



### SOFT SHIELD WITH FASTENING SYSTEM

The soft shield contains the breathing bag equipped with the hose connector and hoses, protecting the breathing bag against tearing and abrasions caused by rocks and sharp objects and improving its hydrodynamic fineness ratio. It is made with high resistance cordura fabric, padded with plastic material. It is equipped with a fastening system to make fast various bag and tool for tactical operations.





OMG Caimano Mk4 CDV is the latest generation oxygen closed circuit rebreather designed for Special Forces and Combat Divers.

Caimano Mk4 CDV is the first apparatus in the world that exceeds extreme tactical requirements:

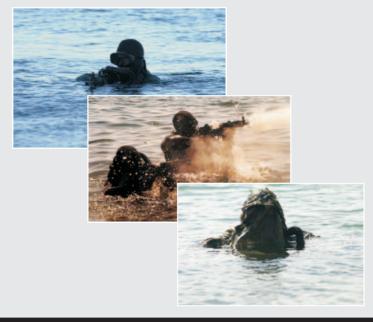
- Ultra-Low Profile
- Light Weight
- Very Small Dimensions (compact)
- Long Duration and Operating Range
- Extremely Low Work of Breathing
- Stealth, Ultra-Quiet Operation
- Low Magnetic Signature
- Low Acoustic Signature
- No Tools Required for Setup and Operation

The best characteristic of this underwater breathing apparatus is a new system to inject oxygen into the breathing bag.

Caimano Mk4 CDV is equipped with a finest on-demand valve which inject oxygen directly into the breathing bag in order to have the hand free during all dive duration.

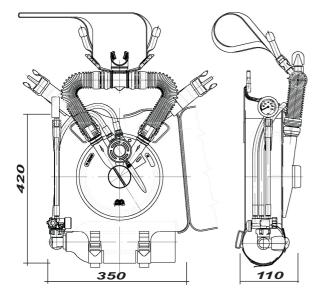
When it's necessary to exclude the demand valve (to surface, etc.) a precise switch permit to operate only manually on the gas injection. This function permit to have total buoyancy control.

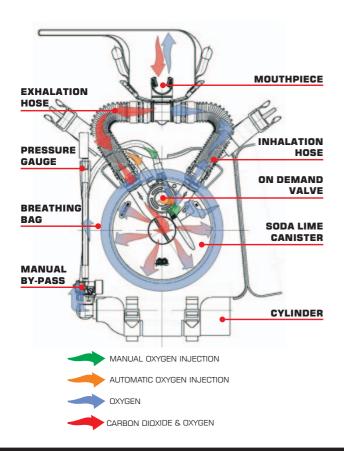
This double system satisfies the requirements of military tactical activities.













### **CLOSED CIRCUIT BREATHING APPARATUS** (NSN:151812704)

Caimano Mk4 CDV O.M.G. La Spezia, Italy Produced by:

AMOV-AM-02 Order number:

Type of apparatus: ventral with soft shield

Working principles: closed circuit

Oxygen injection system: manual and/or automatic Specifications of the gas: oxygen, at least 99,5 Vol% 02

Breathing bag:

Capacity: moveable capacity, ~ 8,5 litres

Material: atoxic polyuretane

Filter:

Model

Type: radial CO<sub>2</sub> absorbent: soda lime

2.050 kg (4.52 lbs) Capacity:

Cylinder:

1.5 litres Capacity: 232 bar Maximum pressure: alluminium alloy Material: Dive time duration: up to 4 hours -30°C + 70°C Storage temperature: -2°C + 40°C Operating temperature:

Magnetic signature: low magnetic\*

Maximum operating depth: 7m or in accordance with local regulation about diving with pure oxygen (no technical limitation)

Weight (ready to use):

8.4 kg In air:

neutral, breathing bag filled with Immersed: approx. 2,5 litres of oxygen

\*available in accordance with STANAG 2897 class "A"

\*\*Colours available: W=woodland / N=black

Standard Apparatus Parts Description:

Order number: AMOV-AM-021 (W/N)\*\* (NSN:151812704)

Soft, shield Boucle Belt Waist Belt Cross Belt Tactical knapsack Technical manual

### Order number:

Jacket:

JMU-I-02 Jacket JackCol. Woodland

JMU-BC-02 BC JacketShark 7AV100 Ballast 1 kg per piece ZAV101 Ballast 0.5 kg per piece CSM-B-01 Ballast carriage bag

Maintenance:

KITO13 Ordinary maintenance kit

**SET012** Set O-ring

Carriage container:

CMR-E-01 Storage and carriage container CMM-B-01 Storage and carriage bag

Accessories:

CMM-S-01 Tactical Holder









The radial filter ensures full oxygen purification from carbon dioxide as well as an effective steam condensation due to breathing and carbon dioxide fixing reaction.

The self-breathing apparatus is capable of using all standard NATO NITROX mix types with composition ranging between 32 and 60% oxygen.

This particular characteristic of Mk4 CSC make possible to select the properties Nitrox-mix types to reach different depths.



The self-breathing apparatus Mk4 CSC comes from an extensive know-how in the field of submarine activities - both offensive and defensive. This closed and semi-closed circuit apparatus enables the operator (by a simple maneuver that can be effected also under water) breathing pure oxygen or a mix of oxygen and nitrogen.

Mk4 CSC is fitted with a soft shield housing a new design high-capacity breathing bag (made up of non-toxic soft material) ensuring a great breathing ease, that is required to comfortably operate under water for long periods.

Since the system operates in a closed-circuit (i.e., it uses pure oxygen) the gas can be dispensed both automatically and manually. In this case the oxygen admission to the plenum bag is done by the operator who actuates a by-pass valve. This solution proves to be very useful when making tactical approaches to targets, since it allows to

adjust the swimmer hydrostatic balance as needed for going afloat or carrying out emergency maneuvers.

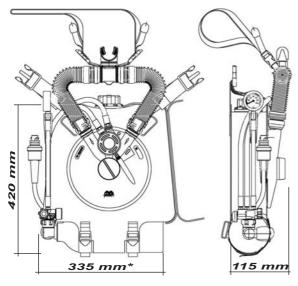






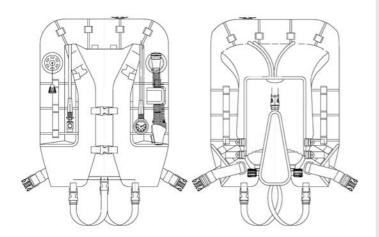


### **FRONT UNIT**



\*280 mm on the arms thanks to soft shield

### **BACK UNIT**



Part number: AMMV-AM-012

Cyclic, closed with oxygen Working principle: Cyclic, semi closed with NITROX

Breathing gas: 100% Oxygen and

NATO premixed nitrox mixture

Oxygen cylinder:

Capacity: 1,5 litres/aluminium

Max Pressure: 232 bar

Nitrox cylinders

Capacity: 2 x 1,5 litres/aluminium

Max Pressure: 232 bar

Breathing bag:

~8.5lt (adjustable) Volume:

Canister:

CO<sub>2</sub> absorbent: sodalime

Capacity: 2.2 Kg

Duration: Oxygen:about 4 hours

Nitrox:in accordance with NITROX mixture type

From -2°C to +55°C Operating Temp: Magnetic sign.: Low magnetic

Maximum depth:

Oxygen: 7m or in accordance with local

Regulation about diving with oxygen (no technical limitation)

pure Nitrox: in accordance with NITROX

mixture type

(max. 54m / 177 ft)

Weight ready to use: ventral apparatus - 13,5 kg

BC Jacket w/cylinders - 10 kg

Neutral in sea water

Standard Configuration Apparatus Parts Description:

Order code: AMMV-AM-012

Include:

AMMV-AM-01 Rebreather JMU-BC-06 BC Shark

CMR-E-02 Storage container MTUM-MK4-CSC User manual

Accessories:

KITO47 Pre-dive check unit

KIT050 Ordinary maintenance kit oxygen unit KITO51 Ordinary maintenance kit BC Shark

**SET019** O-ring set oxygen unit SET020 O-ring set BC Shark **IMA-UW-011** Underwater PpO, Meter







Main characteristics:

Maximum ease of respiration due to width of the sections gas passeges

Filter with high capacity, for total absorption of carbon dioxide produced from breathing

High capacity, aluminium alloy oxygen cylinder.

Protection of the vital parts ensured by a rigid shield

Low drag to advancement in water

On demand regulator or manual supply (bypass valve) delivery to maximise the diver balance and ease of breathing.

# CAIMANO C.R.A.

Caimano C.R.A. is designed and manufactured using non magnetic material in accordance with the STANANG 2897 requirements, is the result of much experience in the field of military diving activities.

The oxygen breathing apparatus Caimano C.R.A. was designed and produced exclusively for military use and satisfies tactical requisites typical of such military operations, such as autonomy, noiseless operations and versatility. Tests made over the years confirm that the breathing apparatus guarantees a high level of reliability, strength, simplicity, operational safety and ease of maintenance, characteristics which make it ideal for both offensive and defensive actions carried out by military Diving Units.

The breathing apparatus can be both put on and taken off easily and quickly.

The special rigid shield, in composite material, is the state of the art, using not deformable material with high resistance to the impact and

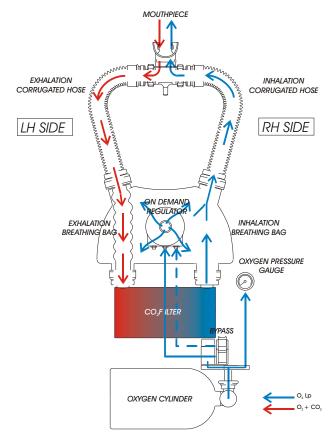


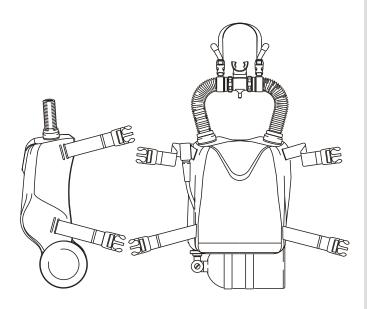
to the strong temperature variations.In other it's very light and comfortable for the diver.

The CRA Caimano has got a special rescue jacket called SHARK supplied as equipmet and many accessory for the diving activity..









# CAIMANO C.R.A. CLOSED CIRCUIT UBA

Part nr.: AMOV AR 01

Type: Ventral with rigid shield

Working principles: Closed circuit

Gas injection: Manual and on demand

Specifications of the gas: Pure oxygen

Cylinder:

Capacity: 1.9 litres Maximum pressure: 207 bar

Material: Alluminium alloy

Breathing bag: Inspiration bag 6.5litres

Expiration bag 0.5 litres

Carbon dioxide absorbent: Soda lime Soda lime canister capacity: 2 kg

Dive time duration: Up to 4 hours
Operating temperature: From -2°C to +55°C
Magnetic signature: Low magnetic

Maximum operating depth: 12 meters (Italian Navy

Regulation)

Weight ready to use: 9.8 kg in air

Neutral in sea water

Standard Apparatus Parts Description:

Order Number: AMOV-AR-01-01

Boucle Belt Waist Belt Stowing bag Technical manual

### Accessories:

JMU-I-02 Jacket Jack JMU-BC-02 Jacket Shark

KIT01600 Ordinary maintenance kit

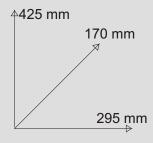
SET01400 Set O-ring

CMR-E-01 Storage and carriage Container

CMM-Z-01 Tactical Holder

ZAV10000 Ballast 1 kg per piece
ZAV10100 Ballast 0.5 kg per piece
CSM-B-01 Ballast carriage bag

### STANAG CERTIFICATION AVAILABLE



- CAIMANO C.R.A. Dimensions -

Doc: cra 03 eng







The radial filter ensures full oxygen purification from carbon dioxide as well as an effective steam condensation due to breathing and carbon dioxide fixing reaction.

The filter container is made of brass, completely coated with protective rubber.

The self-breathing apparatus is capable of using all the NITROX mix types with composition ranging between 32 and 60% oxygen.

This particular characteristic of Caimano Aromix make possible to select the properties Nitrox-mix types to reach different depths

# CAIMANO AROMIX CLOSED AND SEMI-CLOSED CIRCUIT UBA

The self-breathing apparatus CAIMANO AROMIX, designed and built with non-magnetic materials according with the 2897 STANAG Standards, comes from an extensive know-how in the field of submarine activities - both offensive and defensive. This closed and semi-closed circuit apparatus enables the operator (by a simple maneuver that can be effected also under water) breathing pure oxygen or a mix of oxygen and nitrogen.

AROMIX is fitted with a rigid shell housing a new design high-capacity breathing bag (made up of non-toxic soft material) ensuring a great breathing ease, that is required to comfortably operate under water for long periods.

Since the system operates in a closed-circuit (i.e., it uses pure oxygen) the gas can be dispensed both automatically and manually. In this case the oxygen admission to the plenum bag is done by the operator who actuates a by-pass valve. This solution proves to be very useful when making tactical approaches to targets, since it allows to adjust the swimmer hydrostatic balance as needed for going afloat or carrying out emergency maneuvers.







# LH SIDE RH SIDE INHALATION REATHING BAG MIX PRESSURE GAUGE OXYGEN CYLINDER MIX CYLINDER

## CAIMANO AROMIX

CLOSED AND SEMI-CLOSED CIRCUIT UBA

Part number: AMMV-AR-01

Cyclic, closed with oxygen Working principle:

Cyclic, semi closed with

**NITROX** 

Breathing gas: Pure Oxygen

All Nitrox mixture

from 32% to 60%

Oxygen cylinder:

1,9 litres/aluminium Capacity:

Max Pressure: 207 bar

2 x 1,5 litres/aluminium NITROX cylinders Breathing bag: Inhalation:6,5 litres

Exhalation:0,5 litres Sodalime

CO, absorbent: Canister Capacity: About 2 Kg

Oxygen: About 4 hours Duration:

Nitrox:in accordance with NITROXmixture type

Operating Temp: From -2°C to +55°C

Magnetic sign.: Low magnetic

Maximum depth: oxygen: 12 meters (I N

Regulation)

NITROX: in accordance with

NITROX mixture type

Weight ready to use: ventral apparatus - 11,8 kg Jacket with cylinders - 10 kg

Neutral in sea water

Standard Apparatus Parts Description:

Order code: AMMV-AR-01-01

AMMV-AR-01 Rebreather (alluminium cylinder 1.9 litres)

JMU-BC-01 BC Shark

CMR-E-02 Storage container

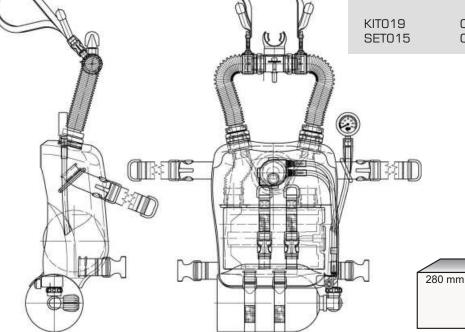
Technical manual

, 180 mm

Accessories:

Ordinary maintenance kit

O-ring set











### The main features:

**C**ombat design; non noise and bubbles to improve diver stealth capability;

New compact design for smaller drag in water and combat readness on land;

**M**aximum breathing smoothness provided by extra wide gas passage section;

Radial soda lime canister for complete CO2 absorbing;

Built with new generation materials;

No tools required for refilling and field maintenance:

Emergency buoyancy possibility.



The latest innovative project by O.M.G. Is CAIMANO C.M.I., A rebreather of dorsal kind essentially made to be used on underwater vehicles and for mine sweeping operations. The apparatus boasts a reduced magnetic content thanks to use of special materials and to an aluminium cylinder of big capacity. The innovative system of gas supply, both manual and automatic allows the operator to cope with any operative situation in good time. Moreover, the lack of bulky object in the ventral part allows to act manually at ease.

The presence of two breathing bags of different cubature ensures easiness of breathing, necessary to operate comfortably during long-lasting diving.

#### **FILTER**

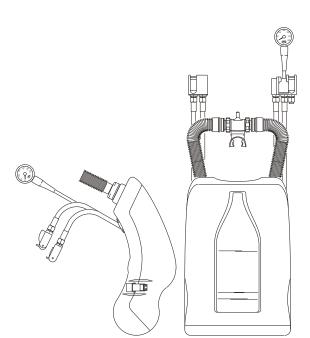
An innovative filter of radial kind ensures a total purification of the oxygen and an effective condensation of the water vapour due to breathing and to the Co2 fixing chemicals reactions.

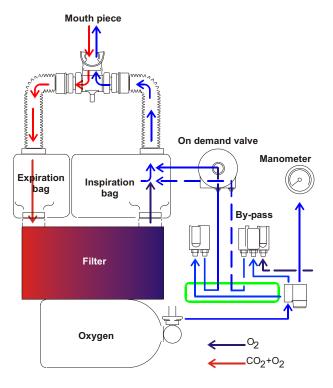
A special life jscket is equipped with CAIMANO C.M.I.; The jacket is supplied with a removable ballasting system and with a series of pockets meant to hold the underwater communication system "seacom 2000", wich can be used together with the full face mask diver.











### CAIMANO C.M.I.

Part nr.:

Type of apparatus: Dorsal with rigid shield

Working principles:

Gas injection:

Specifications of the gas: Cylinder:

Capacity:

Maximum pressure:

Material: Breathing bag:

Carbon dioxide absorbent: Soda lime canister capacity:

Dive time duration: Operating temperature: Magnetic signature: Flotation push:

Maximum operating depth:

Weight ready to use:

AMOD-AR-01

closed circuit

manual and on demand

pure oxygen

1.9 litres 207 bar alluminium alloy inspiration 8 litres expiration 4 litres

soda lime 2,0 kg

up to 4 hours from  $-2^{\circ}c$  to  $+55^{\circ}c$ low magnetic 14 kg

12 m about 10.4 kg in air neutral in sea water

Standard Apparatus Parts Description:

ORDER CODE: AMOD-AR-01-01

Rebreather (Aluminium cylinder 1,9 lt) Jacket with buoyancy compensator

Technical Manual

Storage and Carriage Container

Accessories:

IMM-FM-01 Full Face Mask Mod. Oxycom ZAV100 Ballast 1 Kg per piece ZAV101 Ballast 0,5 Kg per piece CSM-B-01 Ballast Carriage Bag





### The main features of RDN 2000

The shield, wich allows a balanced trim in any position, comes from precise studies on the positioning of all the components for an optimum weight distributions.

Maximum breathing smoothness due to extra wide gas passages and to optimal volume of the breathing bags.

High capacity filter (radial type) in order to ensure the total absorption of carbon dioxide produced by the breathing.

Low magnetic high capacity aluminium alloy cylinders.

The multifunction dosing group for distribution of the gas mixture; easy of maintenance and filling of both filter and cylinders; it will take only few minutes to make the breathing apparatus ready for further use.

Emergency demand regulator for effective redundancy.

## **RDN2000**

The RDN2000 has been designed only for military purposes in compliance with tactical requirements (extended dive duration, silent operation, low magnetic signature obtained by using low-magnetic material.

RDN2000 has gone trough many tests before being commercially produced proving to be fully reliable exceeding all expectations in all working conditions.

The absence of complicated and unreliable moving parts and the ease of maintenance make this breathing apparatus simple, study and reliable in any dive setting.

As it is produced utilising the latest technology materials, the most innovative working processes and being thoughly inspected and tested, it represents the state of the art in NITROX mixture breathing apparatus.

It's possible to connect any type of underwater oxygen analyzer with dedicate port in the breathing bag to monitor a PPO2 during the dive.



### **DOSING GROUP**

The dosing group regulates the quantity and pressure of the gas entering the inhalation breathing bag. It is connected using a stainless steel bracket on the ear right side of the jacket's waist strap.



### **FILTER**

The filter contains soda lime needed to chemically absorb carbon dioxide produced during the breathing process. Essentially it is a non-magnetic cylinder where is inserted a drum formed by two concentric finely perforated cilindrical rings.





**MOUTHPIECE** 

SODA LIME

1<sup>ST</sup> CYLINDER

2<sup>ND</sup> CYLINDER

**MANOMETER-**

BY-PASS

 $O_2/N_2 + CO_2$ 

**MANOMETER** 

## **RDN2000**

Part nr.: AMMD-MR-01

Working principles: Semiclosed cyclical circuit

**NITROX** 

(open in emergency)

Specification of the Gas:

Cylinder

2x3 litres capacity maximum pressure 200 bar Breathing bag: 2 x 6,2 litres purifyng material: Soda lime Soda lime canister capacity: 2,35 kg

Operating temperature: From -2°C to +55°C

Magnetic signature: Low magnetic

Maximum buoyancy: 28 kg

Weight ready to use: 27 kg. In air, neutral in sea

water

Standard Apparatus Parts Description: Order Number: AMMD-MR-01-01

Rebreather (2 Aluminium cylinder 3 lt)

Technical Manual

Storage/carriage container

Accessories:

GPR-30 O<sup>2</sup> Analyzer

KITO30 Ordinary Self Maintenance Kit **ZAV100** Ballast 1 Kg per piece ZAV101 Ballast 0,5 Kg per piece CSM-B-01 Ballast Carriage Bag

