

Newsletter

Welcome to the first Lange Flugzeugbau Newsletter

During the summer of 2006, Lange Flugzeugbau performed a thorough overhaul of its web site. We also announced an e-mail based newsletter, and the first newsletter has now been finished and sent off.

We wish, through this newsletter, to keep our customers even better informed about the current status and events at Lange Flugzeugbau GmbH, and to say thank you for the great interest.

Contents

- + [Lange Flugzeugbau GmbH](#)
 - [Decennial jubilee](#)
 - [Delivery situation / Test flights](#)
 - [Presentations 2006/07](#)
- + [Antares 20E](#)
 - [EASA certification](#)
 - [November – High season for soaring?](#)
 - [Successful system modification](#)
- + [Antares 18S/T](#)
 - [IDAFLIEG -Performance measurements 2006](#)
 - [International customers](#)
 - [Press reprints](#)
- + [Attachment: „Antares Notes“ by John Williams](#)

Lange Flugzeugbau GmbH

Decennial jubilee

Lange Flugzeugbau GmbH was founded in 1996, which makes the company 10 years old. The company was founded with the sole purpose of developing and producing the world's first self launching high performance sailplane with electrical propulsion. Meanwhile quite a few years have passed, as have quite a few, seemingly impassable obstacles. An unshakeable belief in the project, and a very high level of engagement by Mr. Lange and his development team kept the project on course, and finally led

to a well deserved successful end result in the shape of the Antares 20E. 34 Antares have been built and delivered worldwide since the start of the pre-series production in 2004. Among these 34 aircraft are two examples of the youngest members of the Antares family, the Antares 18S/T.

Delivery situation / Test flights

The EASA [certification](#) of the Antares 20E led, as expected, to a substantial increase in aircraft sales. As a result, the expected delivery date for an Antares ordered today is in the early summer of 2008. We have, since this summer, had an average of 4 new orders each month. This is well above our production capacity, and thus we expect the delivery time to increase even more. The abnormally good weather this November actually allowed us to arrange test flights for a number of potential customers.

This is all good for Lange Flugzeugbau, but may be a bad thing for someone who wants to acquire his or her dream machine as soon as possible. To alleviate some of the impact on our customers, Lange Flugzeugbau offers winter customers a conditional sales contract. By signing a conditional contract in the winter, a customer can reserve an as early as possible factory number, and make a test flight in the next spring or summer. Should the test flight prove unsatisfactory, then the customer can exit the sales contract with the return of the down payment. Lange Flugzeugbau has always been offering this conditional sales contract, but so far no customer has made use of the option.

Presentations 2006/07

In 2006, as in previous years, Lange Flugzeugbau was present at a host of shows and presentations, showing the aviation world the Antares gliders and our electrical propulsion system.

We are especially proud of having been invited to the [ILA 2006](#), where we participated in the daily air show routine next to bigger names like A380, Me 262 and MIG 29. Our test / show -pilot, Ola Røer Thorsen filmed the event, and has posted a nice movie on [Youtube](#). Our gliders also found an interested public at the national soaring conventions of Germany (held in [Aschaffenburg](#)), Austria (held in [Zell am See](#)) and Switzerland (held in [Biel](#), where our revolutionary propulsion system was developed).

Both Antares models could also be viewed and flown on numerous smaller events. These included demonstration days in Switzerland ([Birrfield](#), [Schänis](#)) and Berlin, airfield parties, and in connection with soaring competition. We are very happy with the enthusiasm with which the aircraft were met.

Our next public display will be the [Dutch National Soaring Convention](#) in Eindhoven (12.16.2006 showing the Antares 18S), the [SSA Convention](#) in Memphis, Tennessee, USA (02.08.-10.2007 showing Antares 20E) and the [AERO 2007](#) in Friedrichshafen (04.19.-22.2007 showing both models).

Antares 20E

EASA-certification

At 07.14.2006 We received type certificate for our flagship, the Antares 20E. The type certificate was issued by the European Air Safety Agency (EASA) and is marked EASA TCDS No. A.092.

The electrical engine and the propeller had been had been certified separately prior to the certification of the Antares 20E. These certificates cover the utilization in motorgliders and Very Light Aircraft (VLA). More information about the certification can be found in our [Homepage](#).

The certification of the Antares 20E marked the end of the field testing of the Antares 20E.

The large number of pre-series aircraft (28 Aircraft) ensured that the product was mature and highly reliable at the date of certification.

November – High season for soaring?

Most glider pilots pack away their hobby in the winter, and dedicate their time to other things. Others spend large amounts of time, effort and economic resources to escape the winter by flying south of equator.

Then there is Mr. John Williams. He lives in Scotland, and is, since March 2006, the proud (we hope) owner of Antares 20E factory number 25. He spent the ten first days of November collecting some 2250 OLC kilometers – in Scotland!

In doing so, he also managed to break the current UK record for a 500 kilometer target-return flight (pending approval). In order to achieve this in Scotland, he had to fly further north than any glider in the UK had ever been.



Wave flying in the Scottish highlands

The secret of his success is, next to flying the Antares 20E, an in depth knowledge of the wave flight conditions of the Scottish highlands.

Just as Mr. Klaus Ohlman knows every rock in the Alps (and soon the Andes) by first name, so does Mr. Williams in the Scottish Mountains.

This certainly also helped him winning this years „UK Mountain soaring Championship“ in his Antares 20E. We congratulate!

Mr. Williams has been so kind as to write some ["Antares Notes"](#), which can be found as an attachment to this Newsletter.

Further user reviews from the constantly growing crowd of Antares owners can be found in our [Homepage](#).

Successful system modification

Good technical systems can still be improved. With this motto, our design team set of to further increase ease of use and reliability for the Antares 20E. This was achieved by replacing a 12V NiCad battery currently used to power aircraft systems with multiple DC-DC converters, which convert 288V DC from the main battery directly to 12V.

This solution results in a significant reduction in system complexity, and reduces the time required for engine extension and retraction.

Antares 18S/T

IDAFLIEG -Performance measurements 2006

In the beginning of July 2006, shortly after our company prototype Antares 18S was finished, the aircraft was sent to this years IDAFLIEG performance measurements to show whether the aircraft lived up to the ambitious goals set by the development team.

Sadly, bad weather resulted in that only a few measurement flights could be performed. With so few measurements, no scientifically valid conclusions can be drawn with respect to the aerodynamic performance of the aircraft. However, a first analysis of the data available indicate that our high expectations might be proven correct. Further measurements (with hopefully better weather) will take place next year.

International customers

Approximately half a year after the successful maiden flight of the Antares 18S, the order books for the aircraft start to read like a who-is-who in international soaring.

Next to triple Swiss champion, Werner Danz, who owns the very first Antares 18S, many other successful competition pilots from all over the world have ordered their own 18 m Antares. Here we can find, amongst others, former WGC vice champion Justin Wills (UK/NZ) and multiple times Australian champion John Buchanan. We feel honored.

Press reprints

In the 06/2006 issue of "Segelfliegen", there was an Antares 18S test report named "Bestleistung mit Komfort: Antares 18S" (Highest performance in comfort: Antares 18S). A reprint of this report is available on request from Lange Flugzeugbau. The Aerokurier-Test „Antares 18S: Supersportler für die 18 m-Klasse“ (Antares 18S: Super sports-machine for the 18 m class) is available on our homepage, and will also soon be reprinted.

Further press reports about us and our products can be found in the ["In the press"](#) section of our homepage.

Attachment: „Antares Notes“ by John Williams

When I first went to look at an Antares it was more out of curiosity – I had heard that it had a big cockpit and I was close to physical and weight limits in my LS8.

Seeing one in the flesh became "love at first sight" and three hours later that turned into "love at first flight".

I started to imagine how well it would suit my needs in Scotland (I fly from [Portmoak](#), about half an hour north of Edinburgh) where on a few magical days each year we get excellent wave – the combination of comfort, high speed performance and ability to launch exactly when I wanted (self-launching directly into wave on short winter days to save precious daylight or at sunrise on a summer morning to attempt long distances) was just irresistible.

Since taking delivery in March this year I've flown some 200 hours and about 9000km and the love affair continues. I've had some flights of more than 8 hours in the cockpit and still been in perfect comfort. Just knowing that there is a reliable way to

avoid long retrieves gives confidence to explore distant and inhospitable areas where there are very few fields – and in winter they are often full of sheep. Nine times out of ten you don't need to use it – but when I have it has been 100% reliable.

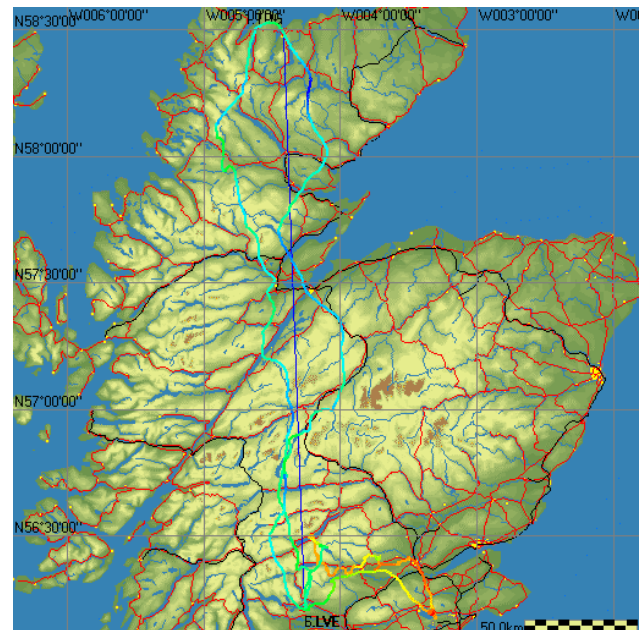
The performance has worked too – even in the weak conditions of this year's UK Mountain soaring Championship the glider helped me to win the competition – something I've been trying unsuccessfully to do for the last six years. In stronger conditions the Antares really is the weapon of choice. On 10th August I had a go at the UK 300km out and return record which stood at 121kph. Launching around sunrise was beautiful, and in non-perfect wave conditions I managed 158kph and was back at home before well before the weather closed in at noon.



The 300 km rekord flight, August 2006

November is a time when many pilots put their toys a way for the winter – but recently we've found it to be the best month of the year. UK weather patterns are never very predictable but sometimes the Scandinavian blocking high pressure stops Atlantic storms reaching through to the east side of the UK. If a deep depression reaches southern Norway, it leaves a nice north-westerly airflow in rising pressure over Scotland. If the jet stream is overhead and the rising pressure prevents excessive cloud cover conditions can be very good. In recent years it seems that the Scandinavian high doesn't decay until later in the

year than previously – leaving November as a good month even though hours of daylight are short.



The 500 km record flight, November 2006

In the first ten days of November this year I flew on four days and did some 2250 OLC km. The highlight was an attempt on the UK 500km out and return record – to achieve that in Scotland needed a new turn point, Tongue, a village right on the north coast at nearly 58 and a half degrees N - further north than any glider has been before. Cloud cover was between 4 and 7.5 octas and flying heights between 6000 and 11000ft. Running along wave bars I fly at about 100kts, slowing to maybe 70kts if there is unusually strong lift or a weak area ahead. Jumping to an upwind wave bar demands something like 130kts to avoid losing too much height (to minimise time in 800ft/min sink with a 50kt headwind). In the end the difficult parts were the start and finish which had almost total cloud cover, and deviating well off-course to find a good energy line into a previously unexplored area without landable fields. Nevertheless the speed came in at 117kph, 5kph more than the existing record held by a Nimbus 3. Both new records await ratification, but the potential has been proven beyond all doubt.

I love my new toy!