

# OUTREMER 5X



## General specifications

### Dimensions:

Length: \_\_\_\_\_ 17.98 m

Beam: \_\_\_\_\_ 8.58 m

Draught: \_\_\_\_\_ 1.2 m / 2.4 m

Air draft: \_\_\_\_\_ 26.5 m

### Displacement:

Light: \_\_\_\_\_ 13.9 t

Max loaded: \_\_\_\_\_ 20 t

### Rigging and sail areas:

Mast height: \_\_\_\_\_ 23.45 m

Mainsail: \_\_\_\_\_ 122 m<sup>2</sup>

Solent: \_\_\_\_\_ 59 m<sup>2</sup>

Engines: \_\_\_\_\_ 2 x 55 CV Volvo

### Capacities:

Fresh water: \_\_\_\_\_ 2x 336 L

Fuel: \_\_\_\_\_ 2 x 336 L

Black water : \_\_\_\_\_ 63 L

Certification : \_\_\_\_\_ 8 personnes / Catégorie A

Designer : \_\_\_\_\_ VPLP

Interior design: \_\_\_\_\_ Franck Darnet Design

Consultant design: \_\_\_\_\_ Patrick Le Quément

# Construction

## Hulls and bridge deck

Building in composite fibreglass by an infusion process in a female mould

Gelcoat White RAL 9003

First skin: Mat / vinylester resin

Sandwich: PVC foam core & fibreglass / polyester resin on inside board and outside board

Monolithic laminate under waterline

Reinforcement omegas laminated along the hull

Various reinforcement (patches and UD strips) and local inserts

Assembly by axis re-lamination and exterior completion

## Deck

Construction in composite fibreglass by an infusion process in a female mould

Gelcoat White RAL 9003

Sandwich: PVC foam core & fibreglass / polyester resin

Various reinforcement (patches and UD strip) and local inserts (balsa)

Glued and re-laminated on the whole perimeter of the gasket scheme hull/deck

## Options:

*Roof in carbon / Vinylester*

## Bulkheads & Assembly

3 main bulkheads in sandwich PVC foam core & fibreglass / polyester resin, glued and re-laminated to the hulls and the deck:

- Mast bulkhead
- Roof bulkhead
- Track bulkhead

Secondary bulkheads in sandwich PVC foam core & fibreglass / polyester resin

Frames in sandwich PVC foam core & fibreglass / polyester resin, or marine plywood, watertight, depending on sizes and positions

6 watertight bulkheads in Sandwich PVC foam core & fibreglass / polyester resin:

- 2 for the engine room
- 4 in aft peaks for the sail lockers from the rest of the boat

System supports in marine plywood, watertight

Berth platter in sandwich honeycomb & fibreglass / polyester resin

Sail locker platter in Sandwich PVC foam & fibreglass / polyester resin

Marine plywood inserts and/or aluminium and monolithic areas if needed

All assembly parts glued and re-laminated by mounting angle along their whole perimeters

#### Options:

*2 main bulkheads in carbon-epoxy: mast bulkhead and stern bulkhead*

## Deck fittings - Rigging - Sails

### Standing rigging

Maréchal aluminium mast posed on the roof: two stages of spreaders and two losanges

Antal mainsail friction track

Stainless steel pipe stanchion and low and high plates

Maréchal aluminium boom with clutches integrated for the reef furler and the outhaul, lattes aluminium soldered batten for boom restraint

Dyform forestay and cap shroud, anchored on forward crossbeam chainplate

Dyform shrouds, anchored on mirror polished stainless steel chainplates and backplates

Sparcraft aluminium white lacquered hull crossbeams and machine-welded seagull striker with sling, attached on aluminium chainplates and backplates

Profurl Solent furler on backing toggle

### Options:

*Carbon fixed mast: Lorima with Kevlar Navtec cap shrouds, Dyneema running rigging, prepared for Gennaker and Spinnaker, white lacquered*

*Carbon rotating mast: Lorima with KevlarNavtec cap shrouds, dyneema running rigging, prepared for gennaker and spinnaker, with carbon arthur, Harken deck fittings, command cable and Spinlock clutches, white lacquered*

*High modulus supplement: Lorima with high modulus fiber 390GPA*

*Carbon canoe type boom: Lorima, white lacquered*

*Boom with spreaders: Maréchal, for the fixation of the lazy jack*

*Aluminium white lacquered mast: Maréchal*

*White lacquered boom: Maréchal*

*Composite compression beam: fibreglass with carbon reinforcement, gennaker chainplate, mooring way with protection and stemhead fitting integrated*

*Staysail preparation: on mast, attachment with halyard sheave box and forestay fixed place; on beam, with stainless steel chainplate and backplate on composite compression beam*

### Sails

Incidences whole mainsail in Dacron battened with big roach, 3 reefs of 118 m<sup>2</sup>, with lazy bag (color to be determined), on Antal slide and friction traveller

Incidences Dacron self-tacking solent of 59 m<sup>2</sup> with anti-UV stripe (color to be determined)

## Options:

*Hydranet square mainsail: Incidences, wholly battened, 3 reefs of 125m<sup>2</sup>, replacing the standard sail*

*Hydranet solent: Incidences, self-tacking, of 59m<sup>2</sup> replacing the standard sail*

*Gennaker deck fittings with bowsprit: forward triangle with net, Spinlock halyard clutch on mast, Harken deck fitting, pad eyes and Black Magic pulleys on loops, Dyneema sheet kit*

*Gennaker: Incidences 174m<sup>2</sup> or 190 m<sup>2</sup> on Profurl furler, deck fittings and cable (need Gennaker deck fitting)*

*Spinnaker deck fittings: stand-up Harken Black Magic pulley on bows and Spinlock clutch for the arm, Harken Black Magic pulley on loops and padeye for sheets, Spinlock clutches on mast for halyard with arm and dyneema sheet kit*

*Symmetrical spinnaker: Incidences, 250 m<sup>2</sup> with storage and hoisting sock*

*Asymmetric spinnaker: Incidences, xx m<sup>2</sup> with storage and hoisting sock*

*Code 0: Incidences, in Kevlar tri radial 105 m<sup>2</sup> with deck fitting: stand up Harken Black Magic pulleys on roof (need Gennaker deck fittings)*

*Code D: Delta Voiles, area of 217m<sup>2</sup> with Profurl furler (need Gennaker deck fittings), with extra Harken Black Magic pulley on loops*

*Hydranet genoa: Incidences, tri radial 73 m<sup>2</sup>, sheet points on roof with setting 3D, padeye, friction rings and Harken pulleys, with sheet kit and Spinlock halyard clutches*

*Hydranet staysail : Incidences ,tri radial of 45m<sup>2</sup> on Kevlar releasable forestay, with dyneema halyard and sheet, Spinlock halyard clutch, stainless steel chainplate on compression beam and stainless steel backplate, lower forestay hoist retaken on Spinlock clutch and Harken dedicated winch*

## Running riggings

Mainsail halyard 2:1 dyneema on mast

Dyneema solent halyard on mast

Gennaker halyard 2:1 dyneema on mast

Spi halyard 2:1 dyneema on mast

Polyester topping lift on mast

Mainsail sheet, in Germansheet 6:1 dyneema at port and starboard helm stations

Port and starboard mainsail track traveller controls on aft arm

Mainsail outhaul in dyneema in the boom

3 dyneema reefs in the boom

Dyneema Solent sheet at port and starboard helm stations

Polyester Solent track traveller controls at port and starboard helm stations

Polyester daggerboard lifting cables in cockpit port and starboard

Dyneema core lazy jack

Solent furler cable portside in cockpit

## Deck Hardware

At mast foot, 1 Harken ST60 winch for halyards, reef lines and topping lift

On the roof at helm stations, 4 Harken winches 2\*ST 60, 2\*ST70 for the sheets: mainsail, Solent, Solent track, and depending of options, halyards, code 0 and genoa sheets and setting 3D

At the cockpit, 2 Harken ST70 Winches for daggerboards, Solent furler, Gennaker, code D and spi sheets (and arm)

On the aft arm, 1 Harken ST50 winch for the mainsail track traveller and the lifting of the dinghy on davits

1 Harken self-tacking Solent track with traveller with ball, thrust with controls and idler flat deck pulleys

1 Harken mainsail track, traveller with ball and 6-stranded hoist with Harken Black Magic pulleys

On mast, Antal halyard clutch for mainsail, Solent, Gennaker, spinnaker and Spinlock topping lift

At port and starboard helm stations, mainsail and solent sheet clutches, and Spinlock Solent track traveller

At portside cockpit, Spinlock furler cable clutch

On the aft arm, Spinlock clutch for traveller and dinghy lifting

Full restraint boom hoist, to strike on deck chainplates and boom

### Options:

**Running rigging cockpit return:** *mainsail halyard, reef furler, lift and outhaul returned to the helm station, with sheave box and clutches at the helm station*

**Harken ST 70 Electric winch:** *Electrification of cockpit and/or roof winches, for a winch with foot control*

**Harken ST 60 Electric winch:** *Electrification of roof winches, for a winch with foot control*

**3<sup>rd</sup> speed on electric ST 70 winch:** *for portside cockpit winch with Solent roller furler*

## Exterior equipment

### Mooring and anchoring

8 anodized aluminium Damade 450 mooring cleats, 2 forward (bows), 2 at the maximum beam, 4 aft in transom, 2 inboardside, 2 outboardside, installed with backplate

Delta 32 kg anchor delivered with 50 m of ISO galvanized chain and 50 m of polyamide 3-stranded cable

Mooring locker with chain creel accessible by the upper part

Aluminium stemhead fitting with double sheave, stainless steel chain – anchor connection, stainless steel mooring shackle

LewmarV5 vertical axis (24V 2000W) electric windlass forward roof with deck control, with ISO winch and gypsy

Mooring crow's feet with polyamide 3-stranded cable, installed on crossbeam chainplate

### Options:

*Chain counter: Lewmar windlass control at helm station with chain counter*

*Mooring-kit: 4 22 mm x 18 m moorings, 6 fenders and 1 ball kit*

### Safety facilities and protection

Self-draining cockpit, large foot bath and teak duckboard

2 hull opening escape hatches under companionway for pour conformity

Safety port and starboard trampolines

24 75 cm stainless steel stanchions with dyneema double line of textile sectors

2 Wichard adjustable life-lines on forward side-decks

2 life-lines under nacelle (and harnesses chainplate)

Various anchoring points on Wichard chainplate

Plastimo built-in emergency ladder in aft transom

5 extinguishers, 2 in the cockpit (port and starboard), 1 per hull, and 1 in the saloon

Plastimo Contest bulkhead compass, at helm station

BIB area in the cockpit, with access hatch over and under hull

Working area: deck, roof and under nacelle non-slip covered

### Options:

*Bows rail: stainless steel structure with a white delrin seat on each hull peak*

*Board side strake protection: black, grey, or white Elastomer on aluminium track*

*Skegs: Sail Drive protection in composite and laminated on each hull*

*Ribola fine-meshed trampoline: replace the standard trampoline*

*BIB: PlastimoTransocean 8 persons +24h*

## Exterior equipment

In the cockpit, bunk on starboard with storage locker, under hatches with metal devices and locks

U-shaped banquette for 8 people with stowage spaces under all the banquette parts, under hatches with metal devices and locks

Table made in sandwich, PVC foam core and teak-veneered, half-foldable on 3 fixed aluminium stands and baseplates

2 large storage lockers in front of the roof, under hatches with metal devices and locks with access to the fuel tanks, the gas cylinders and the mooring system

Large sail lockers in the two forward peaks, access by the Lewmar T70 deck portlight, with stainless steel ladder and teak steps, stainless steel support bars for fenders and rigging.

Composite catwalk on aluminium white lacquered structure, with composite mooring hatch and integrated stemhead fitting, chain way protected by delrin protection

Stainless steel bathing ladder, teak made steps in transom locker

### Options:

*Teak cockpit and transom: teak-covered cockpit floor, steps and transom, with black Sikaflex edges and caulking*

*Carbon foldable catwalk: GS Composite, with the boat name, tarp and lyre support in each transom*

*Composite foldable catwalk: GS Composite, with the boat name, tarp and lyre support in each transom*

*Davits: mechanically welded aluminium white lacquered patterns and deck fittings, Harken pulleys, Spinlock rigging and clutches, single-stranded circuit*

*Carbon davits: like aluminium ones but in white lacquered carbon*

*Carbon bimini: whole bimini in composite, sandwich glass-carbon/polyester resin, with 8 LEDs lighting on dimmer, 2 loud-speakers and a water harvesting system, fixed on the roof and two aluminium white lacquered stanchions*

*Lowerable saloon table: replacement of fixed stands by retractable ones, with Silvertex saddlery*

*Full bimini protection: tarp on the whole perimeter Sunbrella with crystal glass made, removable and installed on aluminium track, color to be determined*

*Sunshade: Batyline on the 3 sides of the roof, fixed by par snap fasteners, color to be determined*

*Courtesy LEDs on transom: 6 units, blue light, in the stair steps for transom access*

## Lay-out

### General specifications

Joinery in varnish Alpi walnut and white laminated  
Marine plywood for the smallest thicknesses  
Sandwich plywood PU foam core for the higher ones  
Supports, furniture back panel and inspection hatches in light expanded PVC  
Formica laminated floor with PVC foam core to increase rigidity  
Ceiling and lining in perforated plywood with apparel in textile or imitation leather, at the owner's choice  
Low sideboard polyester veneered impact-resistant  
Various marine-typed hardware, « push lock »-typed locks, coat hooks, mirrors and accessories  
Saloon saddlery, seats and backs in HR foam with removable covers and tissues to be determined

### Options:

*Club version port hull (2 cabins and 1 washroom)*  
*Skipper cabin on forward port peak with toilet, wash-basin and shower*  
*Specific wood species*  
*Forward cabin with triple berth*  
*1 retractable berth in forward cabin (port or starboard if Club version)*  
*Saloon table on 2 levels, convertible with bedding for extra berth*

### Saloon

Saloon ground-floored with the cockpit  
Giot smoked-glass bay window, double leaf, with key locking system, opening: 170 cm  
U-shaped wooden sofa for 6 people with wooden removable seats for 2 more people  
Numerous storage facilities accessible from hatches under the seats  
Various furnitures and cupboards  
Table made in sandwich foam and walnut veneered, foldable in 2 parts, with stowage space  
6 smoked Plexiglas dispatched on the three sides, with screen printing on the perimeter  
6 opening hatches for ventilation: 2 forward Lewmar T30 black anodized, 2 on the roof Lewmar T20, including over the galley  
Headroom of 2 m

## Helm station

Forward-facing chart table, with panoramic view  
Lacquered instrument panel, access to equipments and space for navigation electronic device  
Leather-covered opening, space for laptop, and/or maps and documents  
Ergonomic hanging seat, on double stainless steel pivot  
24V control panel with backlight and gauges  
White / red reading light

## Galley

Large U-shaped galley opened on cockpit  
Working surface in white Corian, with washboard on the perimeter  
Numerous storage facilities and wooden top  
Double stainless steel sink and Franke mixer tap  
Siemens gas 3-burner stove with clamp pan  
Airlux gas built-in oven with grill and rotating heat effect  
Pressurized fresh water, hot and cold  
Indel 12V 190 L s fridge, water-cooled with 2 drawers, stainless steel facade, in port galley down locker  
2 built-in bins with flush « prentout » system  
Numerous specific storage spaces  
Headroom of 2 m

## Hull's layout (Owner's version)

Companionway 3 wooden steps, teak stair nosing, structure made in white lacquered aluminium

### **Port hull:**

A sliding wooden lockable partition door in the companionway separate hull and saloon.

### Aft cabin:

Berths: longitudinal 200 × 180 cm or transverse 200 × 200 cm  
Large non-opening port in outboard side, made in smoked Plexiglas with blackout curtain  
Lewmar opening made in smoked Plexiglas and looking onto the transom  
Lewmar T60 opening deck hatch above the berth  
Seat, hanging locker, numerous storage wooden spaces

Slatted bed frame and bedding  
2 LED bedhead reading lights  
LED ceiling spotlights with switch

Companionway:

Glazing made in smoked Plexiglas in outboard side  
Hanging locker, numerous storage wooden spaces  
Spots LED au plafond with switch

Washroom:

Access by door from the passageway  
Large non-opening port in outboard side, made in smoked Plexiglas with blackout curtain  
Composite wash-basin on large working surface, with mural mixer taps and backlight mirror  
Numerous storage wooden spaces and hardware  
Jabsco manual marine toilet, large bowl  
Shower with Plexiglas partition door, composite molded-in shower tray, and drain by devoted Whale pump  
Lewmar T10 opening port in inboard side  
Lewmar T60 opening deck hatch  
Natural ventilation e  
LED ceiling spotlights with switch

**Starboard hull:**

Aft cabin:

Access by wooden door from the passageway  
Berths: longitudinal 200 × 180 cm or transverse 200 × 200 cm  
Large non-opening port in outboard side, made in smoked Plexiglas with blackout curtain  
Lewmar opening made in smoked Plexiglas and looking onto the transom  
Lewmar T60 opening deck hatch above the berth  
Seat, hanging locker, numerous storage wooden spaces  
Slatted bed frame and bedding  
2 LED bedhead reading lights  
LED ceiling spotlights with switch

Separate shower:

Access by wooden door from the passageway  
Shower with Plexiglas partition door, composite molded-in shower tray, and drain by devoted Whale pump  
Composite wash-basin on large working surface, with mural mixer taps and backlight mirror  
Lewmar T10 opening port in inboard side  
Natural light shaft with matt Plexiglas

Natural ventilation

LED ceiling spotlights with switch

Washroom:

Access by door from the passageway

Composite wash-basin on large working surface, with mural mixer taps and backlight mirror

Numerous storage wooden spaces and hardware

Jabsco manual marine toilet, large bowl

Lewmar T10 opening port in inboard side

Natural light shaft with matt Plexiglas

Natural ventilation

LED ceiling spotlights with switch

Companionway:

Glazing made in smoked Plexiglas in outboard side

Wooden storage

LED ceiling spotlights with switch

Forward cabin:

Access by wooden door from the passageway

Longitudinal berth 200 × 135-165 cm

Large non-opening port in outboard side, made in smoked Plexiglas with blackout curtain

Lewmar T30 port in inboard side

Lewmar T60 opening deck hatch above the berth

Hanging locker, numerous storage wooden spaces

Slatted bed frame and bedding

2 LED bedhead reading lights

LED ceiling spotlights with switch

### Options:

*Electric toilet using fresh water: one Sanimarin each*

*Electric toilet using both fresh water and sea water: one Sanimarin each*

*TV LED 32": Samsung, retractable in port top galley furniture*

*Dish-washer: Electrolux, 220 V 6 shelves, in starboard galley under the sink*

*5 kg washing-machine: Bosch, laundry dryer 220 V, in port passageway*

*Blackout curtain: Oceanair, double blackout curtain and fly screen on every deck hatches*

*Fans: Caframo Sirocco 24V one, multi-directional with dedicated switch*

*Square venetian blind: Oceanair, in the saloon, in the front facade and the side ones*

*Micro-waves oven: Airlux 800W 220V built in in galley high furniture unit starboard*

*90L freezer: Indel, in port hull, water-cooling system and stainless steel front (incompatible with the 2<sup>nd</sup> fridge)*

*Fridge 130 L: Indel, in port hull, water-cooling system and stainless steel front (incompatible with the 2<sup>nd</sup> fridge)*

*Port holding tank: 63 l by gravity, with deckplate and an emptying system*

*Heater: Webasto 9 kW, water exchanger, with 6 heaters (2 in the saloon and 1 per cabin), boiler in the engine room, and main control in the saloon*

*Air Conditioning: Dometic, independent and reversible, 2\* 12 kBTU in the saloon and 3\*6 kBTU per cabin, or by area, on 220V*

## Systems

### Steering system and daggerboard

Leather-covered stainless steel steering wheel at portside, hydraulic Lecomble & Schmitt transmission

Daggerboard case in composite, sandwich fibreglass/polyester resin

Daggerboard in composite with carbon fibre reinforcement, operating system, pulleys, rigging and clutches at cockpit

Rudder trunk with with Jefa self-aligning bearings

2 composite rudders, aluminium rudder stock

Emergency rudder tiller

#### Options:

*Carbon steering wheel: Jefa 3 radius*

*Mechanical steering system: Jefa, disengageable mechanical system, with cable, quadrant, arms and link bars, carbon rudder tiller and composite ergonomic seat*

*2<sup>nd</sup> steering wheel: portside, mechanical transmission by cable*

*Port helmsman's chair: stand-up seat typed, stainless steel structure and pillows Silvertex, color to be determined*

*Starboard helmsman's chair: stand-up seat typed, stainless steel structure and pillows Silvertex, color to be determined*

*Dodger: protection for the helm station, stainless steel structure and protective tarp (color to be defined), for one helm station*

*Carbon rudders: Isotop; rudder and rudder stock made in carbon / epoxy*

### Motorisation

2 Volvo D2-55 engines Sail Drive 55 HP mounted on silent-block

Double control for engine mechanics

Volvo double-blade propellers

Volvo instrument front and tachometer

2 90 AH Plumb engine batteries

Engine compartment insulated by heavy insulation foam

Sheer fuel tank of 336 L x 2 capacity, fed by stainless steel deckplate; and gauges at the chart table

### Options:

*Foldable three-blade propeller: Volvo (for engine D2-55)*

*75 HP engine: Volvo D2-75 Sail Drive*

*Foldable four-blade propeller: for engine D2-75*

*Electric engine control: ZF, 1 or 2 helm stations*

## Electricity

Port and starboard starting cabinet with starting switch and emergency switch service with removable keys

4 Plumb 105AH auxiliary batteries

2 115Ah 24V Mastervolt alternators with Alpha Pro regulator for auxiliary batteries

2 115Ah 12V Volvo alternators for engine batteries

24V control panel with backlight and gauges

Mastervolt Battery control

Charger 24V 60A

220V deck power socket, circuit-breaker differential protection, galvanic insulator and 25 m deck power extension

220V distribution box with circuit-breaker

4 220V sockets, 2 for galley and 2 for saloon

1 12V female cigarette lighter socket at the chart table

1 USB 12V socket at the chart table

All lights are equipped with LEDs

Toggle switches for all the passageways

LED navigation light

LED mooring light

LED steaming light

LED deck light

### Options :

*AGM batteries: Energie Mobile 440Ah en 24V*

*Ion-Lithium batteries: Mastervolt 2 x 24V 5000W, with control panel and battery bus, with charger 24V 100A*

*Solar panels: Energie Mobile, back contact monocrystalline of 4\*200 W, charge regulator MPPT, with lacquered white aluminium frame on stern davit*

*Hydrogenerator: Watt & Seacruising 600, with storage bag and stowage in locker*

*Racing hydrogenerator: Watt & Sea Racing Alu, with storage bag and stowage in locker*

*5kW generator: Northern Light – 1500 rpm, in front starboard locker, with devoted starting battery and control panel at the chart table, reinforced insulation*

*Converter with sockets: Mastervolt 24V / 220V 5000W with 5 sockets (1 per cabin and 1 per head for razor)*

*Pack USB and 12 V socket: 1 USB in each cabin and 1 watertight 12V at helm station*

*Boat in 110V : Mastervolt charger 24V 100A, inverter 24V / 110V 5000W, deck power and bipolar distribution cabinet 110V, deck power extension 110V, galvanic insulator, socket, 9 110V socket*

## Electronics:

### Options:

#### **Electronic pack B&G:**

*Weather vane, anemometer, Lochmeter, sounder*

*3 T41 multi-screens*

*Auto-pilot AC42N, gyro compass and Triton control*

*Z8 Touch Map viewer (European map) at helm station and GPS antenna*

*AIS transceiver and devoted antenna*

*V50 VHF radio two-way with antenna*

*Wiring, assembling, settings, formation*

*Jefa Auto-pilot engine in engine room*

#### **B&G 4G 2kW Radar**

#### **2<sup>ème</sup> Z7 Touch Map viewer at chart table**

**HIFI Fusion MS-RA205:** *with loud-speaker 3 ways, Bluetooth MS-BT200, USB and antenna*

**WIFI:** *BadboyXtrem antenna into the mast with Wi-Fi router*

**Security pack:** *Ocean Signal E100G distress emitting beacon (with GPS and MMSI), 2 R10 AIS SRS Safelink and Globalstar locator beacon*

**Emergency auto-pilot:** *Simrad on rudder tiller with connecting links and devoted outlet (for full independence of the emergency system (electronics installed))*

## Water

Fresh water tanks: 2 x 336 L plastic with non-return valves and shut-off valves, stainless feeding deckplates on deck, gauge at chart table

Fresh water system by 2 17L Flojet water pump with expansion tank

All circuits have shut-off valves on distribution header

40L water heater 220 V supplied and heat exchanger with thermostatic mixer tap, in engine room

6 24V Whale Orca automatic bilge pumps, 2 for engine room and 1 for passageway per hull, manual triggering at the chart table, visual and sound alarm

2 40,5L/min Plastimo manual pumps

### Options:

**Deck shower in transom:** *hot and cold water, with mixer tap and flexible, in starboard transom*

**Deck-supplied pressurized water:** *connected in line after the water pump*

**80L water heater:** *220 V supplied and heat exchanger with thermostatic mixer tap, in engine room*

**100L per h 24V water maker:** *DC Dessalator, with pump, filter, membrane in starboard engine room and control panel in starboard transom*

**Pressurized sea water :** *devoted Johnson sea water pump, mixer tap double function fresh water / sea water, Gröhe sink, deck outlet 2 functions: deck washing and mooring*

## Gas

Space for 2 gas cylinders (13 kg) in front port locker, with fixation by slings and chainplates.

2 propane cylinders provided

Regulator, copper pipe, flexible stainless connecting hose, and shut-off valves at every ending

## Launching

Ownership and discovery of the boat at delivery

Ownership of electronic devices at delivery

Fuel full loaded tanks

### Options:

**Antifouling: Primary with 3 layers of Seajet**

***Annexe : on estimate***

*Additional formations on request*