

PATENTED DESIGN

NEXTH







*"...this plane likes me,  
it has nothing of ultralight,  
it's a real plane"  
(first flight impression  
of German Certification Agency  
Test Pilot)*

## THE COMPANY PHILOSOPHY ... for who wants to stay ahead.

**AERO&TECH** ... is a responsible company, present and reliable in its commitments, within its name the essence of the philosophy that guides the project: pure passion for flying linked to technical engineering awareness as required to live it in safety without empiricism, ... the philosophy that leads to an intuition ... NEXT designed and built within the passion for things well done.

NEXT as the "next" coming aircraft, the future, and -H as "High performance" ... a new aircraft, your next one, titled by worldwide press as the most "cool" and "revolutionary" of the moment, the "last most sports plane ever seen", a combination of flying freedom, performance and the intrinsic safety of the project, with the passion for the most advanced Italian design, innovative lines for the sector with an unquestionably unique aerodynamic behavior, verified by a team of skilled technicians using the latest technology.

A **PROJECT** led by CS VLA and FAR23 (where applicable) obtaining at the first inspection the German Permit to Fly under LTF-UL certification process, developing also towards American LSA for a standard of absolute safety and reliability, without compromises. Experienced craftsmen and technicians come together in a synergy of skills for the successful construction of an aircraft innovative and different from the past, respecting the indisputable top solidity and reliability of traditional metal construction with special steel frame and metal wings, using carbon components only for non structural and light elements.

**HIGH TECHNOLOGY FOR MAXIMUM SAFETY & QUALITY**  
The wing leading edge made from a single piece is an evidence of the AERO&TECH high professional and technological level, to meet customers needs under a regime of constant and total quality control, centralizing all production in Italy in a single workshop, respecting in this way the prestigious mechanical manufacturing tradition of the real "made in Italy".

All within certified ISO9001 quality that ensures product quality and company reliability.

All in respect of customers, "partner" for AERO&TECH, aware that product evolution lays in mutual comparison and collaboration.

*...because AERO&TECH listens you*



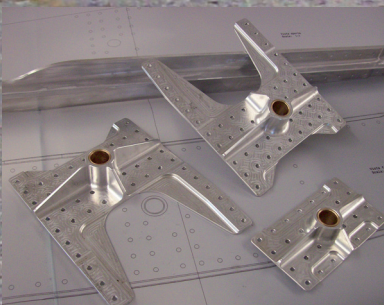
**HIGH PERFORMANCE**



**NEXTH**

Max speed 100% power (HS Sport version): 240 (285) km/h  
Cruise speed 75% power (HS Sport version): 225 - (255) km/h  
Stall full flap speed (CAS): 65 (75) km/h  
Aerodynamic efficiency: 12:1 130 km/h

ULTIMATE LOAD FACTORS: ACROBATIC CATEGORY + 9 - 4.5 G  
MIN. EMPTY WEIGHT: 298.5 kg  
MAX NEVER EXCEED SPEED Vne: 306 km/h  
MAX DESIGN SPEED Vd: 340 km/h









## NEXT-H... HIGH PERFORMANCE 15 CDV 6 GR3

..... for acro strenght & your first safety cell

AERO&TECH is the first company to introduce the special high-performance steel tubes from Formula 1 and long used successfully by the most prestigious sports cars for the exceptional technical characteristics and higher strength.

note: 15CDV6GR3 RM 1280 N/mm<sup>2</sup> versus RM 600/800 of common 4130 tubes

- protective welding atmosphere and internal protective anti corrosion treatment
- safety enveloping cell for deforming elastic absorption impact energy
- fuselage / engine mount frame with pressure control system
- non destructive weld resistance tests with x-ray and penetrating liquids

## ACRO +9 - 4.5 ACROBATIC CATEGORY

..... numbers and facts, not words

A responsible project choice with +9 - 4.5 G ultimate load factors, among the highest in the ultralight category, combined with the docility of a simple, easy and safe aircraft; acrobatic to invest in safe solidity, not for acrobacy (always forbidden) but to have safety in turbulence or emergency, to protect your person and who shares the flight with you, to have a strengthful aircraft... *added value that not allows doubts in the choice of Nexth as the right aircraft.*

The wide application of the most advanced material and processing technologies permits to maintain the minimum weight under 300 kg, as required by LTF-UL rules, with the highest load factors +9 -4.5 G.

## ADVANCED DESIGN (INTERNATIONAL PATENTED DESIGN)

..... the added value of the Italian functional style

The international patented design certifies the originality of NEXTH lines, defined as futuristic, an own distinctive **LINE**, not the usual imitation, a real new aircraft difficult to compare, synergy of advanced aerodynamic and industrialization design, combined with the attention for the safety and pleasure of flying, for an amazing and functional design. Projected by engineer Morelli L. pencil with an exclusively Italian design, it has been drawn also with the pilot experience improving its value...the added value.

The design respects also **ERGONOMICS** needs, safe and comfortable in dimensions for all pilots with one of the most roomy cockpits, side by side, to enjoy and share the flying experience and improve training, with an elegant and aggressive sports character, inspired by a simple and modern design.

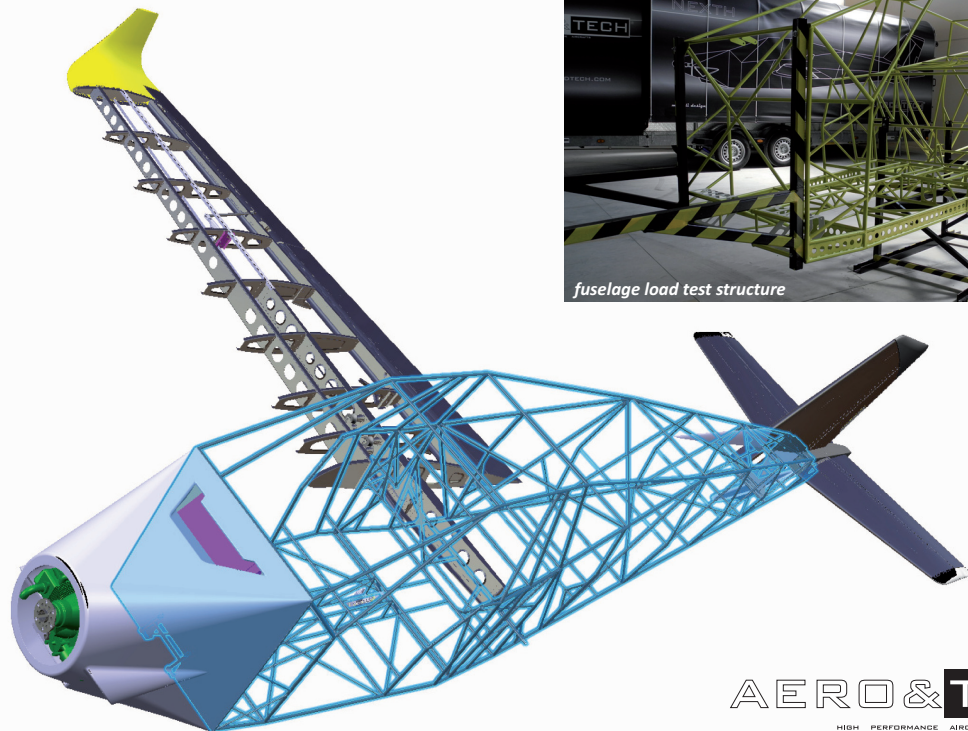
The **easy access** is given by the futuristic gull-wing doors, with a particular angular shape that prevents the pilot from leaning against the door, finding instead a secure support on the fuselage frame.

The **gull-wing doors**, designed for an easy access for all pilots, ensure the possibility to exit even in an accidental landing overturn condition, proving once again the design deep attention to pilot safety and details.

Headrests are introduced against the underrated risk of whiplash and of floating objects on the hatbox, and the 4/5 point seat belts are securely fixed directly to the fuselage frame for a top solidity anchor, in order to make safer as possible emergency landing.

The value of the design is not only in aesthetics, that distinguishes, but also in the aerodynamic performance as demonstrated by the perfect regularity of CFD fluid threads and with the important Flutter test at 340 km/h ... with NEXTH each line has an aim, the result: one exceptional work of aerodynamic engineering.

*morelli design*



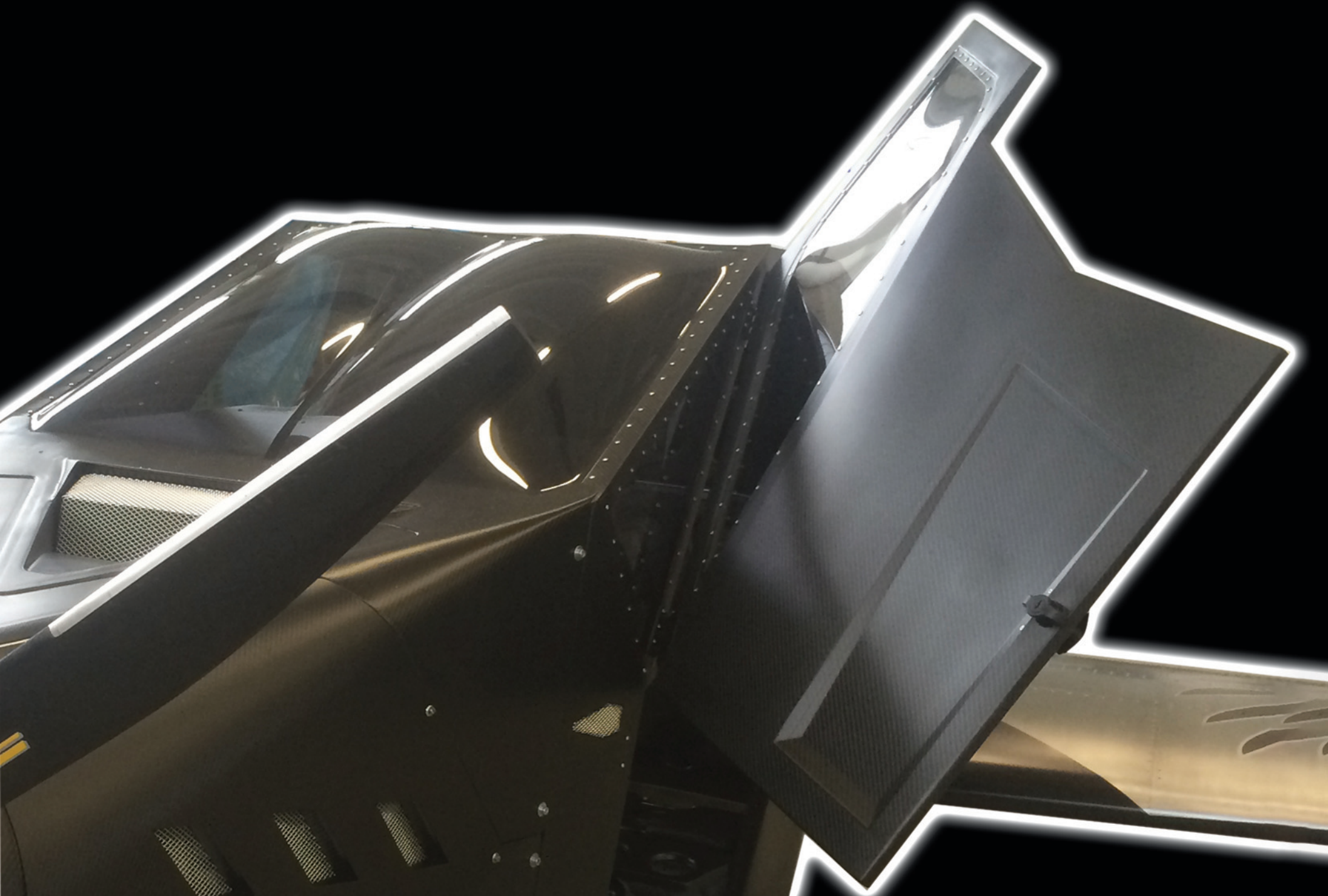
fuselage load test structure

**AERO&TECH**<sup>®</sup>  
HIGH PERFORMANCE AIRCRAFT

## ADVANCED EMOTIONAL DESIGN & STRENGTH









## WING SAFETY: HINGED CONNECTION & METAL CONCEPT

The wing, result of Morelli design and of the experimental development, is equipped with a high performance profile, product of an important work made in testing and improving its behavior within German LTF - UL certification program.

The tapered plant wing, with a 3-spar strong structure, is hinged on the fuselage to avoid the presence of shear stresses, while the main spar of both wings, when connected together, become a complete full-length beam, free to flex as necessary with no fix shearing points.

The wing / fuselage connection is a delicate point, through which important stresses are transmitted between the two components, subjecting the wing spars with high shearing forces that can compromise its integrity. The NEXTH technical solution of the hinged connection, having no vertical fixing bolts, avoids dangerous shearing forces transforming the reactions into a rotary movement, with the main spars free to flex rotating around the connecting hinges, welded safely on the frame, reaching free from vertical constraints a higher resistance, +9 -4.5 G.

Being safety one of the key points of NEXTH project, the first must has been to use only aluminum alloys for the stressed structural components, and carbon fiber only for aesthetic secondary parts, to ensure as much as possible the capability of the aircraft to fly and land safely whatever happens. As well known, aluminum alloys has a plastic-elastic type breakage, they follow an elastic model under stress stretching out, and when they reach the limit they don't break (like instead carbon fiber does) but follow before the break, a plastic non-reversible deformation, visible at every pre flight inspection, contrary to what carbon fiber components do when collapse with a fragile type break, suddenly without any warning.

After a stress, a gust, a turbulence, a hard landing, the aluminum deforms and warns before breaking in a visible way, for a wider safety margin with no question.

## WING, FOLDING SYSTEM

In order to solve hangar problems, NEXTH can be equipped with a fast folding system, and easily transported thanks to NEXTH-TRAILER.

## WING - STALL

The wing profile is extremely versatile for high speed performance with simple and safe low stall speed behavior, and moreover:

- authoritative and complete controls at low speeds, also during power-on turning stalls, useful for safety and for short take off /landing
- certified LTF-UL safe stall behavior, at 65 km /h, warned by buffeting with no falling wing and with a down-pitch moving attitude, in order to warn the pilot and invite to the correct action
- efficient double-slot flap and aerodynamic devices, as fences and stall stripes, result of a deep engineering and experimental aerodynamic activity, within certification program, to improve safety and performance
- good wing efficiency for lower fuel consumptions

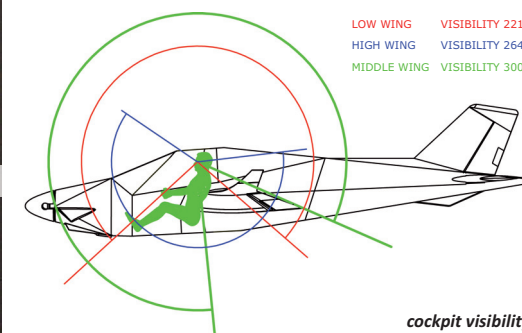
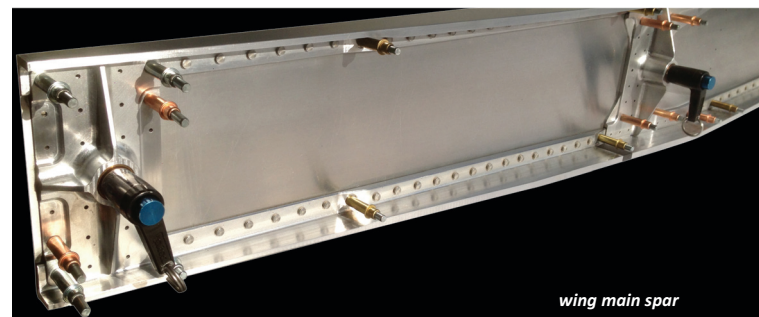
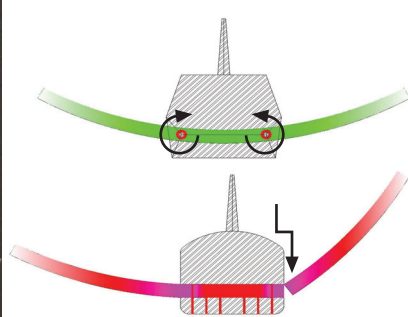
## WING, VISIBILITY.....high/low wing visibilities in one

The middle and backward shifted position of the wing joins in NEXTH the two visibilities in one, the one of a high and a low wing, all for a:

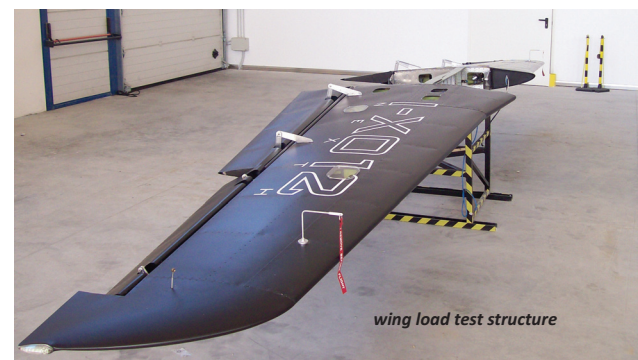
- 360° degree visibility without compare for a greater flight pleasure and for increasing safety, improving the sight of other traffics approaching the airport
- more efficient activity for territory surveillance and pilot training



## SPORT & LEAST



LOW WING VISIBILITY 221°  
HIGH WING VISIBILITY 264°  
MIDDLE WING VISIBILITY 300°









## RETRACTABLE GEAR

Fixed or retractable, however solid without compromise in the structure with legs made of 5 grade titanium CNC machined, designed to reach higher absorption and mechanical strength

- manual emergency system
- nose gear support independent from engine mount frame
- safety closing cinematic made of 7075 T6 CNC machined elements
- light indicator for gear status and inspection window for nose wheel position
- certified wheels and braking system with handle lever (pedals on request)

Important is that the gear legs system is the same for the fixed and retractable configuration, so that it is possible to convert the one to the other as a simple upgrade.

## SAFESTART

SAFESTART is a simple engine start button device introduced by AERO&TECH in order to prevent the accidentally starting of the engine and consequent take off with the fuel valve in the closed position, the rotating tap covers the engine start button so that it cannot be started without having first opened the fuel.

## COOLING SYSTEM

The radiator engine cowl air inlet characterizes NEXTH with a sport design and efficient cooling. The engine is able to operate around 100°C stable, also with 40°C OAT and long taxing time, for a greater safety and longevity of engine components, no longer thermally stressed.

- optimized design for a more efficient cooling in all conditions
- thermostat applied (on request) to optimize the engine heating time and to prevent thermal shocks

## HIGH PRESSURE CARBON COMPOSITE

All non structural and light components are made on request in carbon fiber, as the engine cowl, tips, fuselage skin panels, ...etc.  
AERO&TECH applies for composite elements production only in autoclave high pressure technology in order to improve strength/weight ratio and safety.

## SAFETY FUEL TANK

The safety tank, single, with a capacity of 50 / 130 lt (on request) for a max endurance of 1700 km, is strictly made with non explosion technology and FIA standards, with non overflowing valve (on request), and it is well placed in the most safe aircraft position, away from possible external points of collision.

## CONTROL CRUISER SYSTEM

The cockpit is equipped with the most advanced and efficient control systems, for the engine and flight parameters, with both visual and acoustic signals for anomalies, as for the stall warning and the engine temperatures.

## BALLISTIC RESCUE PARACHUTE

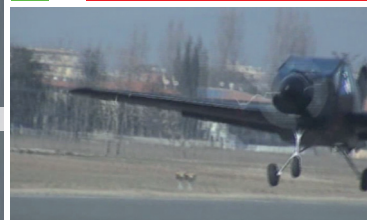
The aircraft is equipped with a performing parachute with 4 elastic shock-absorbing extensions, each one resistance up to 5.000 kg, hidden in the fuselage skin, and with a guaranteed minimum opening safety height.



912 IS SPORT version



**SAFETY**









# TECHNICAL CHARACTERISTICS

## TECHNICAL DESCRIPTION

Metal construction with aeronautical aluminum (6061T6 - 2024T3 - 7075T6), ultrasonic tested for mechanics - 15CDV6 GR3 steel tubes fuselage and engine mount frame - Folding low-middle wing - Tractive propeller - Tricycle fixed/retractable landing gear with titanium legs - Manual emergency system - Nose gear steerable, independent from engine mount - Two side by side places with double controls - Safety cell - Gull-wing opening doors - Trim on three axes ready for Autopilot (on request) - Exclusive International Patented Design and interior carbon look - Ergonomic cockpit - 360° direction total visibility - Non Explosion Fuel 50 lt (13 US Gal) / 130 lt (34 US Gal) tank - Adjustable pedals - Certified braking system and wheels - Cockpit and glass air vents - Flight and maintenance manual - Warranty for 2 years.

## PERFORMANCE

Rotax 912 USL 100 Hp with 3 blade propeller FG (Fixed Gear)  
HS High Sport version:  
Rotax 914 UL with Variable Pitch Propeller, Sport Wing and RG (Retractable Gear)  
Max speed 100% power (HS): 240 (285) km/h - 130 (154) kts  
Cruise speed 75% power (HS): 225 (255) km/h - 121 (138) kts  
Stall full flap speed, LTF-UL certified version - (HS): 65 (75) km/h - 35 (40) kts  
Max speed never exceed Vne: 305 km/h - 165 kts  
Max design speed VD: 340 km/h - 183 kts  
Rapid/steep climb speed: 130/100 km/h - 70/53 kts  
Take off/landing distances: 120/120 m - 394/394 ft  
Climb rate: 7.9 m/s - 1550 ft/min  
Aerodynamic efficiency: 12 : 1 at 130 km/h - 70 kts  
Operative ceiling altitude: 5000 m - 16400 ft  
Fuel consumption MIN. / 75% : 13.5 / 18 lt/h - 3.56/4.75 US Gal/h  
Endurance min-max 50 / 130 lt fuel tank: 2.7 - 3.7 max 650 km / 7.2 - 9.6 hrs max 1700 km  
Endurance min-max 13 / 34 US Gal fuel tank: 2.7 - 3.7 max 351 nm / 7.2-9.6hrs max 918 nm

## ULTIMATE LOAD FACTORS

ACROBATIC CATEGORY +9 - 4.5 G (the project task is to give to pilot a safety cell acrobatic activity intent, not recommended for the category)

## WEIGHT AND DIMENSIONS

Max. take off weight MTOW ULM / LSA : 472,5 / 600 kg - 1042 / 1323 lb  
Min. EMPTY Weight: 298.5 kg - 658 lb  
Max project weight: 600 kg - 1323 lb  
Wing area: 10 (9.5) mq - 108 (102) sq ft  
Wingspan: 7.83 m 25.7 ft standard tip version - 7.95 m 26.1 ft winglet version  
Length: 6.94 m - 22.8 ft  
Cabin max width - max height (seat to cockpit roof): 1.12 m x 0.96 m - 3.7 ft x 3.1 ft  
Baggage max volume: (hatrack + fuselage luggage compartement):  
36+160 lt - 1,3+5.6 cu ft / 5+25 Kg - 11 + 55 lb

## WHY NEXTH, "THE REVOLUTIONARY AIRCRAFT"

- ✓ reliable company with ISO9001 Quality System
- ✓ operative, maintenance and training aircraft low costs
- ✓ wide visibility suitable for surveillance tasks
- ✓ side by side double control cockpit for training activities
- ✓ excellent aerodynamic and flight performance with short take off / landing distances
- ✓ aircraft with +9 - 4.5 G and the guarantee of the metal construction strenght
- ✓ engine mount / fuselage safety cell frame in 15CDV6 GR3, with pressure control system
- ✓ seatbelts (4/5 points) fixed directly to the frame
- ✓ nose gear independent of the engine mount
- ✓ manual emergency gear system
- ✓ folding wing for easy handling, space economy and hangar solution with NEXTH-TRAILER
- ✓ one of the most roomy and designed cockpits in the category
- ✓ opening gull-wing doors for easy access and safety opening even after accidental overturning
- ✓ non explosion safety fuel tank for greater autonomy and installed in protected safe position
- ✓ easy and large opening engine cowl doors for simple inspections
- ✓ innovative International Patented Design
- ✓ no aircraft structural parts made in carbon composite
- ✓ pilot personal training program

## ENGINE-PROPELLER

Engine: ROTAX 912 USL2/3 - 100 HP - 5800 RPM - 1352 cc (available 914 turbo, 912/915 ISC SPORT)  
10.5:1 compression ratio  
Consumption: 5500 rpm continuous 25 l/h (5.6 gal/h);  
75% 4750 rpm continuous 18.5 l/h (4.2 gal/h)  
Engine mount in special steel tubing 15 CDV 6 GR3 with pressure inspection  
Double starting system with Safe Start System  
Liquid - air cooling system with water and oil radiator and filter  
Oil thermostat  
Central Throttle control  
3 blade fixed propeller (with variable pitch on request)

## FUEL SYSTEM

Central non explosive fuel safety tank  
Non overflowing valve  
External cap with key  
Fuel quick drain with filtered outlet  
Protected fuel lines  
Mechanical engine pump  
Electrical back-up pump

## EXTERNAL

Double slot flap with electronic control  
Fixed / Retractable electrical / pneumatic gear with titanium GR5 main legs  
(the gear legs system is the same for the fixed and retractable configuration, so that it is possible to convert the one to the other as a simple upgrade)  
Load tested wheels and nose gear steerable  
3 Axes-Trim configuration ready for Autopilot (on request)  
Nexth Color: Black Carbon Composite for fuselage skin / natural aluminum look for wings (on request available personal painting design)

## STRUCTURE +9G -4.5G (FAR23 - CS-VLA AEROBATIC CATEGORY)

High resistance frame and safety cell in special steel tubing 15 CDV 6 GR3  
Skin/Wing AL2024 T3 - AL6061T6 with aviation riveting - 7075 T6 CNC full machined spars and mechanics made of ultrasonic tested material  
In autoclave high pressure carbon composite elements, used only for non structural light parts

## SAFETY

Stall warning  
Gear warning system and mechanical emergency system  
Gull-wing doors with internal double lock and external locking key, opening also after overturning  
Parachute with guaranteed minimum safety opening height  
Real 360° visibility and aviation sunglass  
ELT (on request)  
4/5 point seatbelt  
Wing safety sea floating tanks (on request)  
Hot air glass vent (on request)  
Tail strobe light - taxi light - landing light  
Electrical back up pump  
Fuel valve with Safe Start System

## INSTRUMENTS AND INTERNAL ERGONOMICS

Engine and flight instruments in different versions: ANALOGICAL - HYBRID - DIGITAL, available also with personal configurations including:  
ENGINE: rpm, oil temp. and press., water temp., MAP, CHT/EGT, fuel pressure, fuel tank indicator, ammeter, voltmeter  
FLIGHT: air/vertical speed indicator, altimeter, turn coordinator, compass, artificial horizon (only for hybrid and digital), radio and intercom  
GPS (on request)  
ELT (on request)  
Autopilot (on request)  
Cloche maintrims  
Brake adjustable pedals (on request)  
Carbon look exclusive interior design  
Air vents  
Removable headrest

The described technical characteristics can be modified without notice by the manufacturer



**AERO&TECH**<sup>®</sup>

HIGH PERFORMANCE AIRCRAFT

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