FLYOX I

THE SKY WORKER

SINGULAR
AIRCRAFT

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SINGULAR AIRCRAFT HAS CREATED THE NEW
CONCEPT OF UNMANNED AERIAL VEHICLES.

SINGULAR
AIRCRAFT

Singular Aircraft was founded by Luis Carrillo Lostao, looking for a way to provide a solution for pilots who risked their lives conducting aerial fire fighting operations.

The initial phase was focused on firefighting, but after the first designs and tests the Singular Aircraft Team saw how The Flyox I could offer a variety of solutions as an alternative to traditional aviation functions, such as the transport of solid or liquid goods, surveillance or agriculture works. After two years of hard work by the team of engineers, the first prototype, called SA-03, made its first ground and water tests.

With the results of those test, Singular Aircraft manufactured its first unit of the Flyox I series, which successfully performed its maiden flight on May 16, 2015 at the airport in Hofn, Iceland.

Singular Aircraft are excited about the future with The Flyox and are optimistic and encouraged by the initial results. Singular will continue working with the aim of establishing the Flyox I as a reference point within the UAV market.

Luis Carrillo
Founder and Owner

FLYOX I

THE SKY WORKER

AFFORDABLE PRICE AND REDUCE MAINTAINANCE

It is an autonomous amphibious platform which in addition can be remotely piloted from a ground station, which can be installed in any regular commercial van, ship, operation centre, etc. The ground station reproduces a standart aircraft cockpit with 3 cameras allowing the pilot to have a frontal and side view of 240º. The operation distance under light of sight is up to 120 km, above this distance a satellite control link can be stablished.

For training purposes and to conduct maneuvers Singular Aircraft has developed an own simulator accurately reproducing the complete flight envelope. The simultor is also used for pilot type-raiting and specific trainings (e.g. firefighting, night operations).

- Versatile
- The biggest amphibious UAV
- Payload: 1,850 Kg
- Endurance: 25 h
- Fleet operations
- Automatic & autonomus flight mode
- Optionally controlled by ground station
- Fits standard 40' intermodal container
- Assembly in less than 4 hours
- Fully customizable
- Regular 95 octane fuel
- Day and night operations
- Take-off and land on any surface
- Affordable price and reduce maintainance

THE GROUND STATION & **THE SIMULATOR**

AGRICULTURAL WORK

Reducing seven times the operating costs

Security
Pilots no longer have to be exposed to pesticides and harmful chemicals, while obtaining a high level of precision in agriculture.

Detailed planning
Possibility of entering, prior to takeoff, an automatic flight plan navigation. This plan may vary depending on the weather.

Air controls and reforestation
Aerial application is the cheapest, fastest and safest way of fumigation. Flyox I also performs other tasks as detecting water stress, nutritional control, irrigation, seeding and planting.

Fumigation and pests
Aerial spraying is a great advance in the world of agriculture. When crops are attacked by an insect pest or disease, time is crucial. In this case, an aerial medium can accomplish in one hour more than a ground team can do in a whole day, without touching or damaging the land or plants, and without taking any risks for pilot's health.

Saving more than 90% of aerial resources expenses

FIREFIGHTING

Fully adaptable to current requirements.
Depending on the radars, sensors or cameras that are fitted on board, different assistance methods and strategies with forest brigades can be developed in surveillance mode, or different types of monitoring can be carried out.

Generating confidence in the population through early detection.
With the potential to work on prevention and safety missions, and notable for its long range (+24 hrs) which allows an entire area to be controlled at a very reasonable cost and is unique on the market.

Advantages over competitors
- Cost savings.
- Absolute adaptation to the environment.
- Ability to launch 1,600 liters of water or fire retardant.
- Ability to discharge every 2 minutes, working on fleet.

Prevention of caused damages
Effectiveness, operating both day and night. Generates greater security to the population in terms of prevention and intervention at the time of a crisis.

Elimination of personal risks
Every year, about a hundred firefighters die. The 57,42% of cases, death due to inhalation of fumes. Flyox I wants to end these statistics with forest monitoring, early detection and fire-fighting.

GOODS TRANSPORT

Converting costly, scarcely viable transportation into automatic and profitable routes

Time and cost savings in a single RPA

- 40% more economical and 15 times faster than land transport.
- From 6-20 times more economical than the competition.
- Transports up to a 1,580 kg load, food, fuel, drinking water or assistance in disaster areas.

Without limits and with precision parachutes

- Capable of landing on many different surfaces.
- Capable of taking off at between 200-300 m, depending on load.
- Launching of loads with precision parachutes.

SURVEILLANCE & LIFESAVING

Saving up to $100.000 per day in rescue tasks

All in a single support: the FLYOX I

Immediate intervention. | Shipwreck localization. | Survivors search. | First aid transport. | Rescue coordination.

Prevention, action and first aid

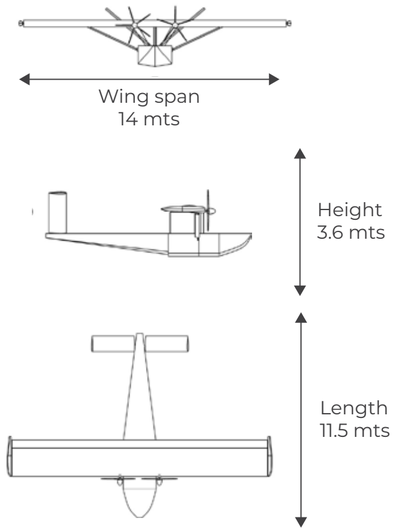
- Exact location of victims and survivors, on land or sea
- Sending of the location to rescue teams.
- Capable of landing on different surfaces.
- Capable of transporting a 470 kg load, food, fuel, drinking water or first aid equipment needed for the emergency situation.
- Provides first aid and peace of mind to victims at the time of crisis and when waiting for the rescue teams.

Working with the Cospas-Sarsat system

- The international system based on satellites that is capable of receiving distress signals for search and rescue (SAR), reducing response time and costs.

TECHNICAL **SPECIFICATIONS**

MTOW/Max. Landing weight	4,000 kg
Landing gear	Retractable tail-wheeler
Landing surfaces	Sea and land
Basic empty	2'200 kg
Payload	1'800 kg
Take-off roll	750 mts
Landing roll (MTOW) (SL.ISA.)	540 mts
Rate of climb (MTOW) @ Vy	2,000 Ft/min
Climb 1 engine op. (MTOW)	440 Ft/min
Vne	142 Kts



V. Cruise at 75% power (MTOW)	126 Kts
V. Cruise at 65% power (MTOW)	103 Kts
Max. Operational altitud (3'500 kg)	24'000 Ft
Power plant	2x 350 CV / HP

	AGRICULTURE		FIREFIGHTING		CARGO					SURVEILLANCE	
	A1	A2	FF1	FF2	C1	C2	C3	C4	C5	SV1	SV2
FUEL CAPACITY (L)	300	600	300	600	300	600	900	1200	1800	1,800	2,200
PAYLOAD (Kg)	1,580	1,360	1,580	1,360	1,580	1,360	1,130	910	470	470	170
ENDURANCE (h)	2.2	5	2.2	5	2.2	5,0	7.8	11	18.2	18	23,7
RANGE (NM)	227	525	227	525	227	525	810	1,120	1,800	1,800	2,280