THE ELECTRIFICATION STANDARD FOR **HYBRID SAILING**

FOUNTAINE PAJOT · DUFOUR · LAGOON · BENETEAU · JEANNEAU

LEOPARD CATAMARANS · RM · DAY ONE CATAMARANS

Chosen by leading shipyards

Inspire a new way of sailing.
One of silence, comfort, and smart energy.

JOOOL engineers integrated energy and propulsion systems that redefine onboard power. **By storing more energy on board, yachts can operate silently at anchor, manoeuvre in electric mode and reduce reliance on generator sets.** The result is quieter operation, improved comfort and more efficient energy use at sea.

Hybrid-electric architectures operate within a unified ecosystem: **scalable, robust and ready for integration**. From intelligent energy management and high-capacity energy storage to electric propulsion, each component is engineered for absolute reliability at sea. Industrialized plug-and-play modules simplify installation, reduce wiring and optimize overall performance.

For nearly three decades, **Alternatives Energies** has refined marine power systems with the same rigor and technical vision. With JOOOL, this expertise sets a new benchmark for modern yacht construction, where advanced technology meets industrial precision.

20 MILLION PASSENGERS TRANSPORTED

44 HYBRID BOATS WORLDWIDE

28 YEARS MARINE ELECTRIFICATION

New build

First-fit integration with partner shipyards. Built into the vessel's production process from the outset.

Refit

Subject to a structural sizing study specific to the vessel : hull characteristics, minimum 40-foot length.



Custom

Bespoke unit engineered to specific constraints : size, use case, or certification requirements.



SILENT AT SEA

REDUCED EMISSIONS
EXTENDED AUTONOMY



SILENT MODE

HVAC, hotel load, lighting and electronics
powered at anchor without generator

ZERO-EMISSION

Electric-only operation, no exhaust fumes
Access to protected & regulated waters

HYBRID FUEL SAVINGS -50%

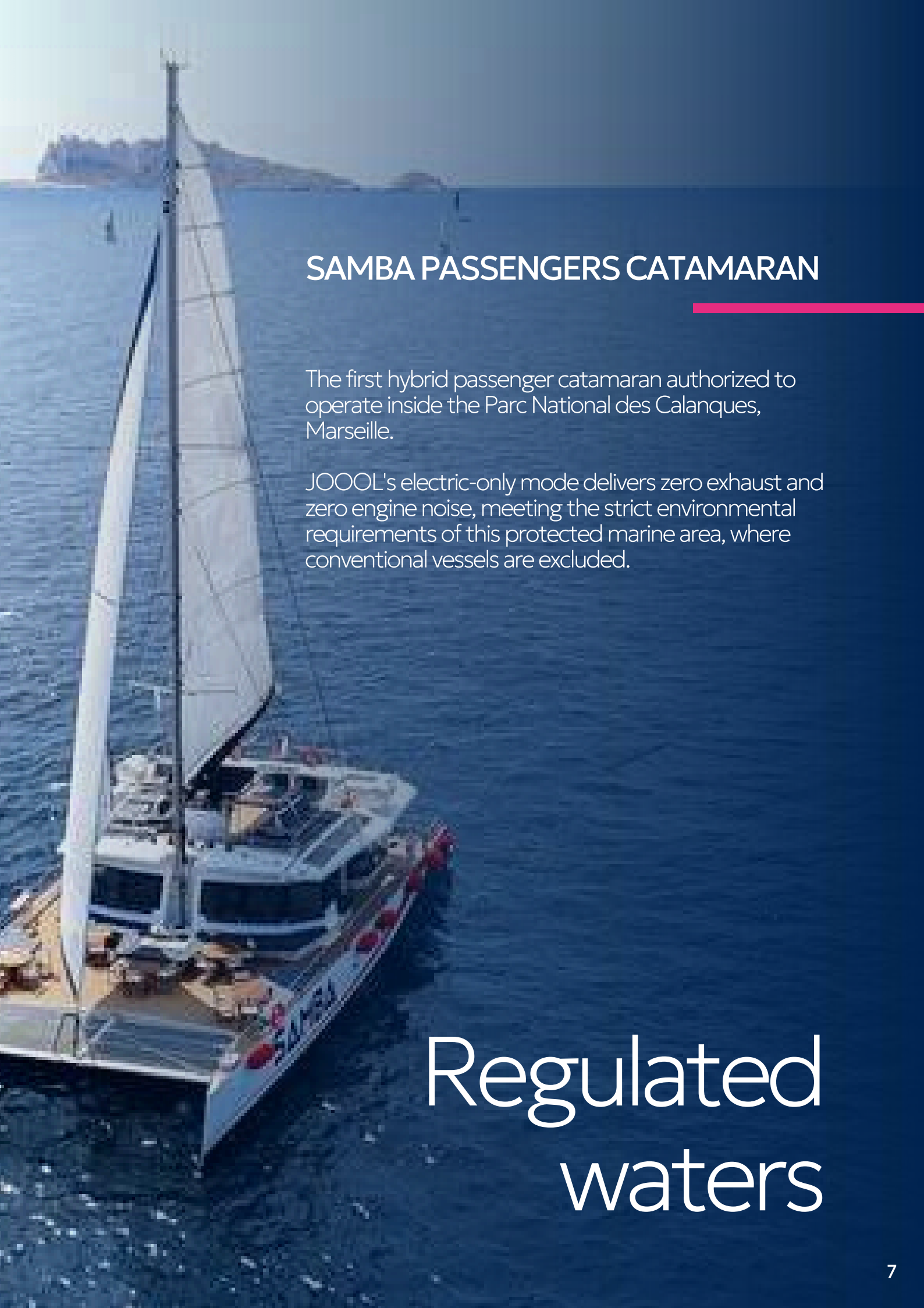
Range x 2
-50% fuel consumption in charter operations

LOW-NOISE PROPULSION

Significantly reduced engine noise and
vibration while underway

THINK HYBRID


NO EXHAUST
NO NOISE
Electric-only operation.
Access where combustion
engines are prohibited.
Protected
areas



SAMBA PASSENGERS CATAMARAN

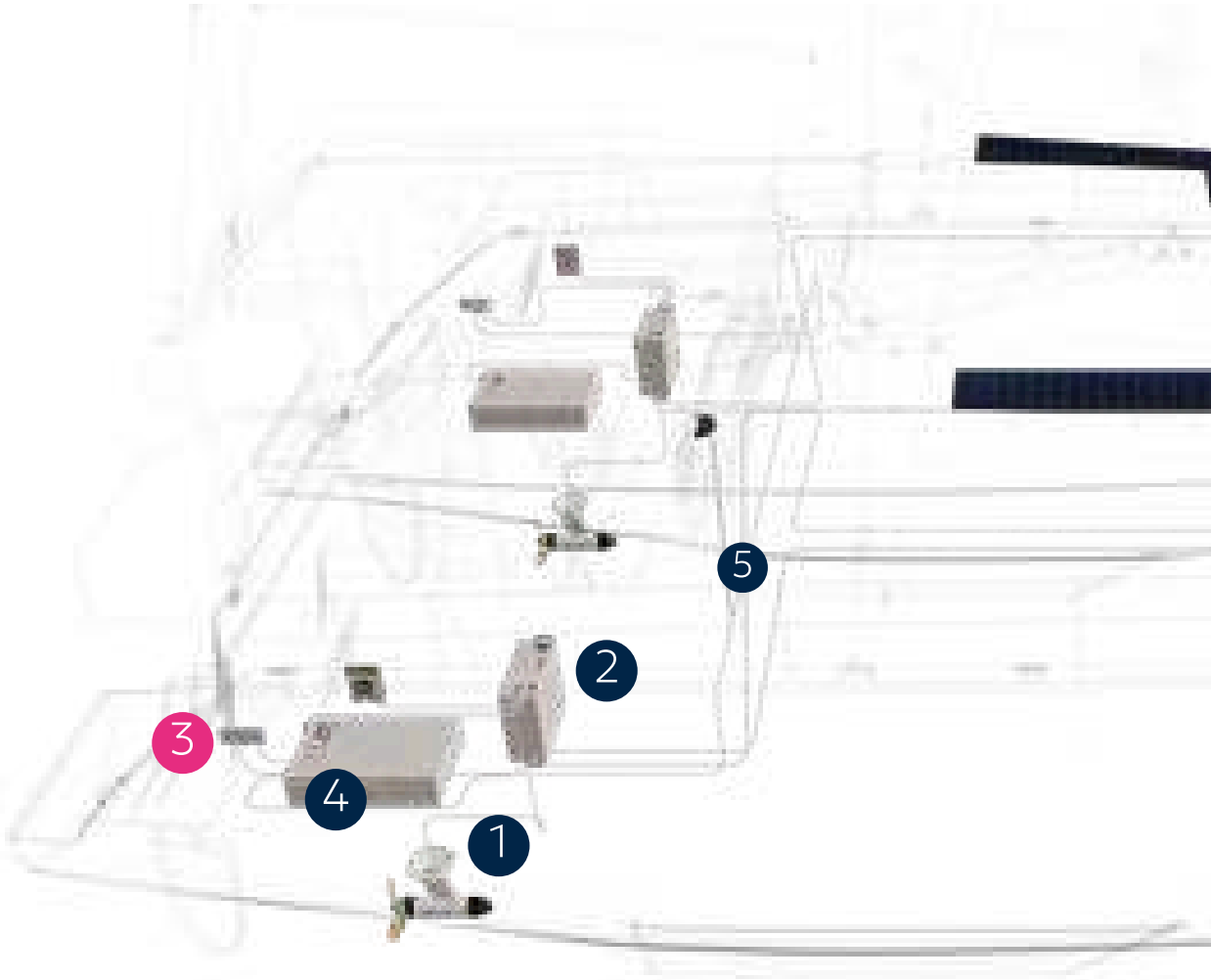
The first hybrid passenger catamaran authorized to operate inside the Parc National des Calanques, Marseille.

JOOOL's electric-only mode delivers zero exhaust and zero engine noise, meeting the strict environmental requirements of this protected marine area, where conventional vessels are excluded.

Regulated waters

ELECTRIC

System



1 PROPULSION
FROM 25KW TO 50KW

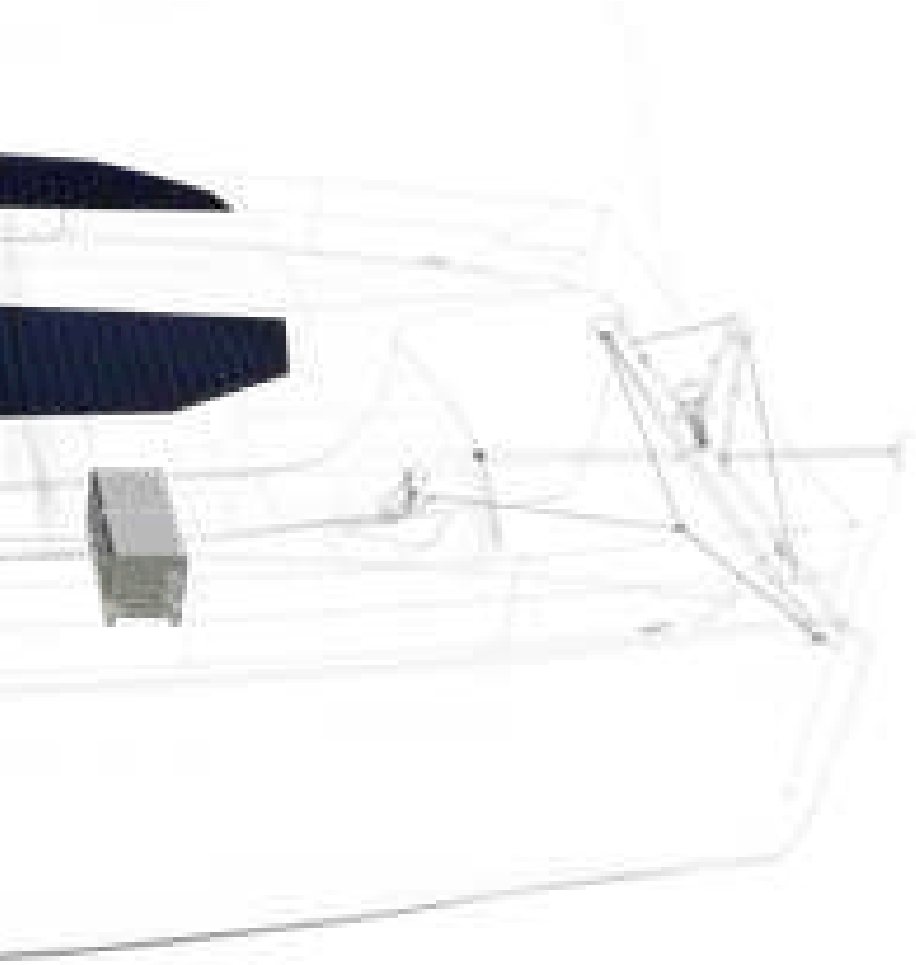


2 ENERGY MANAGEMENT
AC/DC - DC/DC - DC/AC



3 BRAIN OF THE SYSTEM
HARD/SOFTWARE





Modes

Silent Mode

LFP battery powers all hotel load. No generator, no engine noise at anchor.

Electric propulsion

Zero-emission drive for harbor maneuvers and motor sailing.

Hydrogeneration

Propulsion pod acts as turbine under sail, recharging the battery bank.

Solar system

Continuous passive recharge from onboard solar panels.

Generator backup

Diesel generator as last-resort energy source when battery is depleted.

3 STORAGE
FROM 21KWH TO 300KWH



5 INTERFACES
DEDICATED HMI



SCALABLE

PLUG & PLAY

ROBUST

BOAT RANGE



From 35ft
to 80ft



Sailboats & Motor



Silent sailing · Vibration-free · Instant torque

Electric propulsion

Electric drive eliminates engine noise and vibration from the moment you leave the dock. In harbour, instant torque makes docking precise and predictable, even in tight spaces or strong current. At sea, the PowerPod operates silently, no exhaust, no mechanical noise, no interference with the sailing experience.

Marine proteted areas

Zero exhaust emissions allow access to emissions-restricted zones and eco-sensitive anchorages closed to combustion engines.

Diesel exhaust eliminated

No fumes in the cockpit or saloon. No smell at the helm. Passengers and crew breathe clean air from harbour to anchorage.



No vibration · Zero noise · Silent anchorage

Silent mode

The OneBox manages all onboard energy automatically : lighting, refrigeration, ventilation, without starting the generator. Battery capacity covers 24 hours or more of hotel loads at anchor. No engine noise. No vibration. The generator starts only when the battery level requires it, and only for as long as necessary.

All systems on & generator off

As long as the battery covers onboard demand, the generator stays off. You run the boat on stored energy, and silence is never interrupted.

24h+ hotel load autonomy

Battery bank sized to cover a full day and night at anchor without any generator start : lighting, fridge, fans, electronics included.



Extanded autonomy · Silent anchorage · Home comfort

Battery autonomy

The JOOOL battery bank powers all onboard systems continuously, air conditioning, watermaker, cooking, charging, without generator intervention. Hydrogeneration under sail and solar panels recharge the bank automatically during the passage. At anchor, the system manages distribution autonomously, extending battery life to match the longest stops

No shore power dependency

The battery bank is sized to sustain full onboard comfort without any marina connection. Anchor anywhere, for as long as recharge sources keep pace with consumption.

Scalable capacity

Battery bank sized to cover a full day and night at anchor without any generator start : lighting, fridge, fans, electronics included.



Solar · Hydrogeneration

Energy recovery

While sailing at 6 to 7 knots, the PowerPod operates in generator mode and recovers approximately 1.5 kWh per hour. On a twin-hull catamaran with two PowerPods, hydrogeneration reaches up to 3 kWh per hour — enough to cover a significant portion of hotel loads during a day's passage. Combined with solar input, renewable sources can sustain onboard autonomy without generator use on most sailing days.

Energy production while sailing

Every nautical mile under sail recharges the battery bank. Passages become self-sustaining energy cycles, the longer you sail, the more you store.

Solar — passive recharge

At anchor or underway, solar panels contribute continuously to the bank. Combined with hydrogeneration, most cruising days require no generator intervention.

CATALOGUE

Products sheet

01 - ENERGY MANAGEMENT

EPMS Software manager

OneBox Energy

OneBox Propulsion

Inverter

Battery pack

02 - ELECTRIC PROPULSION

Electric Drive Propulsion | POD 25kW

Electric Drive Propulsion | POD 35kW

Electric Drive Propulsion | POD 50kW

03 - MONITORING & CONTROL

Marine throttle

Onboard screen and display

Chager

Complete electric propulsion and energy management systems for sailboats and motor yachts. Designed, manufactured and supported from La Rochelle since 1997.

EPMS- Software manager

IP42 CE

HEART OF THE SYSTEM

The EPMS is the intelligence behind the entire JOOOL system. It coordinates all components : OneBox, Electric Pod, battery packs, charger, ensures they work together, and manages all energy sources in real time, prioritizing renewables and limiting generator use to when strictly necessary.

System coordinator

Connects and coordinates all JOOOL components : OneBox, PowerPod, batteries, charger. Every modules communicates through the EPMS.

Real-time energy management

Monitors and optimizes all onboard energy flows continuously. Shore power, solar, generator, battery, managed without manual intervention.

Renewable priority

Automatically prioritizes solar and hydrogeneration input. Generator activates only when battery reserves require it, and stops as soon as possible.

Shipyard ready

Proprietary architecture developed and manufactured in France. Designed for production line integration : same configuration, every vessel.



EPMS - SOFTWARE MANAGER

KEY FEATURES

- CAN Bus
- 12/24v
- OTA updates
- Industrial connectors

OneBox-Energy

IP40 | HVIL | CE

AUTOMATED ENERGY MANAGEMENT

The OneBox Energy centralizes all energy flows : shore power, solar, generator, and battery storage into a single unit. It automatically manages distribution, minimizes generator runtime, and delivers stable DC power to all onboard systems. Three output connectors allow additional options such as inverter 230VAC or direct DC bus. Several units can be connected in parallel to scale capacity with the vessel.

100A DC/DC
24V BI DIRECTIONAL
2x50A

152 kWh
MAX STORAGE
1 x 21kWh to 4 × 38 kWh

3 × 6 kW
AC OUTPUT
50/60 Hz with external inverter

32 kW
MAX GENSET POWER
415–480 VAC

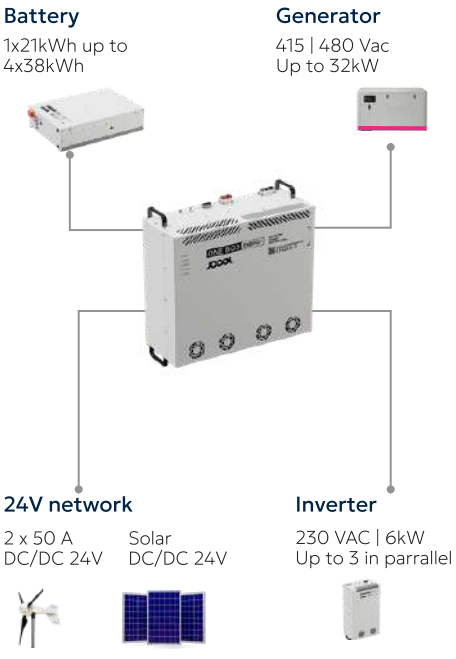


ONEBOX ENERGY 24VDC

+


INVERTER 230VAC

SPECS	VALUE
Input battery capacity	1 x 21kWh to 4 × 38 kWh
Input battery charger [kW]	up to 2x6kW
Input generator Voltage [VAC]	415-480
BI directional DC/DC [A]	2 x 50A (24V)
230V AC output	up to 3 X 6kW with external inverter
Weight [Kg]	50
Dimensions H x W x D [mm]	700 x 700 x 282
Cooling system	air



OneBox-Propulsion

IP40 | HVIL | CE

AUTOMATED ENERGY MANAGEMENT

The OneBox Propulsion integrates energy management and electric propulsion control within a single architecture. It drives the PowerPod direct-drive motor, manages hydrogeneration under sail, and coordinates all energy flows : shore power, generator, battery, solar, automatically.

50kW
MAX PROPULSION
25kW | 35kW | 50kW

152 kWh
MAX STORAGE
1 x 21kWh to 4 × 38 kWh

2 × 6 kW
MAX AC OUTPUT
50/60 Hz with external inverter

32 kW
MAX GENSET POWER
415–480 VAC



ONEBOX PROPULSION

+



ELECTRIC PROPULSION

SPECS	25 kW | AC	25 kW | DC	35 kW | DC	50 kW | DC
Input battery capacity	1 x 21kWh to 2 × 38 kWh	1 x 21kWh to 2 × 38 kWh	1 x 21kWh to 4 × 38 kWh	1 x 21kWh to 4 × 38 kWh
Propulsion drive [A]	60	60	90	120
BI directional DC/DC [A]	50A (12V)	50A (12V/24V opt)	50A (24V)	50A (24V)
230 AC Output [kW]	6kW	-	up to 2x6kW with external inverters	up to 2x6kW with external inverters
Weight [kg]	60	40	55	55
Dimensions H x W x D [mm]	680 x 700 x 280	680 x 430 x 280	700 x 700 x 280	700 x 700 x 280
Cooling	air			

Inverter (OIM)

IP40 HVIL CE

ALTERNATIVE CURRENT — 230 VAC

The Inverter converts DC power into stable 230 VAC for onboard hotel loads.
Up to 3 units can be installed in parallel, delivering up to 18 kW when paired with the OneBox 50 kW.

6 kW
MAX POWER
7 kW peak

3 units
MAX IN PARALLEL
Up to 18 kW combined

530 VDC
HIGH VOLTAGE INPUT
300–790 VDC range



INVERTER

KEY FEATURES

- 50 / 60 Hz
- Lifespan > 50,000 h
- IP68 connectors
- Synchronizable

SPECS	INVERTER 6kW
Input voltage	300–790 VDC
Max power [kW]	6 kW — 7 kW peak
Output voltage	230 VAC
Weight [kg]	30
Dimensions H x W x D [mm]	600 × 344 x 215

Battery pack - LifePO4

IP45 | HVIL | CE

MARINE-GRADE ENERGY STORAGE

The JOOOL Battery Pack provides energy storage for propulsion and hotel loads.
Available in four capacities from 21 to 38 kWh, up to four units in parallel.
LiFePO4 chemistry selected for thermal stability. No active cooling. No routine maintenance

10 years
OF LIFESPAN
Under normal use

7 years
GUARANTEE
80% retained capacity

80%
RECYCABLE
Colbalt free - no weled cells

152kWh
MAX CAPACITY
1 x 21kWh to 4 × 38 kWh



BATTERY

KEY FEATURES

- Zero maintenance
- BMS integrated
- Industrial connectors
- Scalable & modular

FIREPRO - AUTOMATIC FIRE INSTING

88°C 190°F - SUPRESSION
Agent released - oxygen eliminated

SPECS	21kWh	27kWh	32kWh	38kWh
Nominal Voltage VDC	205	256	307	358
Nominal Energy [kWh]	21.5	26.9	32.3	37.7
Weight [kg]	200	245	290	335
Dimensions H x L x W [mm]	275 x 760 x 770	275 x 885 x 770	275 x 1030 x 770	275 x 1165 x 770
Cooling	air			

POD Electric-Drive

IP68 | HVIL | CE

ELECTRIC DRIVE

The JOOOL Electric POD is a compact, high-performance electric propulsion system for sailboats. Available in 25 kW, 35 kW and 50 kW, it ensures efficient, silent, and eco-friendly navigation. Direct-drive technology with hydrogeneration capability.

50 kW
MAX POWER
25kW | 35kW | 50kW

up to 4kW
HYDROGENERATION
according vessel speed

500 Nm
MAX TORQUE
Proven & tested across the fleet



ELECTRIC POD

KEY FEATURES

- Hydrodynamic design
- Direct electric motor
- Industrial connectors
- Foldable propeller (opt)

SPECS	25kW	35kW	50kW
Thermal engine hp equivalence	60hp	90hp	120hp
Continuous torque [Nm]	250	350	500
Nominal speed	1100 RPM		
Dimensions: H[mm] x L[mm]	463 x 664		804 x 786
Ogive Diameter [mm]	172		
Propeller	22-24 inches		24-26 inches
Weight [kg]	58	58	125
Cooling	natural		

Hybrid marine throttle

IP66 | HVIL | CE

SMOOTH OPERATION

Provides intuitive and secure control of electric or hybrid propulsion, from start-up to regeneration, all with one hand. Available as single lever (monohull) or dual lever (catamaran).

CAN Bus / Analog / PWM | 12–24V DC | Dual helm stations



SINGLE LEVER
Monohull



DUAL LEVER
Catamaran

KEY FEATURES

One-handed operation
Ergonomic design for precise & intuitive control

Neutral point detection
Click-feedback confirms neutral and ensures safe stop

Auto-calibrating sensor
Self-adjusting potentiometer — no upkeep required

Prop / Regen buttons
Dedicated buttons for propulsion and regenerative braking

Quick connection setup
Fast installation with plug-and-play interfaces

IP66 waterproof
Rated for harsh marine environments

SPECS	VALUE
Power supply	12–24V DC
Output	CAN Bus / Analog / PWM
Materials	Aluminium, A2 Stainless Steel, POM

Interfaces- Onboard display

CE

ONE SCREEN FOR THE WHOLE SYSTEM

The JOOOL display centralizes all hybrid system data into a clear, intuitive interface. Whether you're cruising, regenerating, or charging at anchor, it adapts in real time to match your onboard needs, you stay in control effortlessly.

7" sunlight-readable	Marine-grade IP67	Dual-station ready	CAN bus integration



PROPULSION INTERFACE
[catamaran display]



ENERGY MANAGEMENT INTERFACE
[catamaran display]

KEY FEATURES

Power flow monitoring
Full picture of onboard energy at a glance. Track how solar panels, shore power, and batteries supply all onboard systems in real time.

Propulsion performance
Live motor insights for single or dual engine. Monitor RPM and power output per engine to optimize efficiency, range, and responsiveness.

Marine-grade touchscreen
Rugged, waterproof and sunlight-readable.
Designed for permanent deck exposure in all sea conditions.

Autonomy & regeneration
Monitor energy recovery in real time while sailing. See autonomy forecasts and live battery charge status at a glance.

Charger

IP67 HVIL CE

COMPACT & GLOBALLY COMPATIBLE

An advanced high-efficiency charger built for marine and industrial use. With robust design, wide input compatibility, and compact size, PowerUp delivers reliable performance in every port in the world.

CAN BUS

AC 90–265V



CHARGER



3.3 kW or 6.6 kW output
Delivers strong and reliable output, ideal for hybrid marine propulsion systems. Two power levels to match vessel requirements.

Global compatibility
Wide input range — AC 90–265V / 47–63Hz — for worldwide port use. No adapter or configuration change required.

SPECS	3.3	6.6
Ouput current [A]	10	20
Input Voltage Range [VAC]	90-265	
Frequency	47-63	
Lifespan	>40 000 hours	


JOOOU

Since 1997 by Alternatives Energies

www.alternativesenergies.com
www.joool.energy





SILENT AT SEA

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EXTENDED AUTONOMY

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