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Faeta

JOINS THE NEW GENERATION

WORDS BY BRIAN BIGG PICTURES ALAN BETTERIDGE & BRIAN BIGG





AIRCRAFT FEATURE



ATEC aircraft founder Petr Volejnik came to Australia in December last year to celebrate the arrival here of one of his companies newest flagship aircraft, a 321 Faeta NG (New Generation).

Like most Europeans, Petr and his partner, Klara Kudrnová, who is also the company's head of international sales, thought they might like to see something of Australia during their visit. They had planned to spend what they thought would be a few lazy days driving from Sydney to Cairns and had hired a cheap campervan in which to do the trip.

They were very disappointed to learn that the distance involved was about the same as driving from London to Moscow and that their crappy old campervan would probably not make it past the Gold Coast in the time they had allowed. This country is pretty big and it's not until a European gets here that they realise just how big it is. It always amuses me, when coming back to Australia in the jumbo, when the captain announces, "we have just passed over the Australian coastline" to watch the Europeans get up and put their coats on, expecting to get off the plane sometime soon. I never have the heart to tell them there are another five or six hours to go. As well as the vast distances, Petr and Klara were also hugely put off by our perfectly true tales about giant deadly snakes, tiny deadly jellyfish, huge deadly sharks and fierce deadly spiders. Why do we do that to tourists? It scared the hell out of them. They eventually did set off in their campervan with trepidation and actually made it to the Bowen, not so far from their destination, by the time they had to return to Sydney to fly home. It's a big country. It really is.

And that's why ATEC's new Faeta NG should be right at home here. The NG barrels along at 134kts (high cruise power setting), sucking fuel from a 100 litre capacity. That's an effective range of more than 1,500kms, a handy thing to have when traversing this great big brown land the way you should do it - in a recreational aircraft, not in a crappy old campervan.

A LONG HISTORY

ATEC was one of the original Czech ultralight aircraft companies. The factory started producing composite parts for other people in 1992. Four years later it launched its own model, the Zephyr, one of the earliest of the new style, 'plastic' ultralights. The model was a hit in Europe where ATEC won a number of design awards and sold more than 200 aircraft.

Nine were sold in Australia (one in New Zealand, now back in Australia and about to be made airworthy again), and mine was the last of those. As regular readers of this magazine will no doubt know, I love it to bits. Don't get me started.

But ATEC didn't sit still after launching the Zephyr.

Because of its history as a composite parts maker, it was able to develop everything in-house, meaning as the design improved, the changes were immediately added to the next model coming off the line. So very few aircraft were ever exactly the same, the company continually examining and modifying almost everything about the aircraft. My version, for example, is noticeably different from the aircraft which arrived in Australia just a year or two earlier. That design work and modification continued until ATEC felt the aircraft was different enough from the original, that it needed a new designation, and so the the 321 Faeta was born.

It still sells the Zephyr, and the Faeta contained all the same modern carbon composites, but the new model had more than 100 changes on the original. It also retained the classic T-tail, which made the aircraft stand out in any crowd of ultralights. The Faeta sold in good numbers (although only one in Australia), encouraging the factory to continue developing and updating its design and adding features. In 2016, when the model had again evolved so much, the factory allocated it a new designation, and so we arrive at the 321 Faeta NG.

BIG CHANGES

As with a lot of products these days, each NG is customised and produced according to the requirements of the customer, so again, no two aircraft are ever alike. For example, electric versions of the flaps, aelerons and trim control are all possible, and autopilot if you have the dough.

"The NG has finally lost the T tail"



AIRCRAFT FEATURE

The NG is also the result of Petr's continuing obsession with trying to reach the lowest possible weight, but keep the strongest possible structure, keeping a focus on long material life and improving safety.

Among the many changes from the original, the NG has finally lost the T tail. According to Petr, it gives the aircraft a more sporty and elegant look, improves airflow and flight comfort. The basic structural material of the airframe is the same as the Faeta, a highly rated rigid carbon composite.

It also retains the same wing length but with a very noticeable decrease in thickness. That gives the NG a cruise speed of 134kts, a full 33% higher than the original Zephyr. The wings are fitted with highly effective slotted flaps, which gives the plane a very low stall speed of 27kts (one up with half full tanks). At a MTOW of 600kgs that rises to 34kts. It means the effective speed envelope for this aircraft is about 100kts, a rare achievement among ultralights. The aspect ratio of the rudder has also been changed to improve controllability. One of the things I love about my Zephyr is having full rudder authority all the way down to the ground. On a smooth day I can choose which main wheel to put down first. The Faeta does the same.

Aluminium fuel tanks are built into the first third of each wing half-span and each has a capacity of 50 litres. You will need a toilet break long before you need to put more petrol in. The NG is also approved to run 10% ethanol fuel, but it must be at least 95RON.

The 100HP Rotax 912 engine drives a 2-blade Fiti EcoCompetition propeller, a proven performer.

COCKPIT

The cockpit is wide enough so you don't get to know your passenger too intimately. Getting in is always an interesting experience. I am fitting front steps on mine this year, the same as come standard on the Faeta NG, so I don't have to clamber onto the wing in my old age. But once on the wing, the advantage of getting in from the front becomes obvious. You don't have to stand on the seats and it keeps the upholstery clean. The canopy is clear, but you can opt for one with tinted green perspex which contains a UV filter. As with the Zephyr and the earlier version of the Faeta, it opens upward and then backward. For pilots worried about a front opening canopy, there are three detectors installed in the cockpit frame which will prevent the engine starting if the canopy is not locked. The seats are adjustable forward and backwards. If that's not enough for your more height challenged pilot, adjustable rudder pedals are also an option.

Because this aircraft is European, cabin heating is also available. As with the earlier models you can also opt for a ballistic parachute system, but that system is as dear as rat poison and I don't think anyone in Australian Zephyrs or Faetas has gone for one so far.



Atec aircraft founder Petr Volejnik with Australasian distributor partner, Dexter Burkill (standing)



SPECIFICATIONS

- WING SPAN** 9.6m
- FUSELAGE LENGTH** 6.2m
- HEIGHT** 2.0m
- WING AREA** 10.1 m²
- EMPTY WEIGHT** from 290kgs
- MAX. TAKE-OFF WEIGHT** 600kgs
- PAYLOAD** circa 300kgs
- CRUISE** up to 134kts TAS
- VNE (NEVER EXCEED)** 143kts for LSA
- STALL FULL FLAP** as low as 27kts / 34kts at 600kg MTOW
- RATE OF CLIMB** 1200+ fpm
- FUEL CONSUMPTION** 86kts/8lph, 134kts/16lph 912 iS or 18lph 912ULS
- FUEL** 2 X 50L 100 litres



SO WHAT IS IT LIKE TO FLY?

I was always going to be a tough audience, because of my love of my Zephyr. Australasian distributor partner for ATEC, the ever popular Dexter Burkill (he is also one of the administrators of the CAGIT Hunter's Facebook page), knew this already. I buy my parts from him (see Editor's Choice this edition). Dexter is demonstrating the new NG at airshows and fly-ins around the country. Turns out I didn't have to be worried. In the air, the differences between the two aircraft are minimal.

Yes, the NG is faster, but Dexter has the NG propeller set up for proper cruise, so you'd expect that. In a recent trip to Evans Head, he reported an



Zephyr (foreground)
Faeta NG (background)



Dexter Burkill and Petr
under the hood



The front is still the
same but the wing
and tail are new

average TAS of 125kts, burning 16 litres an hour.

The different wing shape makes the difference when it comes to top speed. All the rest is the same. Dexter reports that the non-T-tail of the NG has not even changed control feel in cruise all that much, despite what the factory says. It even has the same nose low attitude as the Zephyr, which always surprises pilots the first time they fly it.

Like most ultralights these days, the NG gets off the ground in a cricket pitch or two, even with two on board, and the control feel is almost identical to the Zephyr. Temperatures and pressures stay green even on a sultry aussie summer morning all the way up high. In the air, the NG is light

- you barely need to move the joystick to make it change direction. Turns are easy to co-ordinate and have the same solid feel as the earlier models. The stall is difficult to get to. The NG is very slippery and takes ages to slow down. There is an obvious shudder when things get down to around 35kts but stall recovery is a no brainer.

Speed control is vital in ATEC aircraft. If you normally plonk down your Warrior or C172 at any old speed, you are going to get a proper education in one of these. Carry a couple of extra knots over the fence and you'll get to know the fence at the other end. In my plane, usually I have to turn the power to idle mid-downwind if I am to have any chance at all of getting the wheels onto the

ground in the right place. The NG is no different. You need to have discipline.

It's a lovely aeroplane, with a long and proven history, an impressive range. At AUD\$145,000 because of the Euro (Dexter's fully optioned version was AUD\$175,000), it may limit the number of people who can buy one outright, but Dexter reports having received inquiries from people looking to share ownership. That makes a lot of sense. It's a perfect cruising machine if, for example, you are looking to spend a few days travelling from Sydney to Cairns. Much better than a crappy old campervan. A much smaller chance of running into one Australia's millions of snakes, spiders and sharks too. ☹