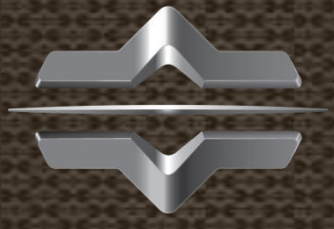
PAL-V

PRESS FOLDER



a joy to drive, a joy to fly

PAL-V Starts Selling Its Commercial Models

13th of February 2017

This week, flying car manufacturer PAL-V has officially started the sales of its commercial models, the *Liberty Pioneer* and *Liberty Sport*. The first commercial flying car in the world is now a fact.

PAL-V starts selling its commercial models

Release: 13th February 2017

The PAL-V *Liberty Pioneer* and the PAL-V *Liberty Sport*, the first commercial flying car in the world is now a fact. Images of the PAL-V Liberty are now available on the PAL-V website.

Prepared For The Next Phase

"After years of hard work, beating the technical and qualification challenges, our team succeeded in creating an innovative flying car that complies with existing safety standards determined by regulatory bodies around the world," says Robert Dingemanse, CEO of PAL-V.

Following the successful test programs of their concept vehicles in 2009 and 2012, PAL-V started the design of the commercial products that have been launched today.

PAL-V is now nearing an exciting phase for its continued business growth, namely fulfilling the first client orders. While other flying car manufacturers' concepts require modified regulations and in many cases not yet existing technologies, PAL-V deliberately chose to engineer, design and build a flying car with proven technologies and fully compliant with existing regulations. This leads to a first product delivery date that is realistic and imminent.

The New Model

The new model design has a distinct Italian flair, thanks to collaborations with leading Italian design agencies. It incorporates a unique dual engine propulsion that further increases the safety of the PAL-V Liberty. While driving, the lowered suspension and tilting "cockpit" adds to the sports car feel on the road. A novel design approach serves to avoid a number of common pilot errors by design, making the PAL-V Liberty very safe and easy to operate.

The PAL-V Liberty has a strong appeal all over the world says Markus Hess, Chief Marketing and Sales Officer of PAL-V, who introduced the PAL-V Liberty to selected clients last year.

"We are very pleased with the response so far. Now that the new design is public I expect to see great interest from customers that have waited for the flying car era to start" says Hess.

Production

"Later in 2017 we will start building a preproduction series followed by the manufacturing of the first PAL-V Libertys for our early 'pioneer' clients. Deliveries of road and air certificated models are scheduled by the end of 2018. This truly is a pivotal time in aviation and mobility history" adds Dingemanse.

More information and high res images at www.PAL-V.com

Contact: Pressinfo@PAL-V.com

Tel:+31-162 580 560

For more information contact:

More information and high res images can be found at www.PAL-V.com

For footage please contact: Pressinfo@PAL-V.com

Press contact:

Robert Dingemanse: tel. +31 162 580 560

Background information:

About PAL-V

PAL-V International B.V., the company that initiated the development of the PAL-V, is located in Raamsdonksveer, The Netherlands. The company was founded in 2007 to commercialize the concept developed since 1999. The management consists of a team of experienced Dutch entrepreneurs with expertise in aviation, automotive, research, and marketing. PAL-V succeeded in gathering the best talent available. Testing its "proof of concept" vehicle for driving in 2008/2009 and for flying and driving in 2011/2012 it has proven technical feasibility and certifiability within the existing regulatory framework. The company is funded by a group of professional and private investors and also received funding from the Dutch Ministry of Economic Affairs. Three Dutch ministries are supporting the project based on its technical innovation and economic potential.

Questions & Answers

Can you tell more about the engine solution?

The dual engine propulsion drive train is based on two fullycertified airplane engine from Rotax. one of the leading manufacturers in aviation engines.

What about safety?

The PAL-V LIBERTY has been developed by using proven state-of-the-art technologies from the aerospace and automotive industries. In the air, the underlying gyroplane technology guarantees a stable flying platform that supports safe landing even in the very unlikely event of a total power failure. Which in itself is very unlikely thanks to its unique two engine propulsion solution.

A gyroplane as such is already a very safe way of flying. However by a rigid focus on flight safety PAL-V has taken it to the next level. By making small compromises on specification it created the safest gyroplane ever built.

Unlike most small airplanes and gyroplanes the PAL-V LIBERTY is certified under the very strict safety regime of EASA (Europe) and FAA (USA). Many countries in the world follow the same rules.

On the road, the PAL-V LIBERTY is complying with the applicable road safety requirements.

An inherent safety aspect is that in case of bad weather conditions you can drive (part of) your journey. This does make your planning much more certain but also increases your safety options dramatically.

Will regulators allow the use of PAL-Vs?

The PAL-V LIBERTY is designed within the current certification and regulations frameworks for the vast majority of countries in the world. No rules or regulations need to be changed to be allowed to use the vehicle.

What specs does it have?

Please view:

http://www.pal-v.com/

Why is the gyroplane concept chosen?

Safety first: in case of engine failure the gyroplane can be landed normally in a very small area equivalent to a tennis court. Landing without an engine can be done with +/- 30 km/h (18mph) ground speed on a very small spot (30 meters or 100ft). This makes emergency landing, in combination with the unique double redundant drive train of the PAL-V LIBERTY, multiple time safer than a comparable aircraft or helicopter.

Advantages compared to a conventional airplane:

Safety again: contrary to fixed-wing airplanes, it cannot stall and crosswind landings are easier and safer than with a fixed wing airplane.

Convenience and comfort: in turbulent air it still flies smoothly with excellent stability due to its high rotor speed. You will only experience 20% of the turbulence of a comparable fixed wing aircraft.

Versatility: Because a gyroplane can fly very slowly, it needs very little space to land. Take-off distance ranges from only 90m to 200m (300ft-650ft). As it deals much better with turbulence and cross wind you can safely fly a PAL-V LIBERTY while fixed wing airplanes have to stay on the ground.

Fun and effectiveness: wide speed range, with a low minimum horizontal speed (from 50 km/h up to 180 km/h or 30mph-112mph). The PAL-V LIBERTY exhibits very positive slow flight envelope characteristics, even slow glides are possible up to safe vertical descends.

Advantages compared to a helicopter:

Safety and ease of operation: a gyroplane is very easy and safe to fly because it is a stable mechanical system. A comparable helicopter is the opposite: as it is an unstable system, kept in the air by the skills of the pilot using both hand and feet. A helicopter is much harder to fly and therefore much riskier and challenging to operate.

Versatility: unlike a helicopter, a gyroplane cannot take off or land vertically. Although you may think this to be an important limitation, in practice it is NOT thanks to the driving capability of the PAL-V LIBERTY. Since you can drive the PAL-V LIBERTY to your destination, it is much more useful and versatile even than a helicopter: taking off nearby is good enough and it does not require anybody to stay behind to guard your aircraft at the landing spot. Also landing a helicopter at the spots where you would like to land is very often not allowed or possible because of noise and safety, making helicopter use in practice very cumbersome. Therefore helicopters are not as practical and useful as a PAL-V LIBERTY.

Cheaper to own and operate: a PAL-V Gyroplane has significant lower cost of ownership compared to a helicopter, yet can accomplish most missions that a helicopter can plus other ones. Since you park it in your garage costly hangar space it not required.

What happens when more PAL-Vs take to the sky?

The great news is that because PAL-V is designed within todays existing regulatory framework, all the tools are in place for safe management of transportation in the sky including 2nd Generation air traffic control. Rules and regulations are in place under the International Civil Aviation Organization(ICAO) to allow the use of the first PAL-Vs LIBERTYs.

Is it possible to take off and land everywhere?

No. Apart from the fact that this is not allowed by law, the PAL-V needs a space for take-off measuring about 90-200 by 20 meters (100ft-650ft by 60ft) without surrounding obstacles. In practice all small airstrips, aerodromes, glider sites and/or ultralight airfields will suffice. The PAL-V LIBERTY can operate from either concrete or grass airstrips. As the PAL-V popularity increases, it is expected that more and more small uncontrolled airstrips will be created. Many countries also allow for special permits on private property.

Do people need a license to fly the PAL-V?

Yes, they certainly do need a license to fly. This can be obtained through one of the many flight schools in the world. To be able to operate an airplane you will need some basic knowledge of navigation, instruments, meteorology, aerodynamics and performance. All pilots of aircraft need training and the PAL-V LIBERTY is – for the aviation aspect – no exception. To acquire a license people have to pass a theoretical exam and have a reasonable amount of training first with an instructor and later as a single pilot (solo) to learn to fly a gyroplane. The gyroplane license can usually be obtained within 30 to 40 hours of training, depending on skill and talent.

Will such a “flying car” receive certification for road and sky?

The PAL-V LIBERTY is designed within existing certification requirements on the road as well as in the sky. For flying, CS-27 (Europe) and FAR-27 (USA) are the standards on which the Type Certificate is based. For driving, the road legislation directives of the European Commission and National Highway Transportation Safety Administration (NHTSA) standards are used. The PAL-V ONE "proof of concept" prototype confirmed that the PAL-V LIBERTY can be built to meet these standards without exemptions.

Where will it be produced?

The PAL-V LIBERTY will be assembled in the Netherlands. Specific parts and systems will be manufactured by leading companies from a number of countries.

What about noise?

The noise will be comparable to a small fixed wing plane. It will be much less than a helicopter.

How long does it take to change modes?

To convert from drive to fly mode or vice versa will take 5-10 minutes.

Inquiries:
Pressinfo@pal-v.com

Press Relations

T: +31-162-580 560
Pressinfo@PAL-V.com