



XENON 4



[Read more about Executive](#)

The Xenon 4 Executive is the access to a real professional gyroplane adhering to the new 560 kg MTOW regulations. Over the last 13 years the XENON became an icon for flying qualities. It is a combination of the highest standards of safety and ergonomics design. The c manufactured from carbon into a one piece monocoque structure, similar to a Formula 1 racing car, providing additional safety to the Crew. The Xenon 4 Executive first class version to exceed all your expectations incorporating:

- electric trim*, improved landing gear, new brakes and wheels, variable pitch propeller*, LED landing lights & strobes, cabin heating dual with thermostat*, new prer system (up to 250 rpm), noise abatement with new exhaust and aftermuffler*, 135 Hp improved power by a new constant torque turbo system.

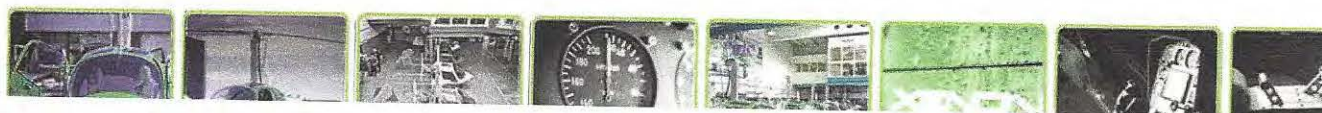
It is supported by a professional team to ensure after sales service and maintenance to the clients i.e. with an online parts ordering system. As well it is manufactured in an industrial manner, complying with ISO9001 procedures. The industrialization process now in place, allows a high level of precision repetitive actions.

The newly designed Instrument panel has been created to correlate to professional avionics and GPS systems.

The Cabin now offers a even more comfortable and spacious environment than ever before. In conjunction with its high cruising speed and the improved aerodynamic new Xenon 4 could also be used for long distance travelling with ease, supporting you with a respective luggage compartment.

The comfortable and ergonomically shaped leather seats together with the high class internal finishing ensures that your flight is pleasant all the way. And the door has been changed in Form, Size and Fixation.

*additional options





The entry level to the mighty XENON 4 is the SPORT.

Original design by Raphael Celier

The Xenon IV Sport, is the access to a real professional gyroplane adhering to the kg MTOW regulations.

Over the last 13 years the XENON became an icon for flying qualities. It is a combination of the highest standards of safety and ergonomics design.

The cabin is manufactured into a one piece monocoque structure, similar to a Formula car, providing additional safety to the Crew.

We keep things simple and effective.

The Xenon 4 Sport is the entry level to your personal flying experience or an ideal and effective member of your flying school fleet. It is supported by a professional team to ensure sales service and maintenance to the clients i.e. with an online parts ordering system.

As well it is manufactured in an industrial manner, complying with ISO9001 procedures.

The industrialization process in place, allows a high level of precision and repetitive action.

The newly designed Instrument panel has been created to correlate to professional avionics.

The Cabin now offers an even more comfortable and spacious environment than ever before.

In conjunction with its high cruising speed and the improved aerodynamics the new Xenon can also be used for long distance travelling with ease, supporting you with a respective compartment.

The comfortable and ergonomically shaped seats together with the high class internal finish ensures that your flight is pleasant all the way.

The doors have been changed in Form, Size and Fixation.

(All prices and equipment are the manufacturers suggested retail prices and exclude destination/delivery charge, title and registration. Optional equipment not included. Prices may not reflect all equipment shown in images. Do not use as the best source for up-to-date pricing.

Celier Aviation reserves the right to change product specifications and prices at any time without incurring obligation.

The Sport package consists of:

Completely new designed, longer cabin

All metal parts meet the ISO 9001 quality

A full monolithic carbon made cabin

Redesigned landing gear moved 5 cm to back



Comfortable and safety front open door

Multi piston hydraulic brakes and new wheels

New instrument panel with iPad

New arrow shape, longer tail



Specifications :

The XENON SPORT package consists of:

1. Full monolithic EPS cabin
2. Full exclusive interior finishing
3. Upper double windows tinted
4. Nose-feet windows
5. Complete doors (pair) with air-vents
6. Composite adjustable seats
7. Harness 3 point
8. Complete dual controls
9. Central console- throttle - prerotator
10. Flexible prerotator 250 t/mn
11. Rotor brake + park position strap
12. Battery park connections
13. Instrument Pack classic (A)

Specs \ Model	Xenon 4 Executive (912 ULS-T)	Xenon 4 Sport (912 S)
	135 HP	100 HP
Empty Weight	295 kg (*)	282 kg
Maximum Take Off Weight (**)	560 kg	450 - 475 kg
Maximum Speed	195 km/h	155 km/h
Cruise Speed	160 km/h	130 km/h
Climb Rate	1200 ft/m	500 ft/m
Take Off Distance	50 - 60 m	100 - 120 m
Landing Distance	0 - 5 m	0 - 5 m
Maximum Altitude	18000 ft	9000 ft
Fuel Quantity	84 l	84 l
Range up to	640 km	520 km

(*) from (**) up to - performances are indicat

CA 912 ULS-T based on ROTAX ULS

The CA ULS-T is based on his previous design (the CA 912 RST) and is universally recognized. Raphael has now updated the design for the powerful ROTAX 912 ULS 100 HP.

The entire RST (now renamed ULS-T) concept is re-designed, optimizer industrialized.

Special tooling was developed to produce the specific exhaust system with highest quality and is now available with a special silencer (after muffler) countries requiring lower noise.

This new concept, now copyrighted, has undergone hard testing on many weather conditions.

Engine temperatures are kept low, mainly for the exhaust which is the critical one.

This ROTAX bigger block engine (1.4 l instead of 1.2 l for the Rotax 912) can deliver much higher torque and at lower RPM. This engine has excellent reputation for reliability.

The power is deliberately limited to a max MAP of 40" delivering 145 hp. On the Xenon 4 it is limited to 39" delivering up to 135 hp, whilst max continuous recommended output is 38" providing 125 hp. On the Xenon 4 XL the engine is prepared to use the full 40" boost.

There are 2 types of propellers suiting this engine configuration. These are the Kaspar 2/3 (ground adjustable) and the Kaspar 2/3 P-LT (variable pitch and electronic constant speed).

In standard configuration we use the ground adjustable propeller that is set at an optimized pitch for good climb and cruise. It is simple, effective and light. The variable pitch model can be chosen as an option. The electro-hydraulic constant speed unit is actuated via a pilot friendly system. This configuration improves efficiency and provides a more quiet flight. Overall, it adds 7 kg and comes with an integrated spinner.

Power Curve provided by Faston Sp z o.o. - the Polish Official Rotax Importer

Technical facts as written by the designer:



As then original designer, while keeping my whole general concept, we have made many changes Xenon 4. This includes changes in the new cabin and tail. My older design, never included a monolithic mast "pocket". This is now the case.

Next, the central tunnel is my second "spine" in this gyro concept. Before was glued. Now it is also fully monolithic construction integrated. This is a deep modification in the shape, the overall strength.

Also integrating a necessary little step protruding in the front for added strength in a highly stressed zone. The lip permits the further installation of a metallic plate as a cover only. Not structural.

We have moved the landing gear location 5 cm to the back, not only to change just simply the length of the cabin, but to truly improve take-off performances. As to move the front of the gyro, it will contribute to also load more the rotor on the initial part of the take-off. Thus the rotor flight RPM is faster, thus the take-off is definitely shorter.

We have changed the back of the cabin method of construction, it is flat, no more the middle positioned "step", the exit of the controls to the rotor (in the bottom right section), are now covered by the true monolithic surfaces /cabin. Not the case before. Why ? to increase strength of the bottom back, protect more this sensitive part of the whole machine (the controls), increasing the general safety.

We have introduced back windows. Why ? to increase pilot visibility, thus increasing high safety.

We have introduced on the XENON 4 the new inlets (NACA shapes) to increase cooling of the top of the engine. They are located in the top rear of the cabin.

We have introduced also in our molds all referenced points of fixations. Why ? as before was never done, and by doing it we increase immediately the level of safety. We have perfect positioning of all components. Perfectly reproducible.

We have introduced new door locking mechanism, thus the contour of the cabin door frame is not the same. The door frame itself is also different for the same reason.

We have changed slightly the shape of the dash board, integrated in the cabin.

We have changed the internal structure of the cabin, to correspond to higher standards of safety. The inner headliner structure, was tripled in width. Why ? to dramatically increase the forward / backward strength of the cabin, due to the mast traction and vibrations, that make fatigue to the frontal structure of the cabin. In the past it resulted in windshield cracks. It strongly reinforces the roof of the cabin, also helpful as it is possible to climb on it as a normal procedure when installing / inspecting the rotor.

We are changing the material itself of the whole cabin (and tail), originally was carbon-kevlar mixed, now will be pure carbon. This is important for the stability of the structure to impacts, to humidity (the Kevlar is very sensitive and absorbing the water, and it was found out that this mix is very bad in today's aviation.) and temperature.

We are changing the nose visual shape due to the introduction of dual modern "eye" shape landing lights. Why ? to increase the nose tip point strength (the original glued landing light box is removed, as this is also a junction between 2 mold parts), but better installed on the sides. The lights are of powerful LED quality, ensuring much higher safety for low natural light operation.

While keeping my original concept, our new Xenon is definitely different and higher technology, finish, performances.



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XENON

PROBABLY WORLD BEST SAFETY RECORD

THE ONLY ONE *R. Alie*
THE ORIGINAL

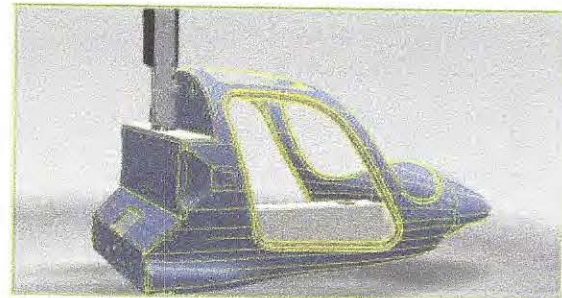
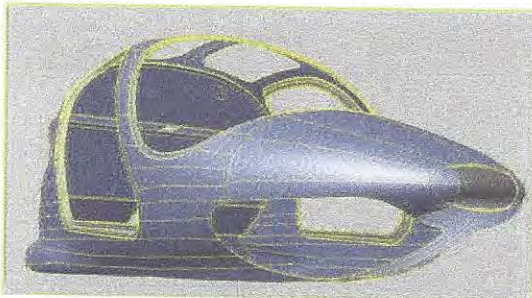
The Safety Side of the Xenon Gyrocopter.

Why the Xenon Gyro is the safest and best ultralight aircraft?

The Cabin of the Xenon is an engineering work of art - is made of composite materials in monocoque technology which means that it is structurally built in one piece of material, just like Formula 1 cars.

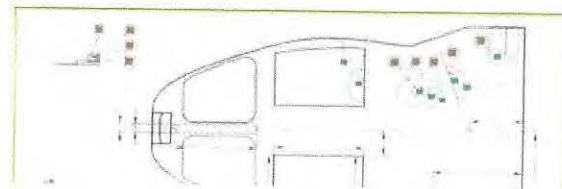
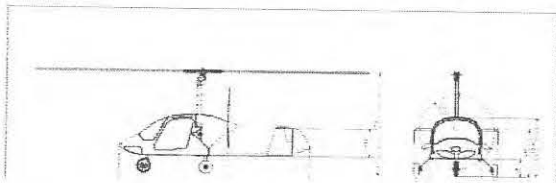
What is a monocoque?

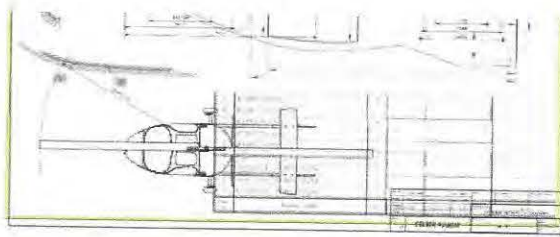
The Cabin is the main component of the machine. All the other components are mounted around the cabin. The main task of the cabin is to provide an enormously strong shell shape where by all other parts are fixed. This provides a huge safety for pilot in the event of an accident because the cabin is capable of withstanding the load many times exceeding the acceleration of gravity.



Monocoque generally means a structure in which the forces are transmitted through the fuselage instead of rods and tubes or frame. Our Xenon is one of the few in the world that uses a monocoque. In the most competitive construction it is done separately from steel or aluminum frame to which are affixed all the shell elements.

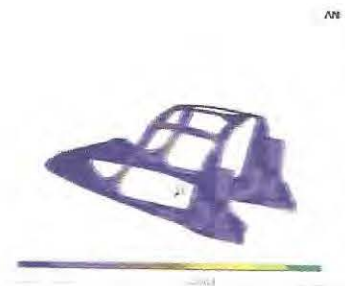
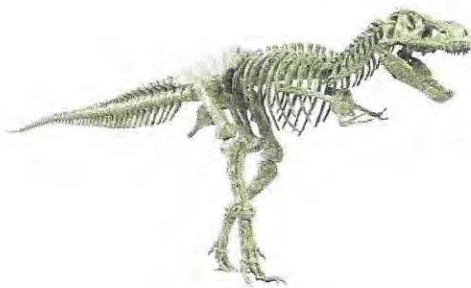
Our cabin is also equipped with a controlled crumple zones. The most important is nose of the cabin, which in the event of a collision with an ob absorbs all the energy to protect the legs and the body of the pilot. Another important crumple zone is the wall separating the cockpit from the Bulkhead engine area. It is a spatial structure reinforced with composite profiles.





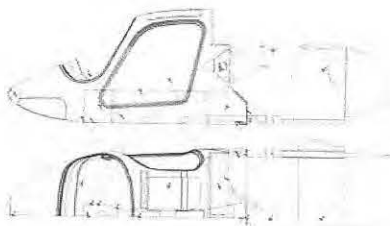
Very important parts of the cabin structure are the "the ribs" as they have created an interesting safety feature. Raphael Celier is very keen observer who likes to include features from nature in his design constructions. Another common practice of modern engineering is a technology we all know named "honey comb". This is reproduced in industry which is extremely sturdy. Again this is found in our construction of the Xenon. Similarly blades of grass or spider thread are carefully studied by scientists who try to imitate their strength and properties, and apply them to modern designs and technologies.

Raphael is also a fan of cinema and if you go back a few years we all admired the Jurassic Park and its computer-animated giant dinosaurs, when experienced adventure with the heroes of the film, Raphael observed how the huge animals as they could move quickly. The result of these observations and thoughts is ... Xenon cabin mimics extremely durable the ribs the Tyranozaurus Rex.



The moment where theory meets practice are the strength tests. Celier Aviation together with the Institute of Aviation the Technical University of Warsaw conducted a comprehensive study of the strength of the cabin and the rest of the components. This confirmed the expected strength and everyone's surprise award exceeded the expected standards.

Our cabin is the result of hundreds of hours spent on analysis, testing and verification of the concept in practice. Xenon cabin was built with a view to host large pilots. The constructor has given a priority for tall men and women to feel comfortable in the Xenon. Ergonomics and ease of use combined with ultra-modern solution technique is the main secret of Xenon.



Take for example the seat that is made from carbon composite and foam-filled kevlar. This is able to save our spine in an accident. The seats can also "crumple".

In the process of design, sketches and drawings are transferred to a computer with a modern CAD software, this technology it is possible to place the phantom in the middle of the draft and check the ergonomics of the machine before manufacturing a prototype.

Looking at the finished design you will not realize that virtually nothing was left to chance and every item is the result of many hours spent on the project.



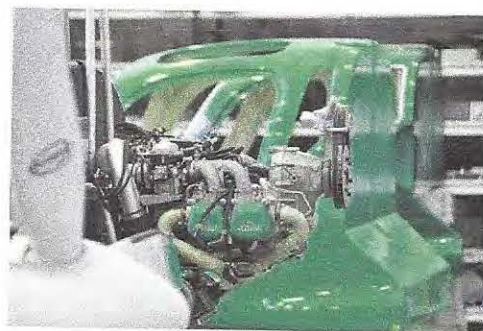


The Mast is a vital part of the structure of our Xenon. During the design process, engineers have to reconcile some seemingly contradictory elements of the equation.

The main objective was to create a flying machine as the safest flying vehicle you can imagine.

The mast must be very sturdy because from it hangs the entire structure of the Gyrocopter and at the same time there must be a safety zone to avoid serious injury in the case of an unexpected collision of the rotor with an obstacle. Based on the assumptions and structural stress tests we developed a profile that is able to reconcile the seemingly contradictory task. With the fulfillment of construction we can withstand overload stresses of several G and yet again it has a specially designed "crumple zone".

The mast is designed so that in the event of an accident spinning rotor separated from the cab and injured the pilot. What a peace of mind for u



The Chassis is simple design and connects the wheels and cabin, seemingly nothing special. It is also the fruit of calculations, tests of strength and priority objectives designed to maintain the security of both active and passive.

Xenon chassis is extremely wide - his spacing unparalleled in other Gyrocopters.

Its dimensions are above 2.20 m so that during taxiing and landing it is stable and predictable. Also the shape of the landing gear is not random, slightly gaping letter L is designed to absorb energy in the event of a sudden touchdown and save your body from damage.



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Raphael Celier founded



Beginning of



First flying Xenon



Company moved



5 x Grand Prix



New model



Reorganization of



C.A. designing



C.A. designing



C.A. designing



C.A. certify Xenon 4



C.A.

Specifications :

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