SHARK.AERO, s.r.o.

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LZSE 48°39′28″ N 017°19′47″ E

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High-performance composite tandem-seat low-wing UL/LSA/ELSA aircraft **,** designed to be ideal for fast cross-country flights and **flying for fun**

An integration of exclusive performance with comfortable cockpit, excellent visibility, and uncompromising styling enables you to feel yourself like a true Shark in the Sky

ADVANCED AERODYNAMIC CONCEPT

To achieve a minimum aerodynamic drag the Shark uses a proprietary airfoil, optimized for fast cross-country flights, developed specially for SHARK.
The smoothly streamlined, aerodynamically efficient fuselage and aerodynamic surfaces with the elliptical outer leading edges are created by professionals with a lot of experiences from well-known Czech aircraft manufacturers.

CONTINUITY OF THE DESIGN

Beginning of the Shark project was based on the successful collaboration between the **Gryf Design** and **COMP-LET,** it combines the producer's long-time experience with composites and the design team's know-how gained during a large number of designs - from ultralights and sailplanes to GA airplanes and commuters, flying in thousands worldwide.

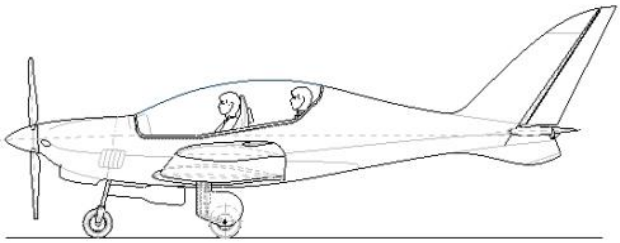
COMFORTABLE ROOMY COCKPIT

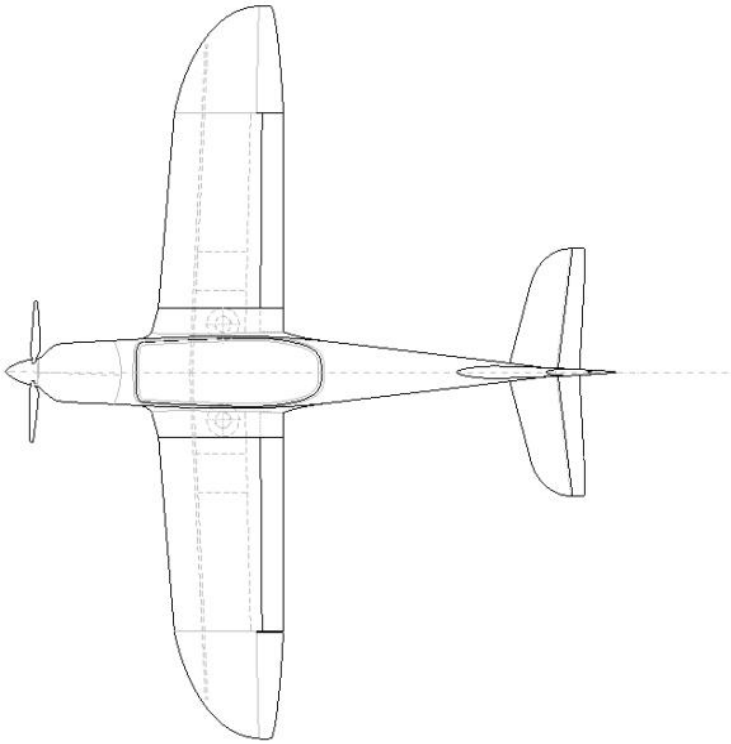
Superb visibility, comfortable adjustable seats, adjustable pedals, side-sticks, EFIS instrumentation, big volume and easy access side doors for baggage compartment - everything is optimized for the crew comfort during long flights. It is really comfortable for subtle girls, as well for XXL pilots over 2 m tall.

PRODUCTION AND QUALITY

Structure is mostly carbon epoxy composite, combined with glass fabrics, carbon-aramid fabric, foam, honeycomb – to get the best weight/strength ratio, stiffness and safety. We use new materials – TEXTREME carbon fabric from OXEON, PR220 resin and pultruded carbon profiles from 5M, AEROGLASS glass fabric from HAVEL COMPOSITES.

Aircraft is produced in COMP-LET facility, take advantage of 200 highly-qualified employees from the past, who had a lot of experience in composite structures' mass production due to its 16-year-long career as a proven supplier of famous aircraft manufacturers like the Diamond Aircraft (DA-40, DA-42, SuperDimona, Katana), the Aerospool (Dynamic), the FlySynthesis (Texan, Wallaby), the Aeropro (Eurofox), the FK-Leichtflugzeuge (Polaris) etc.
Production of Shark will be based on a knowledge of this people.





Aircraft model :	**Shark UL**	
Wing span	**7.9**	**m**
Length	**6.7**	**m**
Wing area	**9.5**	**m^2**
Engine **Rotax 912ULS** -	**75** kW(**100**	HP)
Empty weight	**295**	**kg**
Max. take-off weight	**480**	**kg**
Max. permissible speed V_{NE}	**333**	**km/hr**
Max. climb rate at the MTOW	**7**	**m/s**
Fuel capacity	**100**	**litres**

Maximum load factor + 4 / -2,

MEASURED PERFORMANCE.

Rotax 912 ULS 100 hp, Propeller Woodcomp SR3000 2W, DUC SWIRL 1680	engine power setting	Engine speed	Performance	manifold pressure	speed	speed	speed	fuel consumption	fuel consumption	endurance	range	range
MTOW: 472 kg, fuel: 100 l	%	rpm	kW	in.HG	km/h	mph	kt	l/hour	l/100 km	hours	km	miles
take off performance		5800	73,5	27-28								
max level speed	cruise	5500	69	27	295	183	159	25	8,5	4,0	1180	730
fast cruise	75%	5000	51	26	270	168	146	21	7,8	4,8	1280	790
medium cruise	65%	4800	44,6	26	250	155	135	18	7,2	5,6	1390	860
economic cruise	55%	4300	38	24	235	146	127	16	6,8	6,3	1470	910
long range cruise		4100		22	200	124	108	12	6,0	8,3	1660	1030

Shark is in flight very stable, with easy handling in air on low and high speeds too, with natural response of controls. It have steep descend on big flaps, good feeling of dampening of undercarriage.

DESIGN FEATURES : **Shark UL** is designed according **European UL** rules, for stall speed 65 km/h, MTOW 472,5 kg including BRS, empty weight below 300 kg. Maneuvring load is +4 g, gust load +5,3 g, structure is designed and tested with safety factor 2. All calculations and tests are prepared for 600 kg MTOW, we want to be ready for new EU rules. We prepare **sportShark** - a simpler LSA version with bigger wing and fixed landing gear, MTOW 600 kg.

STRUCTURE : Composite wing with carbon-fibre main spar and rear spar carrying flap levers and aileron hinges has 60 % of the trailing edge occupied by powerful single-slotted flaps actuated by electric servo. 50l+50 l tanks in basic version are in wings. Wings and horizontal tail can be quickly detached for transportation or storage.

UNDERCARRIAGE: **Shark UL** has tricycle type retractable undercarriage with steerable nose wheel and main wheels with hydraulic disc brakes.

POWERPLANT: One 75 kW/100HP Rotax 912ULS flat-four engine with variable-pitch composite propeller. Instalation of Rotax 914 is possible, high altitude cruise speed will be significantly improved.

EQUIPMENT : here are available options – bigger fuel tanks, adjustable props, instruments, BRS with lever on both seats, full = instructor control on the rear seat, lights flush with surface, glider towing hook, autopilot, and a lot of next ideas we prepare.

We are pilots, we know what pilots like, and our goal is to offer the best toy for big boys. We designed and produce dream.