

FLY SYNTHESIS

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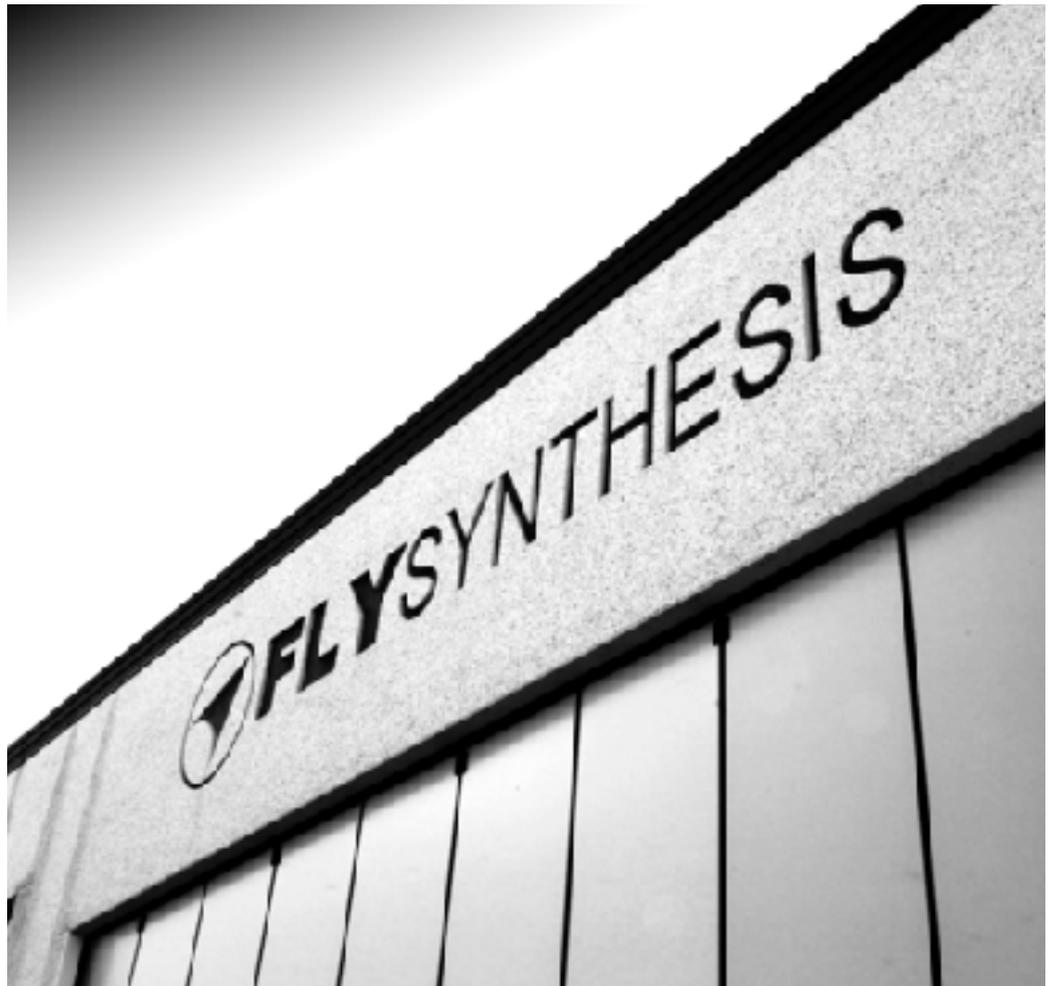


FlySynthesis
more than 25 years
experience in carbon
fiber aircraft building

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Company Presentation Carbon Fiber aircraft production

Traditionally, Fly Synthesis is synonymous of composite materials. The technology of our aircraft is connected to these materials since the firm birth in 1984, era when the first composite fuselage for a single seat ultralight was developed.

The stylistic and technological innovation is one of the fundamental factors of the success of our aircrafts, that is why we have joined the technological research and development to the style research and development, so to translate these distinctive characteristics of our airplanes into characteristically consistent stylistic elements.

Our image comes from the desire to transfer and confirm, in addition to our industrial strength, the heritage of values and passion for flight, and our will to achieve the technological excellence. Despite the industrial manufacturing method that extends in a factory of 4000 meters, our models are made with the same craftsmanship that has always characterized our production.

Fly Synthesis Team

CATALINA NG

The amphibian

Catalina is a fun airplane designed for easy use both water and in flight. The origin of the Catalina NG project depends from the the persevering market demand for a versatile and cost efficient airplane.

The starting point was the experience gained through the Storch Amphibian, and the main concept that led us to the realization of the hull structure is the increased ability to tackle the rough seas compared to conventional aircraft. The Catalina is designed for heavy marine use. For that reason in the entire design process were taken into account the various aspects of structural deterioration due to salt corrosion, led to the choices of materials and processes that ensure long-term corrosion protection. The tricycle landing gear is a full electrically retractable type. The emergency extraction system is mechanical and operates by gravity. The hull is capable of withstanding a landing on the grass without landing gear through the Kevlar reinforced keel. This also allows you to beach with ease. Is being tested in flight a variable pitch propeller specifically

designed for aircraft with reverse function that will greatly facilitate operations in water.

The Catalina configuration is two side by side seats, 3 points standard seat belts , the standard equipment includes a analog suite of flight and engine instruments.

The marine emergency equipment is supplied with the aircraft. Particular attention was paid to both aerodynamic and hydrodynamic study. The wing (derived from that of Storch Classic) has a Junker type electrically controlled aileron built a carbon fiber using a profile designed to achieve very high coefficients of lift at low speed.

The 50 liter tank, positioned in the hull to lower the center of gravity of the airplane is already available in crashworthy version together with the ballistic parachute.

Catalina NG





To follow some aircraft data:		DAEC UL	LSA
Wing Span	m	9.47	9.47
Length	m	6.28	6.28
Eight	m	2.49	2.49
Empty weight	Kg	290	290
Mtow with parachute	Kg	490	545
Vs @ Mtow	Km/h	63	65
Vc @ Mtow	Km/h	144	133
VNE	Km/h	172	172
Load factor	G	+4 -2	+4 -1
Endurance with 30' reserve	Hours	3	3

TEXAN TOP CLASS



TEXAN

Ease of use , high end trainer.

Designed to be desired, the Texan always responds precisely and cleanly, being agile and swift as a sports aircraft.

This side by side two-seater ultralight is made entirely of composites. The fuselage and structural elements of the wings are made mainly of carbon in order to guarantee the highest levels of safety and efficiency.

From its comfortable cockpit, a good 110 cm wide, you can enjoy a 360° view, thanks to a large one-piece canopy.

The high level of design of this aircraft is evident in the ease with which it can be flown, guaranteeing excellent control of the craft under all flight conditions, including unusual attitudes, which are thoroughly assessed at the test stage.

The Texan's versatility and accessibility allow the installation of a control stick which has been specially designed by our engineers, and which allows disabled people to fly the aircraft in complete safety.

Advanced technology used at the production stage, offers a degree of safety above the highest expectations, due to the use of carbon fibre and

aramid fibre (Kevlar), which has allowed a ballistic recovery system with programmed breaking to be made.

A strong roll-bar made of unidirectional carbon fibre further ensures the safety of the occupants in the event of capsizing. This ultralight may be equipped with a ballistic recovery parachute, an adjustable pitch propeller, and retractable gear.

The large instrument panel, which can be adjusted by the customer, is equipped with the avionics necessary to give constant control of all the airplane's parameters. Furthermore, in line with the choice of the customer, it is possible to install the best instruments available on the market.

The Texan's cruising speed is 215 km/h, and its two wing fuel tanks, with a total capacity of 130 litres, give it a range greater than 1,100 km. The low stall speed permits landing in very short distances and allows it to be used on small runways.

Technical data

CHARACTERISTICS	U.M.	TEXAN EVO FG	TEXAN EVO RG	TEXAN SIXHUNDREAD
Lenght m	m	6,90	6,90	6,90
Height m	m	2,40	2,40	2,40
Wing Span m	m	8,60	8,60	8,60
Wing Surface m2	m2	11,80	11,80	11,80
MTOW Kg	Kg	600	600	600
Landing run m	m	140	140	140
Take off run m	m	120	120	120
Engine		Rotax 912 ULS	Rotax 912 iS Sport/ 915 Turbo	Rotax 912 ULS
Power	HP	100	100/136	100
Fuel consumption 75%	l/h	18,5	18,5	18,5
Fuel capacity l	l	65x2	65x2	65x2
Stall speed VS (VSo full flaps)	Km/h	63 (59)	70 (65)	78 (70)
Never exceeded speed VNE	Km/h	285	285	285
Cruise speed at 75%	Km/h	210	230/250	215
Load factor	g	+4 / -2	+4 / -2	+3.8 / -1.9

Texan TOP CLASS



WALLABY

The simple

Wallaby is a two seaters ultralight three-axis basic aircraft with open cockpit designed to get more elevated performances in comparison to the traditional basic ultralight aircraft. His simply configuration allows short take-off and landing runs and a good cruise speed. The philosophy of a basic aircraft comes with the security of composite materials and with the latest technologies. Peculiarity of this design is a ultralight aircraft fun and pleasant to give at the pilot and passenger the complete and pure enjoyment of flying with very excellent visibility, optimum control at low speed, and a easy operate aircraft life. It is a rectangular plant type with counterwind bracing. Used profile is laminar type with full span Junker type ailerons. The fuselage is made by a hull in fiber of glass with a self-carrying structure strengthened by one rim that guarantee rigidity. Tail boom pipe, is made with aluminum alloy. The front

zone of the cockpit is delimited by the windshield made in plastic transparent material and allows a very-good visibility outside. Common seat are made with composite structure and two upholstered pillows in Dacron. Complete the cabin seat two three point safety belts, that fasten completely pilot and passenger to the seat, had b&en fixed directly to the structure of the fuselage through bolts. Empennage are made entirely in composite material to guarantee lightness and structural rigidity. Stabilator includes a trim on pitch axis that is directly controlled from the cockpit. Landing gear is a fixed tricycle type. Main gear has installed dn.1m brakes witch can act together by one command lever positioned on the central cloche. The front gear is fixed to the lower fuselage frame. The engine is a well known Rotax 582, liquid cooled. Wallaby is provided with standard flight and engine instruments.

WALLABY



Technical data

CHARACTERISTICS	U.M.	Wallaby 582
Wing Span	m	9,43
Langht	m	5,73
Height	m	2,4
Empty Weight	kg	230
MTOW	kg	472,5
Engine		Rotax 582
Power	HP	64
Fuel Capacity	Lt	75
Endurance with 30' reserve	h	4,5
Take off run	m	90
Landing run	m	80
VNE	km/h	145
vc	km/h	137
VS@MTOW	km/h	60
Load Factor	g	+4 / -2

Wallaby 582






SYNCRO

High performance, modern design.

We would like to tell you a little more about the story that brings out a new product inside the Fly Synthesis company. It is a special story, that of a research and development of new forms, of design and creativity, bringing to light new concepts in the panorama of materials, forms and safety. So, before even to offer splendid photos and evocative environments, we chose a more technical and also more "intimate" way to present our product through some technical drawings that capture a few moments in the planning stages. We present you an entire team of designers, managers, workers and specialists working together to achieve a common objective. All our aircrafts are born in that way, and are the result of a work based on the precision, commitment, skills and cooperation. Our immediate objective is to share with you this magic. We have always dreamed something new, different, without renouncing a set of functions.

Simple and functional airplanes. The SYNCRO project is based on this concept. Innovative design and technology of assembly. Essentiality and harmony, personality and versatility of ergonomics and prestige. The Syncro maintains the characteristics that distinguish all Fly Synthesis's airplanes, wide view, capable and comfortable cockpits, excellent maneuverability. The mission of this project is to transform the spirit of flight, making the airplane an object with which to test the most advanced concepts of aerodynamics and fluidity. The organic and fluid shapes alongside the rigorous design and shiny surfaces softly curved in total freedom. Every detail is designed to ensure the highest elegance and performance maintaining the highest level of safety at the top of the category. The string and sports shapes involve the pilot into an experience of pure aesthetic and concrete functionality.



To follow some aircraft data:		UL	LSA
Wing Span	m	10,4	10,4
Length	m	6,75	6,75
Height	m	2,32	2,32
Empty weight	Kg	289	305
Mtow with parachute	Kg	472.5	600
Engine	-	Rotax 912 ULS/ 912 iS Sport	Rotax 912 ULS/ 912 iS Sport
Wing Area	m ²	10,54	10,54
Aspect Ratio	-	9,674	9,674
Wing chord	m	1,045	1,045
Wing laminar airfoils	n°	4	4
Vs @ Mtow	Km/h	64	73
Vc @ Mtow (Max Cruising speed in Rough Air)	Km/h	230	225
VNE	Km/h	280	272
Load factor	G	+5 -3	+4,5 -2,5
Endurance with 30' reserve	Km	1200	1200

STORCH

The classic

Imagine a world which is totally harmonious and free: the airplane of your dreams: this is Storch's philosophy, shared by hundreds of pilots whose dreams have come true with this airplane.

In 1991 we launched a highly innovative product onto the aviation market. In fact, Storch was, and still is, the bridge between "tubes and fabric" models and the modern idea of an ultralight. The successful combination of aluminium and composites, which characterized the Storch of that time, opened the way for the subsequent design of airplanes built entirely of composites.

Today's Storch is a side by side two-seater ultralight, with a high wing laminar profile, built entirely of composites, and is available in four different models, plus an amphibious one.

Apart from being an excellent aircraft for long-range touring, its versatility has meant that over the years it has become accepted as an ab-initio and advanced training aircraft. Its spacious closed cockpit offers first rate in-flight comfort. Its optimized wing profile, thanks to its special aerodynamic shape, gives good performance at high speed, while the high efficiency blown flaps guarantee good performance at low speed.

The sum of its aerodynamic characteristics offer in this way a wide range of use, giving the Storch a strong Stoll connotation.

The approximately 500,000 flying hours achieved by the 1,000 produced, give the Storch a flying history which is one of the largest in its class.

STORCH





To follow some aircraft data:

CHARACTERISTIC	U.M.	STORCH HS	STORCH CL Amphibian	STORCH S 500
Lenght	m	5.95	6.84	5.75
Height	m	2.15	3.16	2.15
Wing span	m	8.70	10.15	9.30
Wing surface	m ²	11.8	13.60	10.25
MTOW	Kg	500	500	500
Landing run	m	140	130 in water	140
Take off run	m	125	145 in water	105
Engine	-	Rotax 912 UL	Jabiru 2200	Rotax 912 UL
Power	HP	80	85	80
Fuel consumption 75%	l/h	13	16.2	13
Fuel capacity	Lt	45x2	30x2	45x2
Stall speed VS (VS0 Full Flap)	Km/h	65 (59)	57 (56)	65 (59)
VNE	Km/h	220	160	220
Cruise Speed @ 75%	Km/h	195	145	195
Load Factor	g	+4/-2	+3,8/-1,9	+4/-2

