



ORCA v6[®]

by Lungfish Dive Systems Ltd.

THE
REBREATHER
SOLUTION



LUNGFISH



OPTIMISED TECHNOLOGY

Cutting edge electronics combined with failsafe mechanics and rugged practicality.

OPTIMISED DESIGN

Ergonomic and efficient design combines ease of use with high performance.

Silent, long duration diving. Unparalleled freedom of movement.

PERFECT FIT

Harness system giving an optimal fit for each diver.

Adjustable counter lung volume matched for every diver.

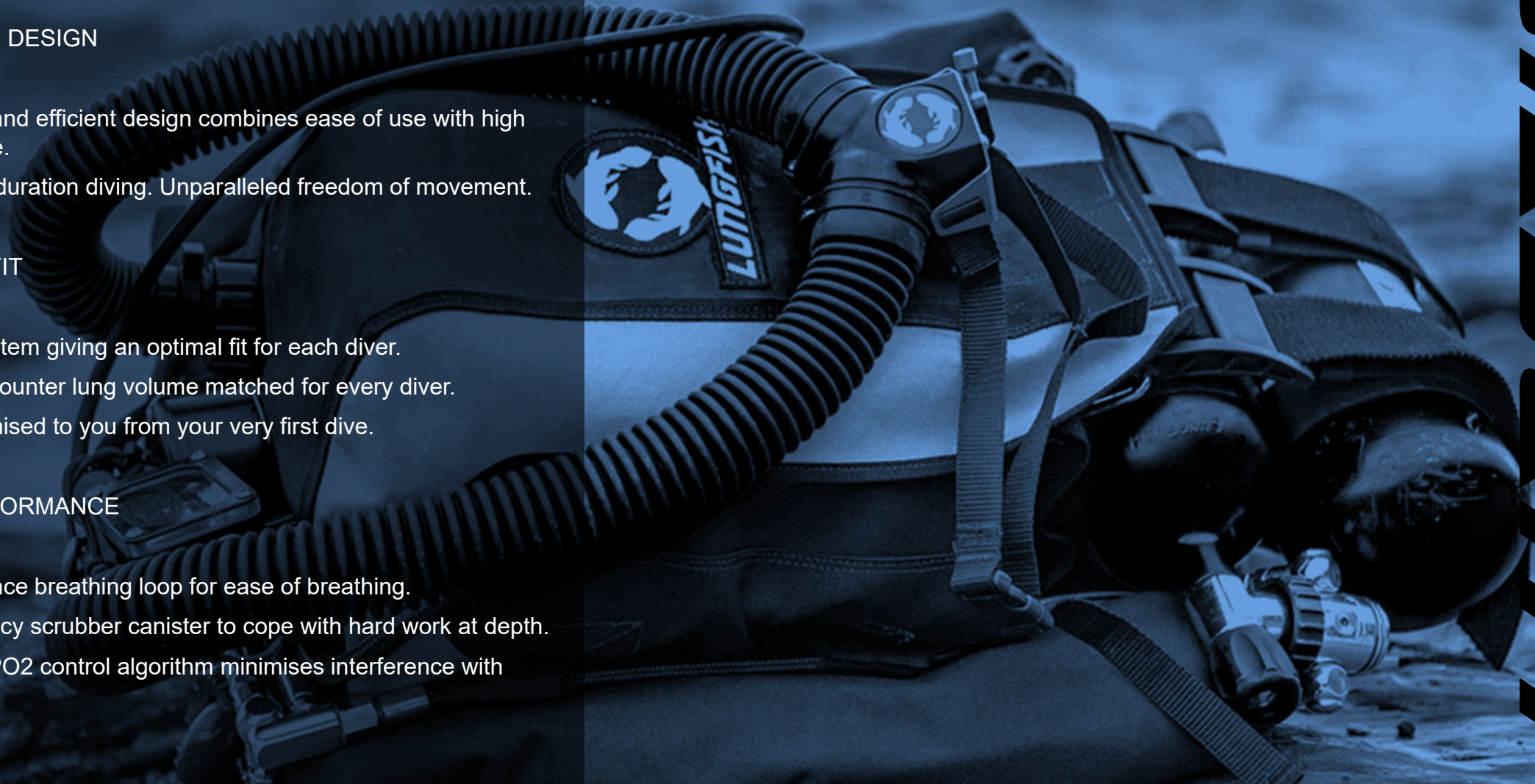
Fully customised to you from your very first dive.

HIGH PERFORMANCE

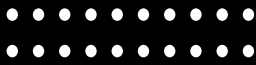
Low resistance breathing loop for ease of breathing.

High efficiency scrubber canister to cope with hard work at depth.

Accurate PPO2 control algorithm minimises interference with buoyancy.



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ADVANCED ELECTRONICS

Mono block for simplicity, quickly removable after use.

No exposed wiring, sensors protected from moisture and damage with hard cover and two independent seals.

Robust solid state CO2 monitor for ample warning of scrubber depletion. Proven in naval use.

High pressure sensor validation as standard giving assurance of cell range prior to diving.

Highly visible displays. Wide angle viewing and status indicator.

Plug-and-play wet-mateable cables all round

Upgrade ports enable secondary computers and head up displays on isolated output, an independent 4th oxygen sensor, and other devices configured to your needs.

Simple charging and log download with USB connection.

HIGH PERFORMANCE FULL FACE OPTION - ALLIANCE

Unrestricted Breathing

Unrestricted Head Movement

Noise-Free Communications

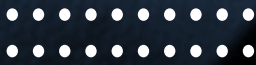
Fog Free Vision

Inbuilt Bailout Valve

No Liquid in Breathing Hoses

Retaining system for comfort and safety





PRACTICALITY

Natural trim and positioning in water.

Ease of breathing in any position.

Flexible cylinder options offering mounts on base, sides, or as stages.

Tool-free assembly.

Highly configurable to user requirements.

Lightweight (10kg stripped down) – easily transportable on airlines.



OPTIMISED MOUTHPIECE

Wide airway for easy breathing.

Easy one handed operation.

Minimum internal volume to reduce CO2 retention.

Hoses directed out of field of view.

Unrestricted head movement preventing jaw fatigue.

DSV (Dive Surface Valve) allows surface breathing and complete purging of water.

Accurate PPO2 control algorithm minimises interference with buoyancy.





SAFETY

Hypoxia Prevention

Optimised counter lungs which are sized to each user prior to use and make any gas injection fault obvious.

Intrinsic property of unit, not dependent on electronics.

Hypercapnia Prevention

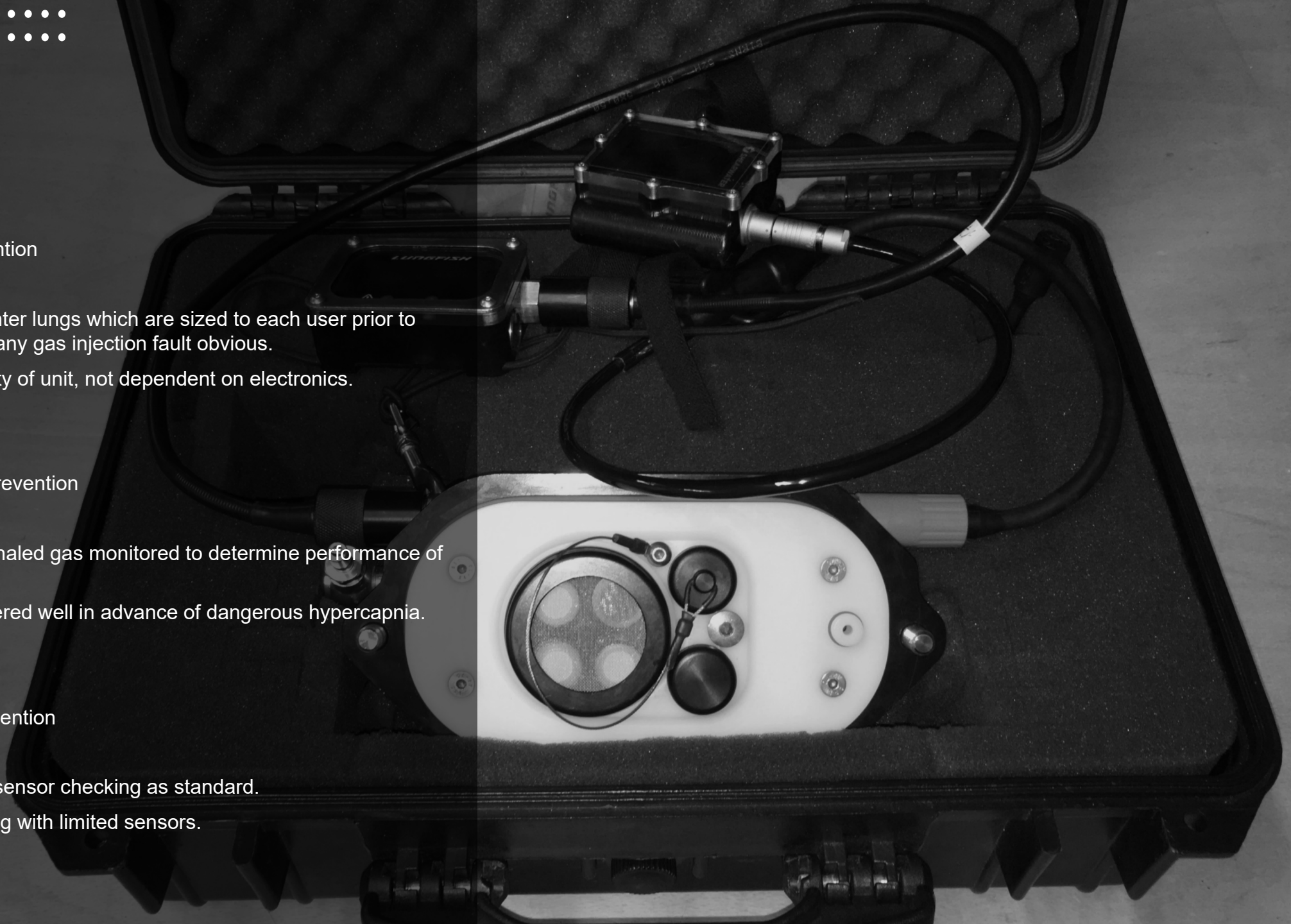
CO2 level of inhaled gas monitored to determine performance of scrubber.

Warnings triggered well in advance of dangerous hypercapnia.

Hyperoxia Prevention

High pressure sensor checking as standard.

Never risk diving with limited sensors.



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SAFETY (Continued)

Flood Resistance:

Hard to flood and easy to empty; CO2 monitor allows verification of scrubber.

Electronics position minimizes risk of immersion, sealed sensors survive a flood.

Fault Detection & Redundancy:

System monitors its own condition, can shut off damaged parts to stay functional.

Triple oxygen sensors in main system with optional 4th independent O2 cell output.

Isolator output allows you to read the main sensors with up to two external dive computers of your choice, all completely independent.

Manual operation:

Always an option in any circumstance.

Once the required gas has been selected, raise the Locking Arm back to the locked position to prevent any accidental change of gas supply.



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TECHNICAL SPECIFICATIONS (standard unit)

- Dimensions: Overall : 60cm X 45cm X 20cm.
Central unit : 32cm X 30cm X 20cm
- Bare Weight: (without cylinders or CO2 absorbent) ~ 11 KG
- Transport Weight: (no cylinders, CO2 absorbent or electronics) ~ 10 KG
- Diving Weight: (with Absorbent & Standard Cylinders) ~ 18 Kg
- Buoyancy: Unit alone ~ 2Kg negative.
Standard Buoyancy Compensator 16 Kg lift.
- Gas Supply: 2l 200 bar Steel cylinders at base as standard.
(Larger cylinders can be fixed to sides, or hung as sidemounts)
- CO2 Scrubber: 2.2Kgs Sofnolime 797 or Divelime 812.
Typically 3 hours duration.
- Sensors: Standard 3 O2 sensors, 1 CO2 sensor,
depth sensor 0-130msw. Optional 4th O2 sensor.
- Control System: Automatic and manual PPO2 control.
- Options: Isolated outputs to additional displays and computers,
extra cylinders and offboard gas supplies, and hardware.

<https://www.lungfishdivesystems.com/orca-v6>



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