

# The Noble Gyrocopter **XENON**

Text by Harrie Greebe

Take a 20 kg. bag of dog food, an aircraft named after a rare character in Greek mythology and the first female pilot to obtain a licence on a stylish gyrocopter and you have a South African situation. It is called the noble Xenon.

As a rare hybrid between rotor and fixed-wing types, gyrocopters have been classified as autogyros, gyroplanes, gyrocopters or rotor planes. Those who design, build and fly them simply refer to them as gyros. Gyros are generally misunderstood by people who fly other aircraft types as well as those who do not fly at all. Gyrocopters are very safe – as safe as the compliance of the people who fly them.

An experienced pilot took me up in another gyrocopter type in the heat of day above the shimmering expanses of the Free State with frequent up-draughts. We flew right through a typical Highveld 'whirl wind' and the mild turbulence experienced was similar to an elevator with a well-behaved brake system. With its tandem seat configuration, I was able to communicate with the pilot through headsets as the air was literally sucked out of my lungs every time I leaned into the wind to take photographs. Flying in this gyrocopter was an exhilarating experience.

Now another gyrocopter has arrived in South Africa called the Xenon. Currently there are less than a dozen of them, but their numbers are increasing. I asked experienced pilots what was the difference between a tandem seat gyrocopter and the side by side seating of the Xenon. They just smiled and referred me to Juanita Kruger, the first woman in South Africa to obtain her licence on the Xenon.

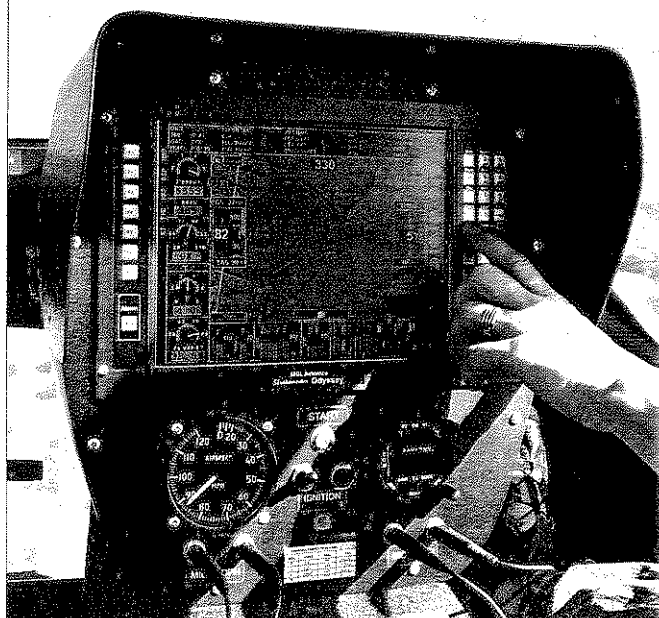
Shortly after sunrise at Kitty Hawk east of Pretoria, Juanita Kruger greeted me with a broad smile and invited me to sit in her silver side-by-side Xenon with its aerodynamic enclosed canopy. Strapped into leather seats, Juanita meticulously talked me through the pre-flight procedures. As she requested

clearance for take-off, I reflected on the origin of the name Xenon. In Greek mythology, the name means 'unusual noble stranger' and refers to a very rare hybrid between gods and mankind - the male child who was given life by Zeus. In 1898, William Ramsay and Morris Travers discovered a gas left in the residue from evaporating components of liquid air. In the atmosphere this gas occurs in minute volumes of one to 20 million. The gas emits a blue discharge when excited by electricity that was named Xenon. Ingenious mankind continues to find more applications for this noble gas which so far ranges from photographic flash lights, coherent light lasers and flash lamps to general anaesthetic. I wonder if the Xenon gyrocopter also has similar hidden potential?

As we taxi onto the runway, Juanita explained that drag dynamics is the main difference between a tandem and a side-by-side gyro. "With the tandem, you aim the craft into the direction you want to fly and off you go. With the wider nose side-by-side version, you have to constantly play with the rudder as the gyro has a greater tendency to turn sideways. You have to direct the Xenon's nose differently into the wind otherwise you have the long side against the wind rather than the short side which will have a direct impact on your fuel consumption. This is absolutely critical during take-offs and landings." Juanita elaborates once we are airborne as she gently manoeuvres the control stick with two fingers.

The Xenon is much lighter than many other tandem gyrocopters, therefore the pilot has to be particularly aware of wind-lift on the nose. Juanita explained that because the pilot flies on the right hand side in the Xenon, the yaw is obviously more than in the tandem. Constant compensation towards

*Instrument panel*



*Juanita at the controls*



the left with the stick and rudder is therefore required which is all part of the safety awareness of being a pilot. I asked Juanita about her solo on the Xenon and how she dealt with the yaw. In recollecting the occasion, Juanita burst out laughing and said: "On our way to Parys in the Free State for my solo on the Xenon, we bought 20kg dog food because we forgot about the weight compensation. That was just as well because our dog food had to be replenished anyway."

In the hazy rising sun, we flew over agricultural farms, indifferent cattle and the silent empty diamond hole of Cullinan. Taking photographs of the landscape through the enclosed canopy, I realised how much more personal the communication between pilot and passenger was in the Xenon. As we eventually come in to land, Juanita once again explained the importance of taking wind into consideration as a safety factor. Thinking to myself – Juanita is highly aware of aviation safety regulations, or a cautious spouse who still wants to spend many years with her husband, or someone who wants to keep on exploring the joys of gyro flying. I presumed all three were equally important.

After a perfect landing, I wanted to know why Juanita and her husband Marius decided to buy a Xenon. Over steaming cups of coffee Juanita confided with a twinkle in her eyes: "As a husband and wife team we both fly a tandem type as well as the Xenon. With the tandem type the pilot and passenger need to dress for extreme conditions. With the Xenon it is an ideal leisure platform for proper communication. We can make eye contact during flight. A couple of days ago we were flying and it started to rain. We were safe, comfortable, dry and next to each other. It was such a peaceful experience. To us there is room for both the ELA (tandem gyro) and the Xenon in our lives."

Although Juanita and Marius use the Xenon for recreational purposes, there are also other applications for the gyrocopter: Running costs of the Xenon are equal to that of a domestic vehicle and one can operate a gyrocopter commercially for around R1000 per hour running on 95 unleaded petrol. Servicing is undertaken on site and a centralised off-the-shelf component store is envisaged for the near future. Juanita is excited about the night flying capability of the Xenon and said: "I think it will be amazing to fly at night under a star studded or moonlit sky. With GPS co-ordinates, all you need to land the Xenon at night are four beacon lights, or the headlights of a vehicle on a dirt strip. Even when the moon is full there is sufficient light for a safe landing." Xenon is an apt name for this gyrocopter and this leisure flight with Juanita in her gyrocopter can only be described as an elegant experience.

Note: As very keen owners of their Xenon, Marius and Juanita Kruger offer an open invitation to anyone who wants to know more about the graceful Xenon. Juanita can be contacted on 082 040 9798. ☎





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