
PIPISTREL
Fly four people
for 1,000 NM using
10 gallons per hour
and cruise at 200 KTS.
Finally.
ENTER
PANTHERA
WILDLY INNOVATIVE

Pipistrel Range

Taurus M
15-meter wingspan
Taurus Electro
15-meter wingspan

Apis/Bee
15-meter wingspan
13.5-meter
New FAI class ready

Sinus 912
15-meter wingspan

Virus 912
12.5-meter wingspan

Virus SW 80/100
10.7-meter wingspan

Panthera
Four seat fast cruiser

Innovation is a State of mind

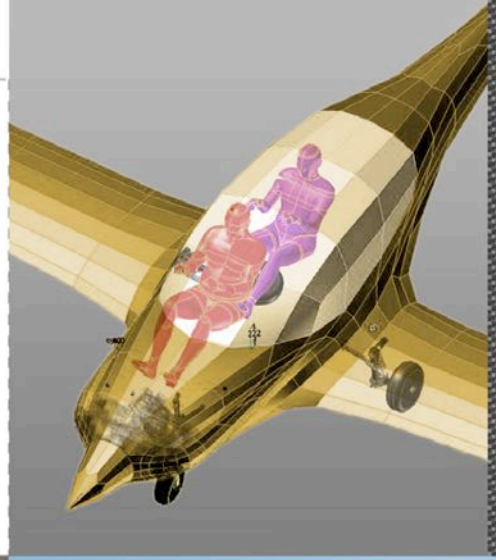
The sky has opened-up like never before and borders are falling every day. The need of traveling long distance, quickly and efficiently has never been greater. Yet, who likes to be stuck at a big airport, going through long lines of security check to board the aeroplane to the point of call? Imagine a **fast** yet extremely **economic** aeroplane, which can take you and your friends, colleagues or business partners anywhere you want, whenever you want. Imagine an aeroplane, that can fully take advantage of small, **short-runway** airfields that you bring you closer to destination than ever and open a whole new world of opportunities. An aeroplane, designed meticulously to keep you **safe**, **comfortable**, is quiet and friendly to the environment. An innovative aeroplane, which instantly catches attention. Your quiet, high performance bubble of safety, your personal time machine. **Panthera**.

PANTHERA

Project story
Panthera's birth

Years ago, people said it is impossible to produce an microlight aircraft light and streamlined enough to be safe and efficient. We did it. People said it is impossible to beat the **NASA** Centennial Challenges.

We went ahead and did what nobody did before – we won the NASA Challenges three times, also winning the Green Flight Challenge 2011 with the first ever electric powered 4-seater **Taurus G4**. They



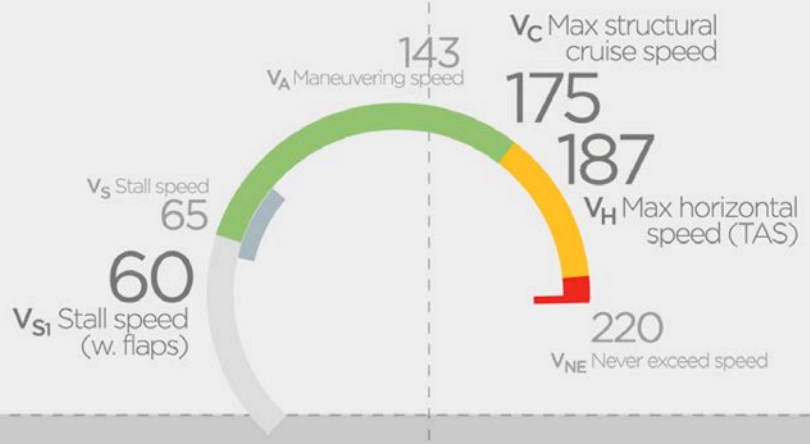
We do not imitate, we innovate!
Now, with a quarter of a century of experience, we are presenting a fast, safe, quiet and comfortable aeroplane, which can use runways shorter than ever before and go the full distance

keep saying it is impossible to make a practical electric-powered aircraft presently. We did it already back in 2007 with the first electric two seater in the World. Clearly we see and do things differently and have a **pioneering vision**.

with four people aboard. An aeroplane, which is ready for the future and consumes **40% less** fuel while going faster, further. This is our idea how a modern, four seat CS/FAR-23 certified aeroplane should be like.
Panthera is making it a reality.

PANTHERA

Stunning Performances

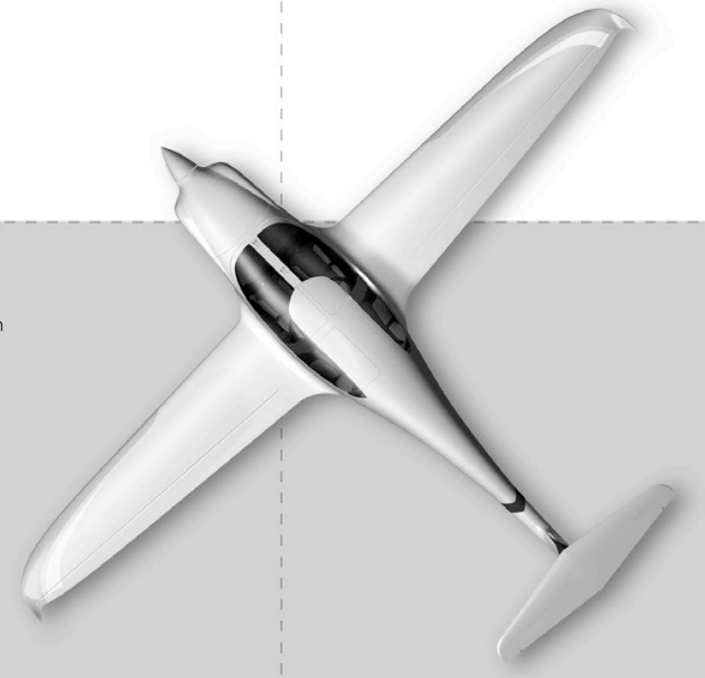


Panthera achieves unprecedented **efficiency** through careful aerodynamic shaping, retractable **titanium** undercarriage, lightweight advanced **composite** structure, a tailor made propeller and a dedicated performance exhaust system. Efficiency does not only reflect itself in a low fuel consumption at 200 kts, but is translated directly into more speed for the same power.
No other four seat aircraft exists that flies this **fast** on the same engine! For the owner/operator this represents significantly lower operating costs and simplified maintenance.

The **1000 NM** range is available with **4 people** on board, something which pilots of four seat aeroplanes have been wishing for. Robust design of the undercarriage and low overall weight allows for operations from **short grass strips**, taking you as close as possible to your desired destination.
The engine is ready for the future, able to accept unleaded fuels and meeting the future **environmental requirements**. **Hybrid** and **electric** models further reduce the take-off noise footprint by taking advantage of the pure-electric take-off.

Sizes and Dimensions

is designed to ensure minimum drag and maximum efficiency. Using state of the art CAD tools, all the aircraft components were packaged into a minimum and therefore **highly efficient shape**, while keeping the passenger cabin **spacious** and **comfortable**. Attention to details is visible also when it comes to airframe components and equipment. The propeller and exhaust system are specially optimized to ensure



Wing span
10.86 m / 35 ft 8 in

Length
8.07 m / 26 ft 6 in

Height
2.19 m / 7 ft 2 in

Wing area
11.2 m2/ 121 sqft

Panthera is designed by applying the most modern design and construction techniques, on top of 25 years of knowledge, experience and excellence in building aircraft. Panthera's organic curves are a product of optimisation through advanced, in-house developed computer tools, where each detail

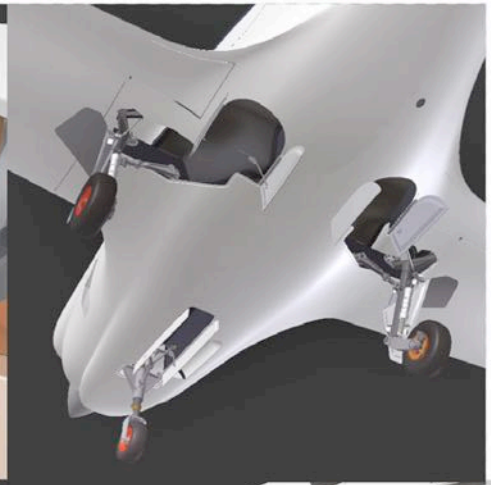
minimum noise and maximum performance. Panthera features titanium trailing-link undercarriage, flaps and trim are all **electrically operated**, optimizing for low weight and reliability. All internal and external lighting uses **LED** technology, providing for better clarity, recognition and feel.

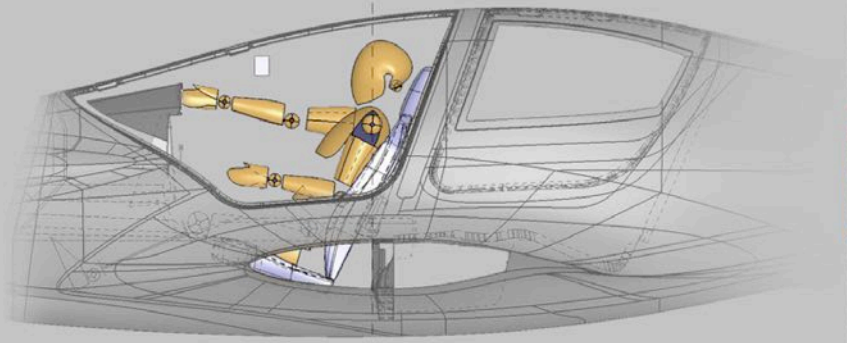
The instrument panel is designed to embrace the pilot and provide **ultimate sensation** and outside **visibility**. The avionics are gathered around 10 inch touchscreen PFD/MFD displays with synthetic vision and the new state of the art **Garmin GTN** series touch-screen Communication and Navigation Systems. The GTN 750 and 635 dual COM/NAV feature full touch screen controls, which maximise screen size and allow for simplified navigation and graphical flight planning. The fully integrated modular avionics provides all terrain, traffic and weather alerts (in areas where applicable). Transponder and 3D audio panel are integrated and courtesy of the Garmin GTN 750.

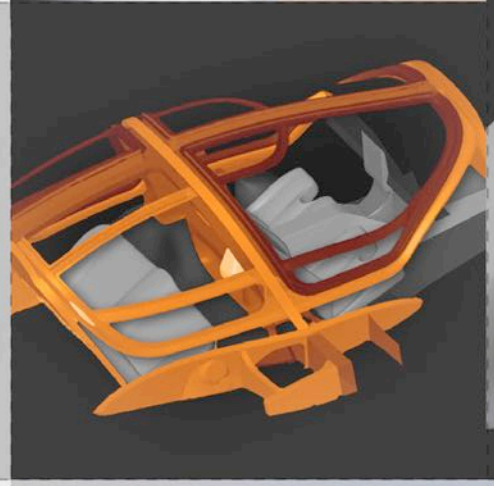
Instrument panel:
Embracing the pilot

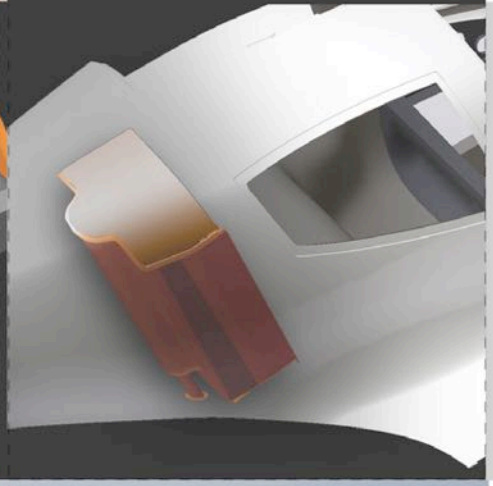
Searching for new Safety standards

Panthera is your personal high performance **bubble of safety**! As part of the rich serial equipment, Panthera features a full-airframe **parachute** rescue system, which was specially developed so it can be deployed and both low- and high speeds as well as low altitudes. The cabin has been engineered as a **safety cell**/roll bar with built-in energy absorption zones, providing superior safety to the occupants in event of an accident. The seats









and safety belts are engineered to latest **+26G** CS/FAR-23 certification standards. Panthera's performance also contributes to safety – the lightweight structure, powered by powerful engines mean that the you will reach safe speeds and altitudes much quicker than usual, reducing time spent in the "*critical zones*".

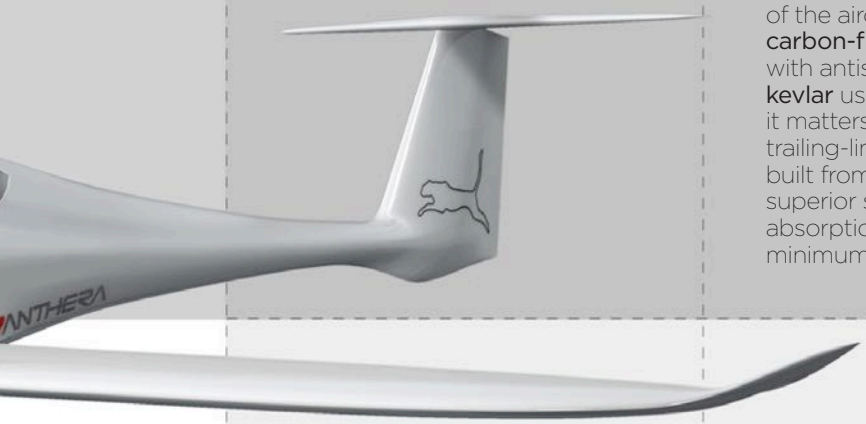
Panthera provides superior **comfort** and **usability** for people of all sizes. Access is easy via three large gull-wing style doors. Back seats are very wide and feature a flexible seating arrangement with power-plugs for digital amenities. Standard cabin luggage fits through the **cargo door**, but the compartment can also be accessed from the cabin during the flight! The interior is furnished with highest **quality leather** and LED lighting for exclusive feel and functionality. Climate is controlled thanks to the on-board air-condition with **automatic ventilation**. It will keep you cool during the summer and warm during the winter.

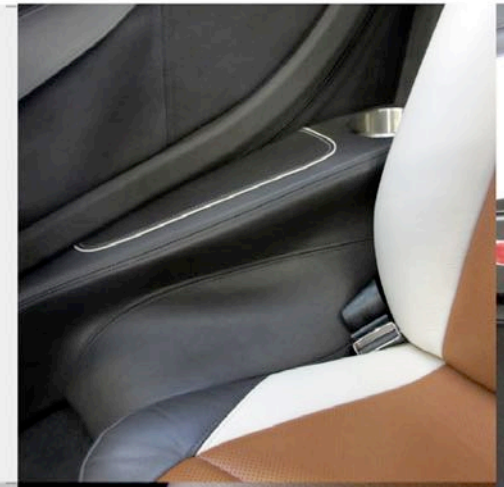
Ergonomy and Cabin comfort

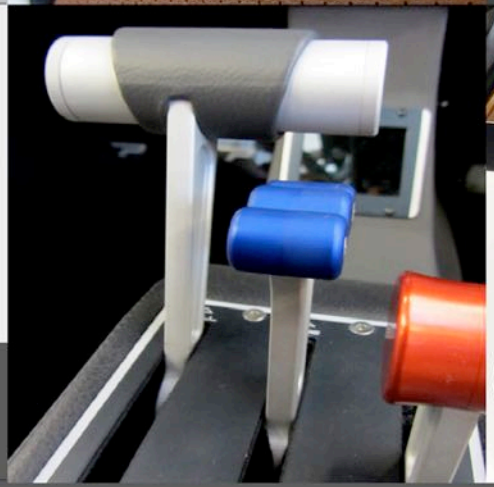
Sophisticated Materials and Craft

The specially designed wing **airfoils** are optimized for cruise efficiency and therefore speed, while at the same time ensuring high maximum lift and **docile stall** characteristics. Its instantly recognizable

T-tail ensures low interference drag and helps improve spin characteristics.
The majority of the structure of the aircraft is made from **carbon-fibre** composites, with antistatic materials and **kevlar** used in areas where it matters. The retractable trailing-link undercarriage is built from titanium, giving it superior strength and energy absorption properties at minimum system weight.





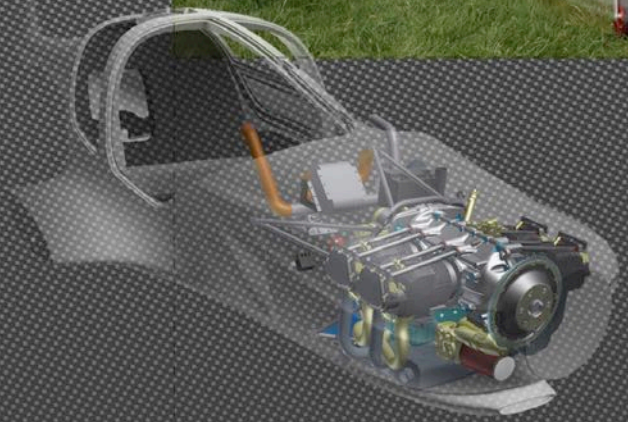


3 Different Configurations

PANTHERA

Panthera

Powered by the bulletproof **Lycoming IO-540 V1** 260 HP engine, or the **IO-390** 210 HP engine, Panthera is the statement of efficiency – cruising at 200 kts with a fuel consumption much lower than that of the competition. The powerful, yet lightweight IO-540 V1 engine can also run on **unleaded fuel**. Panthera is designed to take advantage of short, grass runways and maximize the comfort of operation on longer, hard surfaces. With four people aboard, Panthera will easily reach destinations more than 1000 NM away!



Panthera Hybrid

The **200 kW hybrid-electric** powertrain, supported by the state-of-the-art battery system and the range-extender generator unit is a true revolution in aviation! The ability of noiseless, pure-electric take-offs and landings is coupled with uncompromized range characteristics. Short-field, powerful climb, extreme aeroefficiency and long-range are further enhanced with the revolutionary hybrid powertrain. **Panthera Hybrid** represents a quantum leap forward in thinking and will pave the way for the future of aviation!

Panthera Electro

This version of Panthera with its **pure-electric 200 kW** powertrain is a treat for the high-tech enthusiasts and those to whom the environment matters. The goal is to demonstrate the ability of covering 400 km (215 NM), quietly, efficiently, with absolutely zero emissions and for a fraction of cost. The platform is open and ready to except future generations of battery technologies, which will increase the operating range.

PANTHERA

> "Panthera has the surfaces of a glider, the design of a modern and up-market car, the fun at the controls of an LSA and the cockpit atmosphere of a Very Light Jet"
>
> Jean-Marie Urlacher
> AVIATION JOURNALIST AND PHOTOGRAPHER

Model	Panthera exp	Panthera exp & cert	Panthera Hybrid exp	Panthera Electro exp
Category	Utility (+4.4 g, -1.76 g)	Utility (+4.4 g, -1.76 g)	Utility (+4.4 g, -1.76 g)	Utility (+4.4 g, -1.76 g)
Powerplant	Lycoming IO-390	Lycoming IO-540V	Hybrid 200 kW take-off power	Electric 200 kW take-off power
Rated power	210 HP	260 HP	200 kW (150 kW continuous) maximum cruise power 100 kW	200 kW (150 kW continuous)
Weight and Dimensions				
MTOM	1315 kg / 2900 lbs	1315 kg / 2900 lbs	1315 kg / 2900 lbs	1315 kg / 2900 lbs
Useful payload	545 kg / 1200 lbs	500 kg / 1100 lbs	415 kg / 915 lbs	TBD
Total useable fuel	2x 105 l / 2x 27.7 gal	2x 105 l / 2x 27.7 gal	2x 105 l / 2x 27.7 gal	n/a
Full fuel payload	395 kg / 870 lbs	350 kg / 770 lbs	265 kg / 585 lbs	n/a
Wing span	10.86 m / 35 ft 8 in	10.86 m / 35 ft 8 in	10.86 m / 35 ft 8 in	10.86 m / 35 ft 8 in
Length	8.07 m / 26 ft 6 in	8.07 m / 26 ft 6 in	8.07 m / 26 ft 6 in	8.07 m / 26 ft 6 in
Height	2.19 m / 7 ft 2 in	2.19 m / 7 ft 2 in	2.19 m / 7 ft 2 in	2.19 m / 7 ft 2 in
Wing area	11.2 m2/ 121 sqft	11.2 m2/ 121 sqft	11.2 m2/ 121 sqft	11.2 m2/ 121 sqft
Performance (MTOM)				
Stall speed (flaps extended)	60 KIAS	60 KIAS	60 KIAS	60 KIAS
Stall Speed (flaps retracted)	65 KIAS	65 KIAS	65 KIAS	65 KIAS
Manoeuvring Speed Va	143 KIAS	143 KIAS	143 KIAS	143 KIAS
Maximum Structural Cruise speed Vc	175 KIAS	175 KIAS	175 KIAS	175 KIAS
VNE	220 KIAS	220 KIAS	220 KIAS	220 KIAS
Maximum horizontal speed (TAS)	187 KTAS	203 KTAS	212 KTAS, FL 150	212 KTAS, FL 150
Performance cruise speed at 75% (TAS, FL)	181 KTAS, FL 80	198 KTAS, FL 80	177 FL 150 (full generator power)	TBD
Economy cruise speed at 65% (TAS, FL)	173 KTAS, FL 120	193 KTAS, FL 120	n/a	TBD
Climb rate at MTOW	6.1 m/s / 1200 fpm	7.9 m/s / 1550 fpm	5.8 m/s / 1150 fpm	5.8 m/s / 1150 fpm
Take off run	365 m	295 m	290 m	290 m
Takeoff distance (50 ft obst.)	670 m	540 m	530 m	530 m
Landing distance (50 ft obst.)	570 m	570 m	570 m	570 m
Range with 45 min reserve	1000 nm, 155 KTAS, FL 120, 4 people aboard (4x 86 kg)	1000 nm, 155 KTAS, FL 120, 4 people aboard (4x 86 kg)	1000 nm, 155 KTAS, FL 120	TBD
Ceiling	6100 m / FL 200	7600 m / FL 250	6100 m / FL 200	TBD

Pipistrel reserves the right to revise the above data whenever occasioned by product improvement, government/authority regulations or other good cause. Take-off and landing data valid for ISA sea level conditions.

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