

# **"PACHAMAMA"**

**- Swiss TOPtoTOP Expedition Sailboat 50' -**



**- solar and wind -**

**- a reference for the cruising world -**

**- autonomous & safe -**

**with the participation of world-leading companies:**

Alwoplast, Arc'teryx, Bernradio, Bucher&Walt, Canyon, CCS, DT Swiss, Garmin, Hamilton, Heimgartner Fahnen, Hella Marine, HQ-Powerkites, IBM - Lenovo, ICOM, Intermarine Services, IST, ITT Jabsco, Joubert-Nivelt Design, Katadyn, Lecomble&Schmitt, Locmeral, Mammut, Marinco, Maxprop, Mc Murdo, Meerkämper Optik, Megasol, Meili Huus, Murette, Navtec, North Sails, Q3Software, Raymarine, Reusch, RUAG Aerospace, SF Communication, SPADE, Studio five, Sunware, Superwind, Swisstopo, Veneziani Yacht Systems, Victorinox, WAECO, Webasto, Xoph

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**[www.toptotop.org](http://www.toptotop.org)**

1st Expedition over the 7 Seas to the 7 Summits by Nature's Power to set an example that great goals can be achieved in harmony with nature

## design objectives

- a vessel that can operate in complete autonomy (renewable energies) with maximum safety in the toughest marine environments (Antarctica)
- handling by one person possible
- a reference for the cruising world setting new limits with smart and renewable technologies
- world-leading companies are participating to outfit Pachamama with state of the art technologies and products
- solar + wind = navigation in harmony with nature!





## characteristics

architect: JOUBERT NIVELT DESIGN

builders: Locmereal, Alwoplast

concept: Dario Schwoerer

year: 2000 - 2006

typ: sloop

category: A, CE 0607, certificat of ICNN, F-1700 LA ROCHELLE

sails: 3, on the wind 154 m<sup>2</sup>

solar panels: 11, max. 748 W

wind generators: 2, max. 700 W

length of hull: 15 m

waterline: 13.75 m

breadth: 4.5 m

draught: 2,37 m

displacement: 13 t – kiel 4,2 t (bulp 2,6t)

material: AG4MC – 5083 aluminium 4/5/6/8/10 mm

batteries: 375 Ah @ 24V

motor: NANNI Diesel 62 PS, 5 cylinder

fuel tank: 400 l plus 250 l

water tanks: 2 x 760 l

waste tank: 185 l

painting: VENEZIANI system; under water: 1 x epoxy primer, 2 x plastolite pro, 1 x aderglass, 3 x blanc sprint antifouling; deck: 1 x epoxy primer, 1 x gel gloss pro with superverex antiskid





## interior design from bow to stern



collision "airbag" in the bow, big anchor logger with big storage space, 2 double cabins with showers and bathrooms and big storage space, big kitchen, salon with table for 10 people, very good access to motor compartment, navigation table, 2 double cabins with showers and bathrooms and big storage space, technique room: all systems and valves centralized, big storage space in the stern cabin with rudder system and heating system for all cabins, outside: cockpit with table for 7 persons and 2 storage lockers, shelter with loudspeakers and navigation instruments, helm with navigation instruments, openings for gas bottles and safety raft, swimming platform as dingy storage, POWERARC as rain and sun protection with wind generators, solar panels, antennas



## electronics



below deck: RAYTHEON Radar Pathfinder SL 70; RAYTHEON Smart Pilot course computer S3G with AST, AutoLearn and MARPA incl. spare computer, RAYTHEON Autopilot ST6000+ with LECOMBLE&SCHMITT Autopilot hydraulic, Tridata RAYTHEON ST50plus (depth, temperature, speed, log etc.), IBM ThinkPad navigation laptop incl. lots of software, ICOM SSB radio IC-M802 incl. tuner und RUAG e-mail modem, EPIRB 406 MHz McMurdo, SUUNTO compass, hand-held compass, VHF SEACOM M-168F, GARMIN GPS 152, GARMIN hand-held GPS, satellite phone NERA MARINE with fixed and portable antenna, THRANE&THRANE TT-3022D standard C for fax, e-mail, weather reports, emergency calls and alarms, SANGEAN ATS-818 HF receiver, BLAUPUNKT CD tuner/radio incl. 2 ALPINE loudspeakers, Barograph

shelter: RAYTHEON Autopilot ST6001, wind instrument RAYTHEON ST 60 incl. spare instrument and sensor, Tridata RAYTHEON ST60 (depth, temperature, speed, log etc.) incl. spare instrument and sensors, 2 OLOFSON water tight loudspeakers

at the helm: motor instruments, wind instrument RAYTHEON ST 50+ incl. spare instrument and sensor, RAYTHEON Autopilot ST6000+, Tridata RAYTHEON ST50plus (depth, temperature, speed, log etc.)





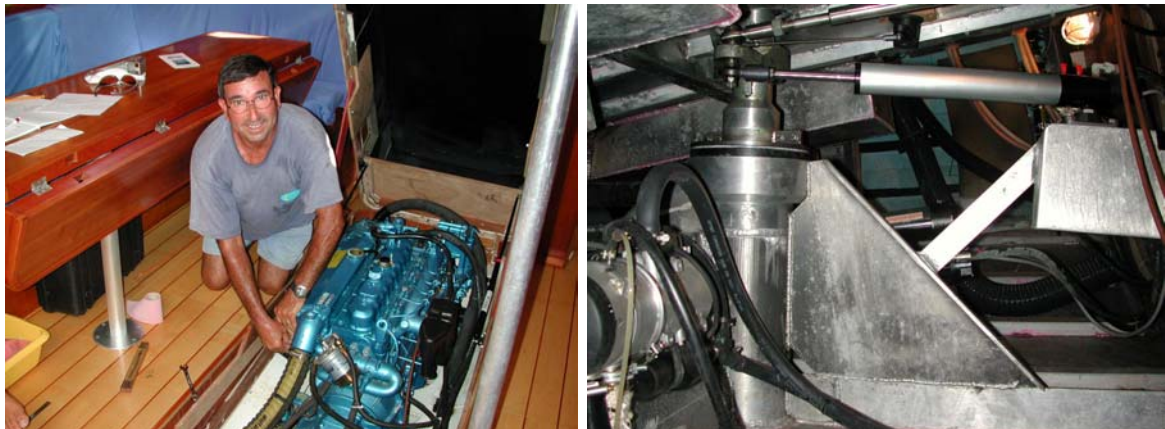
## interior equipment

MEILI HUUS health beds in all cabins, WEBASTO heating system for all cabins and salon, the hull is isolated with ROOFMAT 30/40mm, fridge 210 l and icebox 120 l with 2 WAECO DANFOSS-COOLMATIC 24V compressors, EMO gimbaled stove with oven, big kitchen, VETUS 75 l warm water reservoir (Motor/220V), ITT-JABSCO pump for water pressure with VETUS water pressure reservoir 20 l, JABSCO 1750 electric bilge pump, WHALE manual bilge pump (6000 l/h), WHALE manual pump in kitchen as alternative sweat water pump, WHALE hand pump in combination with KATADYN water maker for drinking water, easy access to cabling system, bright interior with cherry wood in combination with teak



## motor and rudder system

- NANNI DIESEL 5280 HE – 62 PS (year 2004, 900 h) very good access in center above keel, with TM 345A transmission and MAX-PROP propeller and knife on the shaft, VETUS ventilator; all parts of motor as spare parts excl. block
- WITLOCK KING COBRA rudder system with SUUNTO compass
- RAYTHEON Smart Pilot course computer S3G with AST, AutoLearn and MARPA incl. spare computer, with LECOMBLE&SCHMITT hydraulic system 40 ST 16 24V





## electricity



control console for all electric systems and fuses, 2 x wind generators SUPERWIND with total 700 W on POWERARC, 9 x SUNWARE solar panels with total 388 W on deck, 2 x MEGASOL solar panels with total 360 W on POWERARC, TECSUP charger for 110 – 220V, 6 service batteries 450A – 4V (24V), 1 starter battery for the motor 120A-12V, 1 alternator for starter battery 60A – 12V, 1 alternator 110A – 24V for service batteries, 1 Alternator 75A – 24V as spare alternator, 4 plugs 220V, 2 plugs 24V, 1 plug 12 V, hull isolation tester +/- 24V and +/- 12 V, WAECO Mobitronic battery control system, 30m cable for shore power, spare cables, 2 testers, emergency start system for motor

## tanks

easy access to all tank openings:

- 2 water tanks 2 x 760l, total 1520l with indicator, possible to shift with gravity (balast)
- 1 fuel tank 400l with indicator
- 2 diesel canisters 2 x 15l, total 30l
- 1 grey water tank 185l with alarm indicator and pump
- 2 gas bottles 13kg, total 26kg







### **sails**

DACRON with UV protection, sail area close to the wind 154 m<sup>2</sup>

- PROFURL LS 42 for genua 85 m<sup>2</sup>, 39,5 m<sup>2</sup>
- PROFURL NC 42 for jib 39,5 m<sup>2</sup>
- main 68,5 m<sup>2</sup>: 5 latten, 3 reffs, FREDERIKSEN gliders, lazy jacks
- 12 WITLOCK clamps
- 7 ANDERSON Inox Winches

### **mast**

SPARCRAFT PERFORMANCE F 1395: 19,65 m

### **boom**

SPARCRAFT PERFORMANCE F 1700: 6.9 m

### **sheets**

TWARON, VECTRAN, SPECTRA, incl. spare sheets and halyards





## ... and more

2 PELICAN boxes with all manuals of the systems installed, EURONIVIL safety raft for 8 people, life west and lifebelts for 8 people, emergency rudder, LOFRANS LEOPARD 24V anchor winch, anchor chain 100m/12mm, 1 SPADE anchor 25 kg, 2 FOB HP anchors 24 kg, 1 FOBligth 7.6 kg, 1 anchor for the Dingy, total of 400 m of rope, spare halyards and sheets, complete set of tools with BOSCH drilling machine etc., shrouds cutter, complete set of spare and repair material, important equipment as back up (propeller, all parts of the motor, alternator, course computer, solar ventilator, navigation instruments etc.), fully equipped kitchen, 2 CANYON mountain bikes, ZODIAC dingy, 2 air pumps, 4 paddles, HONDA outboard motor BF4,5B 4,5 PS, total set of navigation charts for a circum navigation, construction plans of the ship, first aid kit, cleaning tools, 1 evaporators 220V, WAECO 12 V liquid evaporator, 6 fenders, 2 solar shower bags, 2 water hoses, 2 sets of emergency rackets, sun protection, bimini, 3 fire extinguishers, fire blanket, hand-held depth sounder, 2 horns, persenning, set of HEIMGARTNER navigation and nation flags ...

## information

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# VICTORINOX