 13mm chain
FOREDECK KEDGING/WARPING WINCH	Lewmar EVO 55 Self-Tailing Winch
AFT DECK KEDGING + TENDER HOIST ...	Lewmar 65EST EVO ELS-Series Electric Self Tailing Winch
PARAVANE ROLL ATTENUATION SYSTEM	6m/20ft Aluminum A-Frame paravane booms
PARAVANE BOOMS RIGGING	2x Evo 40 Self-Tailing Size 40
	w/ Rope Clutches
TENDER DAVIT	custom aluminium Arch on Aft Deck
TENDER DAVIT RIGGING	2X EVO Self-Tailing Winch - Size 15
STANCHIONS	One meter high 40mm OD aluminum pipe stanchions
	set into corrosion proof Delrin bushing
LIFELINES	Three levels of 8mm Dyneema lifelines
	Full assortment of mooring lines, inflatable fenders, snubber, and rigging
DROGUE	Jordan style drogue
	Dual attachment points w/ SS insert rings on Port/Stbd Aft corners of deck
SEA ANCHOR	Fiorentino Para-Anchor

DOMESTIC EQUIPMENT

FREEZERS X2	Vitrifrigo Freezer Drawers DRW70A
REFRIGERATORS X2	Vitrifrigo Side Door 130LT Refrigerator C130LX
INDUCTION COOKTOP w/integrated ventilation	Bosch Series 8 PXY875DE3E
SMART OVEN	Bosch w/microwave, convection, broiler Series 8 CMG656BS6B
ELECTRIC GRILL (Outdoor Galley)	Kenyon Frontier Electric Grill
WASHER	Bosch washing machine Series 6 WIW28300GB
ENTERTAINMENT + NAVIGATION MONITOR	50" Samsung Smart TV
HELM CHAIRS	Main Helm = Llebroc Bandera II
	Upper SkyBridge Helm = Llebroc Tradewinds CX HP Series 2
	Both on air adjustable pedestals, built in air Lumbar support + folding foot rests

INTERIOR FURNITURE AND ACCOMMODATIONS

INTERIOR WOOD	Santos Rosewood
WOOD FINISH.....	5 coats of hand-rubbed satin polyurethane
HEADLINERS AND UPPER HALF WALL PANELS	White/AQua/Black Leather (synthetic)
All ceiling and wall panels removeable using FastMount system	
UPHOLSTERY	Ultraleather in multiple colours
INDOOR AND OUTDOOR GALLEY COUNTERTOPS	Turkish turquoise marble
MASTER HEAD COUNTERTOP	white Corian
MASTER CABIN SHOWER ENCLOSURE	custom etched glass by renowned BC artist Sherry Cooper
MASTER CABIN VANITY AND HEAD SINKS.....	Vito Blue and Black cast glass
INTERIOR FLOORING.....	Ado commercial grade LVT vinyl "Click" flooring

TENDER

(also serves as emergency propulsion system)

LOA.....	5.11 m/ 16.8ft
LWL.....	4.56m/ 14.9ft
BEAM W/O FOAM FENDERS.....	1.79m/5.9ft
MAX BEAM	1.97m/6.5ft
DRAFT	0.34m/1.1ft
HULL CONSTRUCTION	welded 5086 aluminum CNC cut plate
INBOARD DIESEL ENGINE	Yanmar 110 HP 4JH4-HTE (mechanical FI)
JET DRIVE	Castoldi 224DD Direct Drive
VHF RADIO	Standard Horizon VHF radio GX1800
AIS.....	Vesper AIS Transponder with Built-in WiFi XB-8000
DEPTH SOUNDER TRANSDUCER.....	Airmar SS60

