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WORLDWIDE PARAGLIDING AND PARAMOTORING MAGAZINE. FOR FREE.

TRENDS 2017





Cover photo:
Bruce Goldsmith flying in front of a
quarry near Gourdon on his new Epic.
Photo: Anthony Green

Following the Thermikmesse and Stubai-Cup trade shows, we've given a roundup of some of the new products for this season, in this edition.

Translation by Ruth Jessop

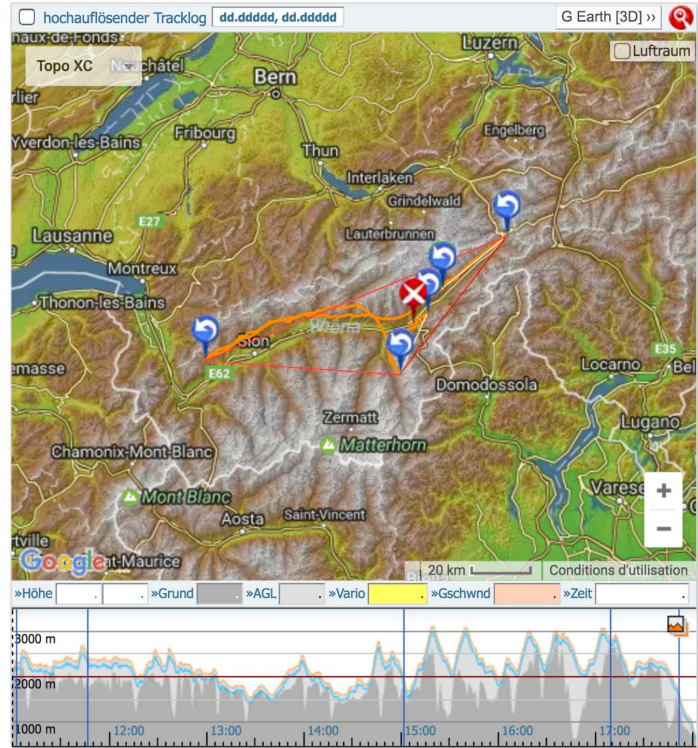


Photo: Markus Gründhammer / www.skyman.aero

16TH MARCH 2017... 205 KM CHRIGEL'S ON FORM

Chrigel Maurer has got the season off to a good start: Fiesch - Grimsel - Ovronnaz-Stalden - Brig, 205 km in 7 hours...

<http://www.xcontest.org/switzerland/de/fluge/details:chrigel/16.03.2017/10:00>





DELTA 3

Fall In Love... Again.

The new DELTA 3 is infused with ZENO and ENZO technology. In keeping with OZONE's True Performance philosophy, the DELTA 3 is solid and dependable in accelerated flight, agile and confidence-inspiring in active air, and just as accessible as its predecessors, the DELTA 1 and 2. It delivers class-topping performance with improved top speed and glide and handling that is simultaneously compact and, we must say, rather elegant. Stay tuned...

WWW.FLYOZONE.COM



OZONE's Instagram feed is full of great stories from team pilots and stunning images from their adventures. Follow along and get a daily dose of flying inspiration!
[instagram.com/ozoneparagliders](https://www.instagram.com/ozoneparagliders)





STUBAI-CUP 2017 FLYING SHOWCASE



The Stubai Cup took place in mid March. As has been the case since 1988, the trends for the coming season were on display...

It has become an event not to miss for several years now and nearly all the manufacturers go to it. Much more than at the Coupe Icare, the visiting pilots come to test what's new. Amongst the reasons why:

- A favourable microclimate (it's very often flyable).
- Mechanical uplift which is very practical (quick rotations).
- A lot more windows when the 'general public' can fly than at Saint Hilaire.

Obviously, the timing has been carefully chosen for this showcase: in March, most of the manufacturers have got products which are finished and ready to demonstrate.

The sky above the Stubai valley was very colourful: the manufacturers are not just bolder as far as decoration is concerned, but can also get new colours of fabric more easily than before when it was limited to white, especially for lightweight fabric.





Photo: Markus Gründhammer / www.skyman.aero

Only one real cell in the centre is enough: the Sir Edmund.

As for 'light' in general, the trend remains very strong, both for making classic models light and for the ultra light wings like the single skins.

The Sir Edmund from Skyman is a single skin with a single cell in the centre plus two little ones at the level of the stabilo.

The manufacturer has also experimented with wings with three and five cells and found that this minimalist version worked a lot better. Furthermore, the wing flies at 40 km/h.

Even amongst the single skins, there are still surprises to discover. It's worth noting that the Israeli manufacturer Apco is experimenting with hybrids: the front half classic, the back half single skin.

The possible EN B certification of this type of wing, in any case, opens the way for tandems (see our [test of the Niviuk Skin tandem](#)), as well as for school wings.

Markus Gründhammer at the Skyman stand.





A steerable square reserve, the "Diamond Cross" by Charly, coming in to land at the Stubai Cup.

The reduction in weight and new shapes have also spread to reserve parachutes.

There are more and more square models whose advantage, amongst others, is that they open quickly and have increased pendular stability.

The disadvantage: folding them is a bit more complicated due to the extra fabric in the centre. Specialists like Alain Zoller recognise the advantages, but also see a fashion effect.

For convenience, Alain has gone back to using a classic reserve for certification flights. An interesting innovation seems, in any case, to be the Diamond Cross by Charly: a square reserve which parachutes as soon as it's opened, then flies with a horizontal component and becomes steerable. We'll review this new type in a future edition.



Guest of honour: Antoine Girard talking about his flight over Broad Peak.

Photo: Markus Gründhammer / www.free.aero

Photo: Armin Kuprian / http://www.arminkuprian.com/

TRENDS IN FLYING TECHNIQUES

It's also interesting to note that the modern equipment has changed the way we fly. With the trend for light weight, the wings are easier to handle, a bit twitchier, but also safer, as we've already shown several times.

Modern paragliders are lighter, scoop up faster, and come up much faster during inflation. This allows take off techniques to be adapted to be much safer.

In fact, the DHV, for example, have noticed that numerous accidents at take off could have easily been avoided. Often pilots run 'non-stop' from the beginning of inflation, almost fleeing the wing, which is held back as it comes up above the pilot.

Therefore it arrives very late overhead. The pilot has to brake hard to stop it diving, all this at a part of the slope which is already good for taking off. Pilots therefore start their take off run with too much brake on their wing.

They then need to bring their hands up as it is taking off. This leads to:

- either a take off with insufficient speed, at the limit of being parachutal.
- or the wing picking up forward speed when it's about to take off, with the risk of a collapse and possible crash.

The most modern technique consists of organising things so that the pilot enters the 'take off stage' without too much brake, but with just a little pressure on the controls.



Photo: Markus Gründhammer / www.skyman.aero

The bond between performance and lightweight is on the up. Shown here, Niviuk's Klimber P, at the Stubai Cup.



**WORLD RECORD
WITH EN B GLIDER**

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Cruise

LTF/EN B

The **NEW** Benchmark
of its category!



1st of november 2016 Konrad Garg - CEO of AirCross - flew 446km XC with the U Cruise in Brazil:

"... the stability of the glider, the extraordinary glide and especially its high speed, allowing me to enter thermals even with headwind, helped me to achieve this record flight. A feeling beyond words after flying for almost 11 hours!"

www.aircross.eu

**4-Years
insurance***
WWW.AIRCROSS.EU
Included when purchasing
a glider from AirCross



Flying techniques, especially those at take off, have changed with the evolution of the equipment: the wings come up a lot quicker, which requires pilots who are used to older equipment to change their technique.

Modern wings are a big help in doing this. They come up very fast after an initial bit of pressure which lets the pilot inflate the wing quickly and wait for it to come up whilst walking slowly, almost stopping.

Then he gradually accelerates to get to the point of being 'almost arms up', at the point of taking off, with the wing pitch stable and ready to fly.

As a result, take off is a lot safer.

Surprising, but true: depending on the wing, this technique, 'Start to inflate, wait, accelerate,' can also result in a faster take off if there is a back wind ! 🌀

Another trend in teaching beginners, especially in the Germanic countries: hold the brakes with your thumbs pointing upwards. This is an easy way of avoiding stalling.

At least for beginners, they are once again encouraged to keep their hands near the riser when braking, like in the olden days.

Agreed it isn't as elegant as having your arms behind. But there is an undeniable advantage: A more direct link between your hand and the trailing edge and better feeling for feedback from the wing.





Photo: Armin Kuprian / <http://www.arminkuprian.com>

The organiser of the Stubaier Cup, Monika Eller, with her daughter Florina Eller.
Next Stubaier Cup: 2-4th March 2018, www.stubaicup.at

A tandem version of the Sir Edmund by Skyman. Above, some Supair wings: manufacturers from all around the world exhibit at the Stubaier Cup.



Photo: Markus Gründhammer / www.skyman.aero



Adventure
Soufflez, Inspirez

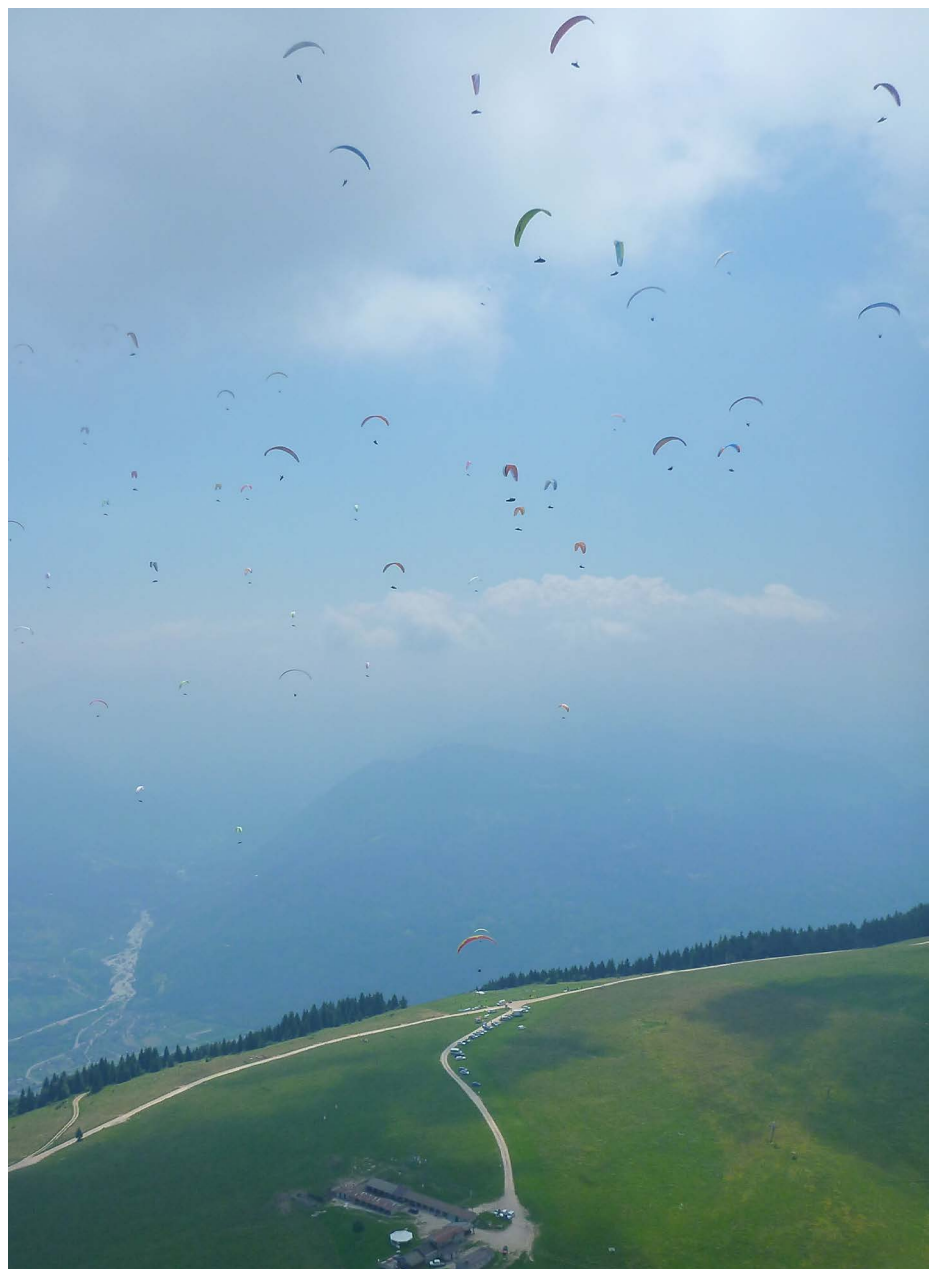
WORLD CHAMPIONSHIPS

MONTE AVENA 2017

Viva Italia! The 15th World Championships will take place in the foothills of the Dolomites at the Monte Avena take-off.

free.aero magazine will look at the region in more detail in our next issue.

<http://www.monteavena2017.org/>





ADVANCE SIGMA 10

Sixty six cells and a 6.16 aspect ratio: the EN C Sigma 10 has clearly had a face lift compared to the previous version.

The Sigma 10, available at the end of April, will be the first wing with "3D-Diamond Panel Shaping" whose stitching isn't just along the wingspan, but also diagonally.

This allows the nose to be held in shape better because the stitching doesn't just work along the wingspan as it does in classic 3D-Shaping.

Advance said they noticed, thanks to video footage taken in the air, a shrinkage of the classic 3D-Shaping stitching reducing the benefits of the system.

<http://www.advance.ch/en/products/paragliders/sigma-10/sigma-10-epic-xc-news/>

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MAGAZINE

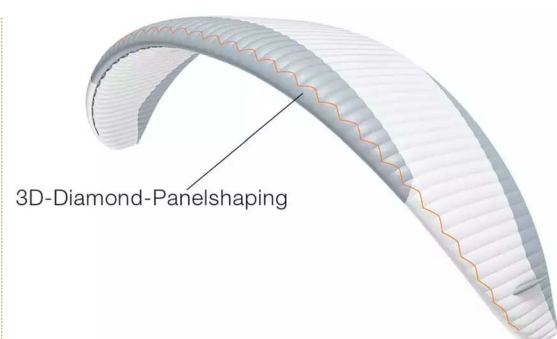
A NOTE FROM THE EDITOR

Going from an aspect ratio of 5.8 to 6.16 is an enormous difference, and will obviously be apparent in the performance.

Despite its high aspect ratio, Advance have, all the same, placed the Sigma 10 in the middle of the EN C class, which seems surprising.

With the 3D-Diamond-Panel shaping, the designers show once again that there are always ways of optimising the way the profile is held in shape, especially at the nose.

It's worth noting that the CCB type 3D-Shaping, used by BGD and Supair, should also prevent stitching shrinkage. 🌀



ADVANCE BIPRO 3

After several years of development, a new harness has been designed for tandem pilots. It's more comfortable, light and simple to handle. Available in April.

<http://www.advance.ch/index.php?id=872>



FEBRUARY 2018: EPC, YET ANOTHER TRADE FAIR...

From the 2nd to 4th of February 2018, a completely new trade show could be competing with Thermikmesse, Stubai Cup and also the Coupe Icare: the EPC (European Paragliding Convention) will take place over 2000 m2 in the Europa-Park Rust conference hall in Germany, near Strasbourg and Switzerland, a good argument to attract French and Swiss visitors.

It was the initiative of Guido Reusch, who is also general secretary of the PMA.

www.epc.aero

Photo: 'Conferntainment' Europapark Rust



SKYDROPS CHASECAM

The follow camera device, the Chasecam, is now available for the GoPro Hero 5 as well.

The system is fairly unusual, as it is shock proof and relatively flexible, unlike other tougher systems with parts which stick out more.

Price: 149 €

<http://www.skybean.eu/chasecam>



AD
AIRDESIGN

EXPLORE BEYOND



THE VITA2 IS DEFINITELY THE BEST ENTRY B THAT WE'VE SEEN. IT OFFERS THE EXACT COMBINATION OF SAFETY, PERFORMANCE AND STABILITY TO SUPPORT DEVELOPING PILOTS.

VITA²

WWW.AD-GLIDERS.COM

MARK ROSSI FLIGHT INSTRUCTOR
CLOUDBASE PARAGLIDING AUSTRALIA



SITES GUIDE EUROPE

This new book brings together more than 10,000 take-offs and landing sites in Europe giving GPS coordinates and other information for each site. It's very thorough and useful, particularly if you are travelling and looking for sites nearby.

Directly from the editor.
<http://cloudbase-media.de/home/>



“ Next turnpoint:
Out in the boondocks.”

Our CHILIs are in a class by themselves. No other B-class glider combines similarly high climb and glide performance with such balanced handling. So it's clear that we improved everything in the new model. Simply. Better. Convince yourself and turn your test flight with the **CHILI** to a cross country flight.



Burkhard Martens, XC-legend - 411km free distance with CHILI4



SKYWALK

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- CHILI
- CAYENNE
- POISON

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PURE PASSION
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www.skywalk.info



ICARO GRAVIS

A WING FOR EVERYONE

The position of the Gravis at 'the heart of' the EN B class is no doubt related to another trend in 2017: not going to the limits of the certification, especially in this very important category.

The Gravis, designed for thermic and XC flying, will even be accessible to beginners, according to Icaro. It has all the modern technology such as a SharkNose, mini ribs and double 3D-shaping.

<http://icaro-paragliders.com/>

| GRAVIS TECHNICAL DATA | | | | | |
|--|---------|-------|--------|--------|---------|
| Manufacturer: ICARO Web: http://icaro-paragliders.com/en/products/glidern/gravis/ Mail: icaro@icaro-paragliders.com | | | | | |
| DATE | 2016 | | | | |
| SIZE | XS | S | M | L | XL |
| CELLS | 40 + 38 | | | | |
| FLAT SURFACE AREA [M²] | 22 | 24 | 26 | 28 | 30 |
| FLAT WINGSPAN [M] | 11 | 11,4 | 11,7 | 12 | 12,4 |
| FLAT ASPECT RATIO | 5.2 | | | | |
| ALL UP WEIGHT [KG] | 55-75 | 65-90 | 80-105 | 90-115 | 100-130 |
| WEIGHT OF THE WING [KG] | 4.1 | 4.3 | 4.5 | 4.7 | 4.9 |
| CERTIFICATION | EN-B | | | | |
| PRICE [€] | 3 700 | | | | |

Icaro give the exact characteristics of each model.



The T-shirts are now available in navy and red.



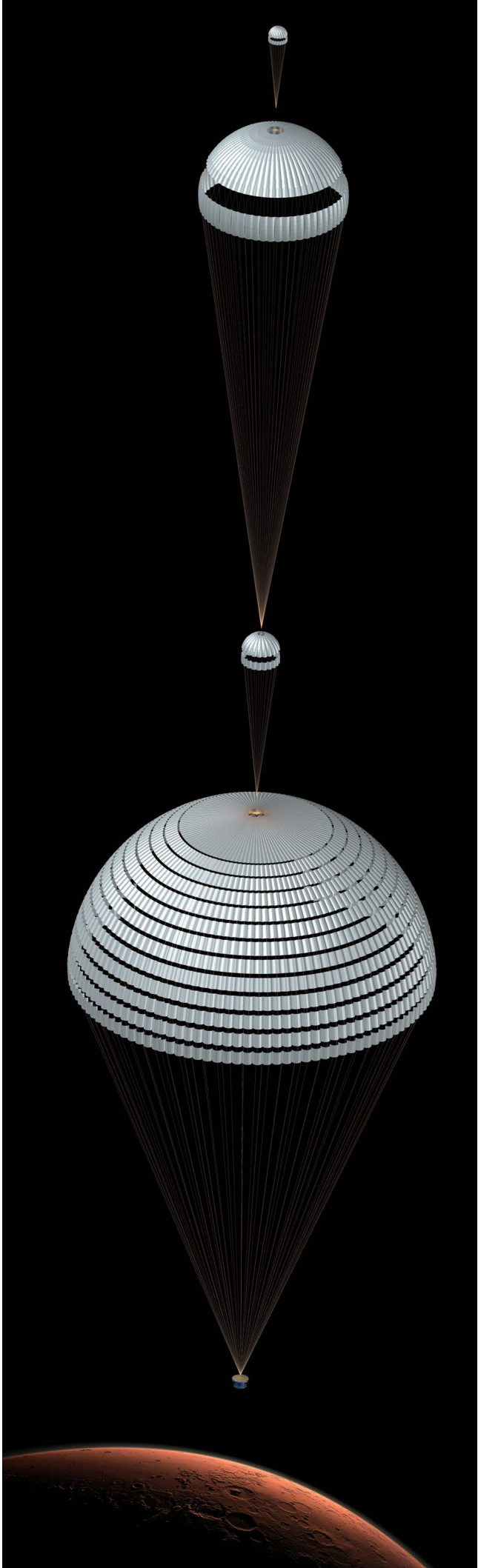
New accessories from Icaro: the backpack with a new carrying system should guarantee a secure fit on your back and be very comfortable.



PROFLY EVERYWHERE...

Michaël Nesler, designer for, amongst others, Swing and his own make Profly, and inventor of the RAST system is also a designer for the next Mars mission. He has designed parachute systems which open in several stages, allowing a safe landing. An interesting mix of genres which we hope will prove useful for developing paragliders as well!

www.profly.org





EN/LTF B

NEW SKIN 2 & SKIN 2 P

**Wherever,
whenever**

Meet your new travel mate,
feel it like your second skin.

niviuk.com



SWING RAST 2.0

At the Thermikmesse trade show, the Swing designer Michaël Nesler, talked us through the positive aspects of the RAST system and the implementation of the second version in the new models. We explained the principle in our [test of the Swing Mito](#) in a previous article. One of the added advantages: at take-off, the wing comes up well but doesn't overfly because the back fills progressively. The profile has an S shape, giving auto stability like a reflex profile.

A surprising effect discovered by the Swing team when they were using it: when taking off with a back wind, as the wing stays above the pilot instead of overflying, the angle of attack stays fairly high allowing it to take off much quicker.

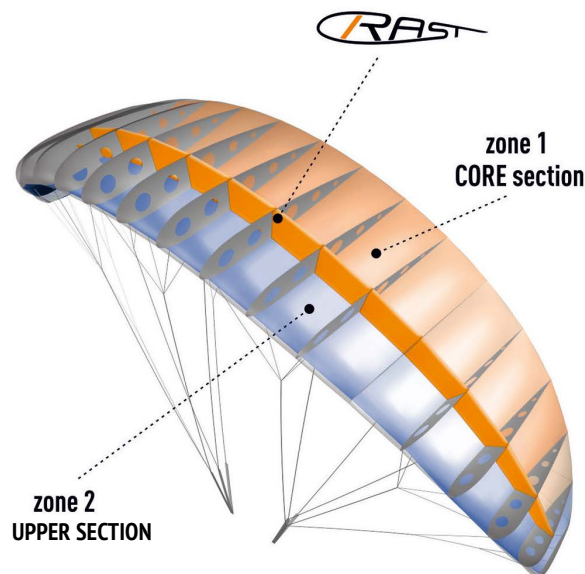




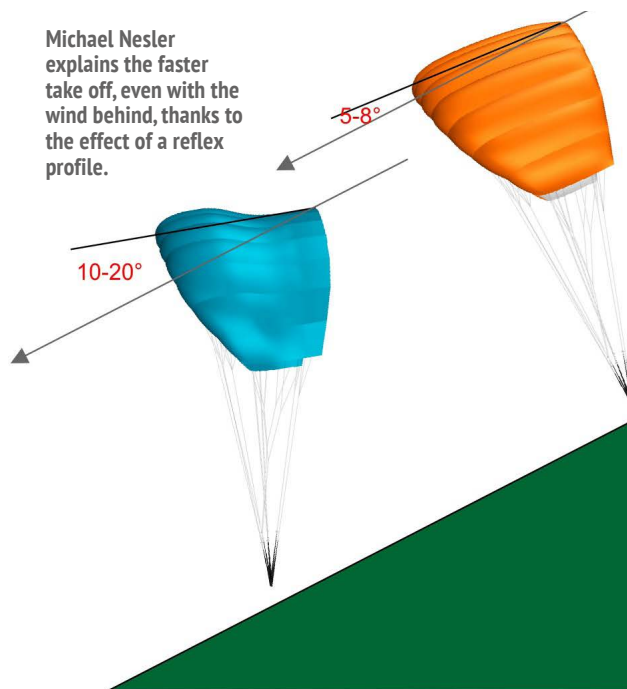
Photo: swing

Clearly visible: the back fills later, the RAST rib fulfils one of its roles.

The second version of RAST has valves; the back part of the wing stays better inflated after a collapse.

Some of the new wings thus equipped include the EN B (almost A) Arcus RS, the mountain wing, the Apus RS and even the speed flying wing, the Mirage RS.

www.swing.de





Speedflyer Swing Mirage RS with RAST. Photo : Christian Arets

Mountain wing, the Apus RS with RAST, clearly visible thanks to the transparency of the wing.



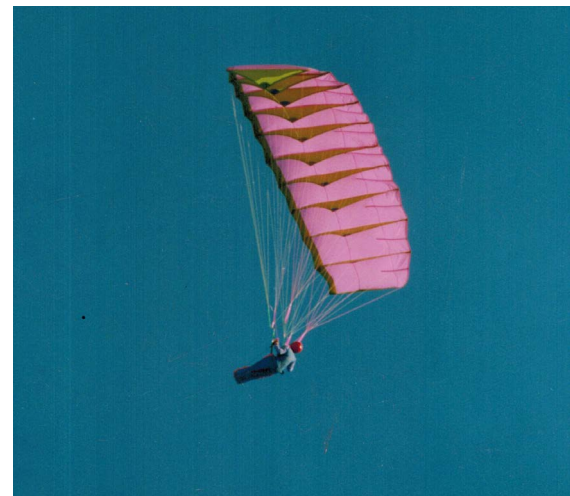
INDEPENDENCE TENSING

Independence, which is also the parent company of the manufacturer Skyman, are bringing out a new version of their Hi-Tec helmet.

The Cruise 4 beginner wing has come out.

The Tensing will be available soon: a more robust version, and thus more universal, of Skyman's Sir Edmund.

www.independence.aero



Above: Stefan Kurrle, owner of Independence/Skyman, in 1989, on a single skin wing which was in the end abandoned. It weighed 9.5 kg!

The Tensing will be identical to Skyman's Sir Edmund, but made in Dokdo 20, and thus more resistant.



GIN



Explorer

A lightweight sports performance wing for experienced XC pilots. Agile yet well-balanced handling and class leading performance in a compact wing weighing under 4kg.

Share your experience #gingliders

www.gingliders.com

 **Explorer**

NIVIUK
SKIN 2





Like all the single skins, it comes up all by itself in the slightest breath of wind. It's worth noting the slightly diagonal orientation of several panels on all the Skin 2s, no doubt an important part of its design.

NIVIUK SKIN 2

In the Skin 2 series, the tandem model came out first, an amazingly light machine (3.3 kg), easy to use and with good performance for a single skin.

In April, the other sizes 16, 18 and 20 will be available, certified EN B (18 is done).

- As always there will be a 'normal' version, weighing around 2.5 kg
- and a 'light' version, weighing around 2 kg.

NIVIUK



A Skin 2 P: the small stylized feather on the upper surface denotes the lightweight version.

A Niviuk Bi Skin 2 P above Monaco.

Read our first test of the Niviuk Bi Skin 2 P which came out this winter:



NIVIUK HOOK 4 P



The Hook 4 P: the impressive reduction in weight of up to 1.5 kg obviously gives it better handling.



HOOK4 P TECHNICAL DATA

Manufacturer: NIVIUK Web: www.niviuk.com

| SIZE | 21 | 23 | 25 | 27 |
|-------------------------------------|-------|-------|--------|--------|
| CELLS | 52 | 52 | 52 | 52 |
| FLAT SURFACE AREA [M ²] | 21 | 23 | 25 | 27 |
| FLAT WINGSPAN [M] | 10,65 | 11,15 | 11,62 | 12,08 |
| FLAT ASPECT RATIO | 5,4 | 5,4 | 5,4 | 5,4 |
| ALL UP WEIGHT [KG] | 55-70 | 65-85 | 80-100 | 95-115 |
| WEIGHT OF THE WING [KG] | 3 | 3,25 | 3,6 | 3,85 |
| CERTIFICATION | B | B | B | B |

NIVIUK IKUMA P



The Ikuma P, following the current trend: a lighter version of a model which has already made its mark.

IKUMA P TECHNICAL DATA

Manufacturer: NIVIUK Web : <http://www.niviuk.com/>

| DATE | 2016 | | | |
|-------------------------------------|-------|-------|--------|--------|
| SIZE | 21 | 23 | 25 | 27 |
| CELLS | 57 | 57 | 57 | 57 |
| FLAT SURFACE AREA [m ²] | 21 | 23 | 24,5 | 26,5 |
| FLAT WINGSPAN [m] | 10,94 | 11,45 | 11,82 | 12,29 |
| FLAT ASPECT RATIO | 5,7 | 5,7 | 5,7 | 5,7 |
| ALL UP WEIGHT [kg] | 55-75 | 65-85 | 80-100 | 95-115 |
| WEIGHT OF THE WING [kg] | 3,3 | 3,5 | 3,7 | 3,9 |
| CERTIFICATION EN/LTF | B+ | B+ | B+ | B+ |
| PRICE [€] | 3 950 | 3 950 | 3 950 | 3 950 |

SKYWALK

CHILI 4

The long awaited Chili 4 is now available.

This high end EN B which is designed particularly for XC flying, has amongst other things, better internal pressure thanks to a SharkNose and improvements in the structure.

It performs better, the controls are more precise and comfortable and it's more balanced and calm in turbulence.

| CHILI 4 TECHNICAL DATA | | | | | |
|---|-------|-------|--------|--------|---------|
| Manufacturer: Skywalk Web : https://skywalk.info/project/chili4/ Mail: info@skywalk.info | | | | | |
| DATE | 2016 | | | | |
| SIZE | XXS | XS | S | M | L |
| CELLS | 57 | 57 | 57 | 57 | 57 |
| FLAT SURFACE AREA [m ²] | 21,39 | 24,59 | 26,40 | 28,28 | 30,23 |
| FLAT WINGSPAN [m] | 10,99 | 11,79 | 12,21 | 12,64 | 13,07 |
| FLAT ASPECT RATIO | 5,65 | 5,65 | 5,65 | 5,65 | 5,65 |
| ALL UP WEIGHT [kg] | 55-77 | 70-95 | 85-105 | 95-115 | 105-135 |
| WEIGHT OF THE WING [kg] | 4,9 | 5,2 | 5,5 | 5,8 | 6,1 |
| CERTIFICATION | B | B | B | B | B |
| PRICE [€] | 3 750 | | | | |



Photo: Tristan Shu

SKYWALK

MESCAL 5

The EN A Mescal 5 will be available from the beginning of April. The main improvements are:

- SharkNose and double 3D-Shaping
- Precision in the controls
- Performance
- Liros lines sheathed up to the top

Photo: Tristan Shu





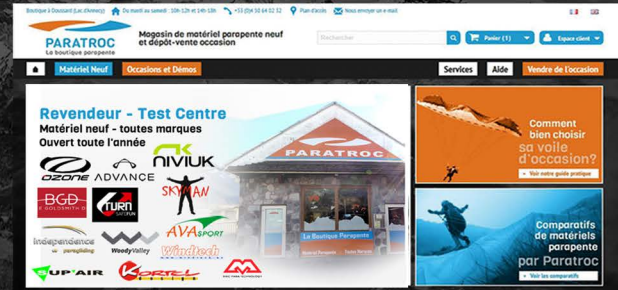
PARATROC
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Online store - Paragliding equipment

First shop for used paragliders

Express shipping in Europe
Duty free ex-EU
We buy used equipment

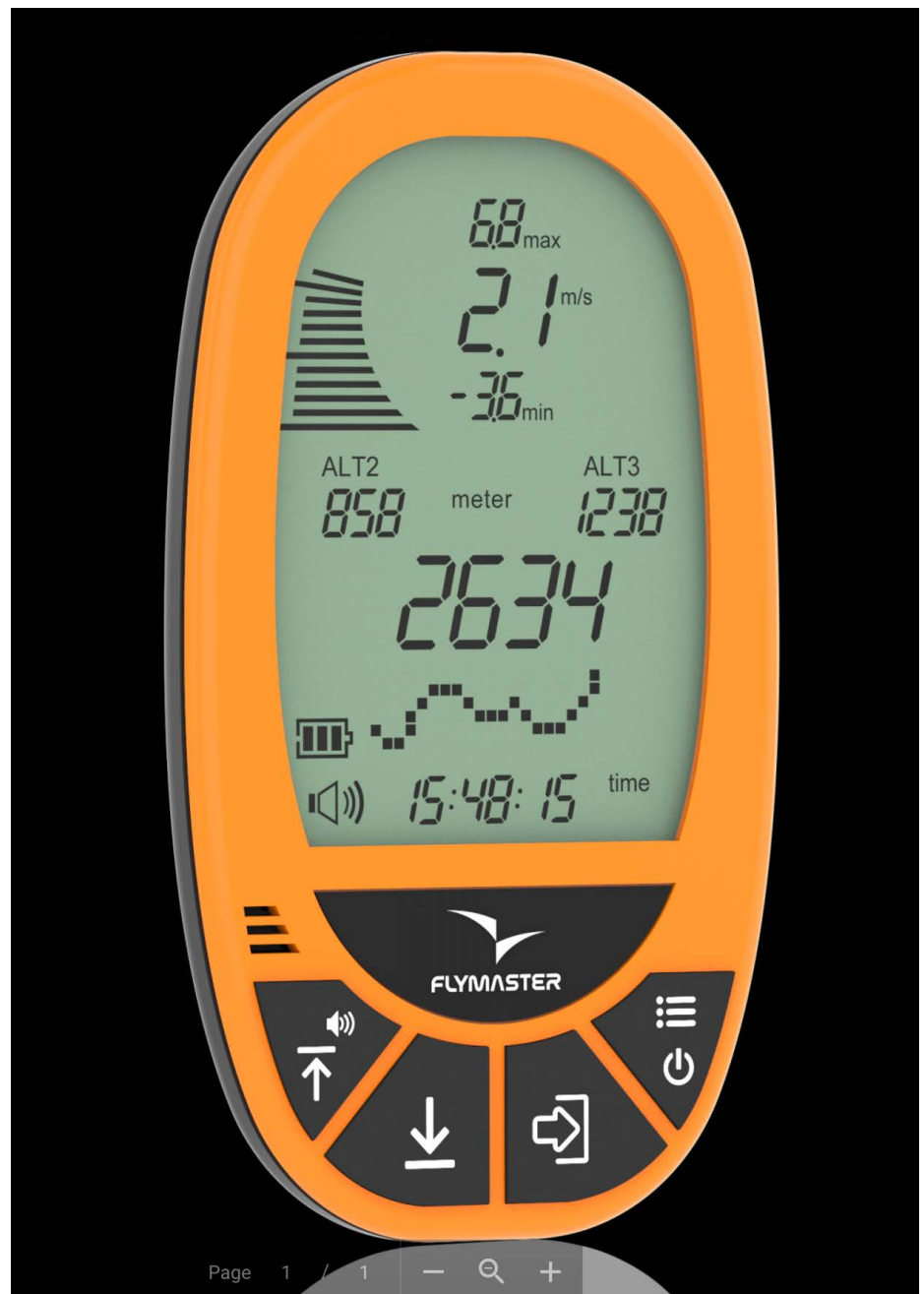
paratroc.com
Doussard - Lac d'Annecy (France)



FLYMASTER

The Portuguese manufacturer is working on a new vario which is totally different to the others with their graphic screens: the new instrument, code named LS, has a fixed LCD display, with only a small part using pixels, for example to display a curve. It slightly resembles the display on the Bräuniger IQ-One. It will be very moderately priced, but this hasn't been published yet.

<https://www.flymaster-avionics.com/>



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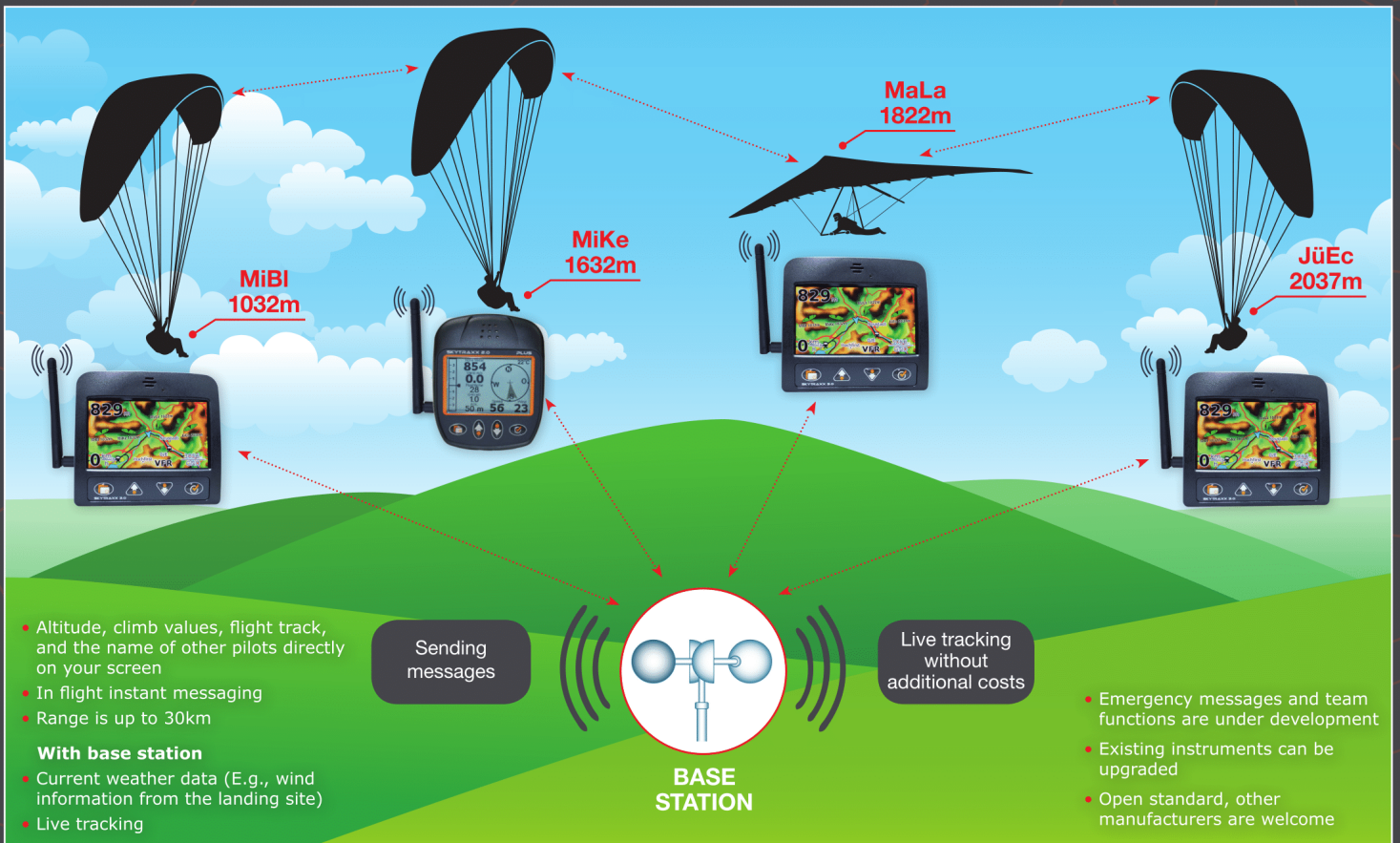
SKYTRAXX FANET

In the autumn Skytraxx will be offering a new option for their variors (new and existing). The FANET is a 'peer to peer' radio communication network allowing pilot's instruments to communicate amongst themselves, both for safety and to mutually indicate the location of thermals.

<https://www.skytraxx.eu/News/FANET>

One clarification of the FANET network given by the manufacturer: extra ground based relays are possible, but not obligatory.

SKYTRAXX® get connected with FANET





GIN

PEGASUS FOR TRIKES

The Pegasus is an easy wing for paramotors based on the Bolero 5 and can be used as an EN A for free flying. It is now also available in size 34 with an all up weight of 115-240 kg.

<http://gingliders.com/paramotoring/pegasus/>

| PEGASUS - TECHNICAL DATA | | | | | | |
|--|----------|----------|----------|----------|----------|----------|
| Manufacturer: GIN Web: http://gingliders.com/paramotoring/pegasus/ | | | | | | |
| DATE | 2015 | 2015 | 2015 | 2015 | 2015 | 2016 |
| SIZE | 22 | 24 | 26 | 28 | 30 | 34 |
| CELLS | 36 | 36 | 36 | 36 | 36 | 36 |
| FLAT SURFACE AREA [m ²] | 22.22 | 24.12 | 26.26 | 28.50 | 30.83 | 34 |
| PROJECTED SURFACE AREA [m ²] | 19.29 | 20.94 | 22.80 | 24.74 | 26.76 | 29.50 |
| FLAT WINGSPAN [m] | 10.30 | 10.76 | 11.23 | 11.70 | 12.16 | 12.77 |
| FLAT ASPECT RATIO | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| ALL UP WEIGHT [kg] | 55-75 | 65-85 | 75-95 | 85-105 | 95-115 | 105-130 |
| ALL UP WEIGHT PPG [kg] | 65-110 | 75-120 | 85-130 | 95-140 | 99-160 | 115-240 |
| WEIGHT OF THE WING [kg] | 5.0 | 5.3 | 5.5 | 5.8 | 6.2 | 6.8 |
| CERTIFICATION | EN/LTF A | EN/LTF A | EN/LTF A | EN/LTF A | EN/LTF A | EN/LTF A |
| CERTIFICATION (PARAMOTOR) | DGAC | DGAC | DGAC | DGAC | DGAC | DGAC |
| PRICE [€] | 3 000 | 3 000 | 3 000 | 3 000 | 3 000 | 3 000 |

free.aero
MAGAZINE

A NOTE FROM THE EDITOR

The all up weight of 115-240 kg makes it possible to use it with a wide range of trikes. This is the current trend: more and more pilots, and not just the older ones, are discovering the advantages of a trike with a paramotor.

Despite the trend towards reducing the weight of motors for foot launching, in the morning with nil wind, after two failed attempts to take off, the pilot gets tired quickly to the point of putting his safety in danger as his actions become less precise.

A trike avoids this problem and makes taking off very easy, especially if it's comfortable, powerful and as a consequence, heavy.

In addition, the combination of a lot of power with a high wing loading ratio, on a reasonable sized wing like this 34, slightly reduces the limits imposed on trikes by the wind when it increases.

GIN

YETI XTREM 2

A new version of the Yeti Xtrem: Gin have reduced the weight by nearly half to reach only 270 g, whilst keeping qualities like 'longevity and in-flight comfort'.

<http://gingliders.com/>



Adjustments to the dyneema 'straps' are done using splices.

NEO X-FLY

After the speedriding wings, Neo have brought out a speedflying wing in five sizes from 9 to 18 m² to cover, as much as possible, all the disciplines: foot launching, soaring, taking off on skis and speedriding in contact with the slope...

From beginner to expert.
Certification: load test 8 G
Sizes: 9 - 11 - 13 - 16 - 18

Weights: from 2.45 to 3.8 kg

PRIMARY FABRIC:
Skytex double coated 42 g

www.flyneo.com



Photos: www.flyneo.com





Soon on
your cockpit

syride

SKYMAN MONO PEAU

The Sir Edmund wing from Skyman is certified EN B. The size 20 only weighs 1.58 kg. Other sizes are being certified EN B, including a 35 m2 tandem.

A central cell, plus two small ones at the tips, seem to be enough; the maximum speed is 40 km/h.

<http://www.skyman.aero/fr/>

SIR EDMUND - TECHNICAL DATA

Manufacturer: Skyman
Web: <http://www.skyman.aero/de/gleitschirme/sir-edmund.html>
Mail: info@skyman.aero

| SIZE | 17 | 20 | 23 | 26 | 35 Tandem |
|--|--------------|--------------|--------------|--------------|--------------|
| CELLS | 39 | | | | |
| FLAT SURFACE AREA [m ²] | 17 | 20 | 23 | 26 | 35 |
| PROJECTED SURFACE AREA [m ²] | 14.23 | 16.17 | 19.25 | 21.76 | 29.30 |
| FLAT WINGSPAN [m] | 9.44 | 10.06 | 10.98 | 11.67 | 13.54 |
| FLAT ASPECT RATIO | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| ALL UP WEIGHT [kg] | 60-85 | 70-100 | 85-115 | 100-130 | 140-180 |
| WEIGHT OF THE WING [kg] | 1.45 | 1.58 | 1.78 | 1.99 | 2.62 |
| CERTIFICATION | EN/ LTF B | EN/ LTF B | EN/ LTF B | EN/ LTF B | EN/LTF B* |

*Pending

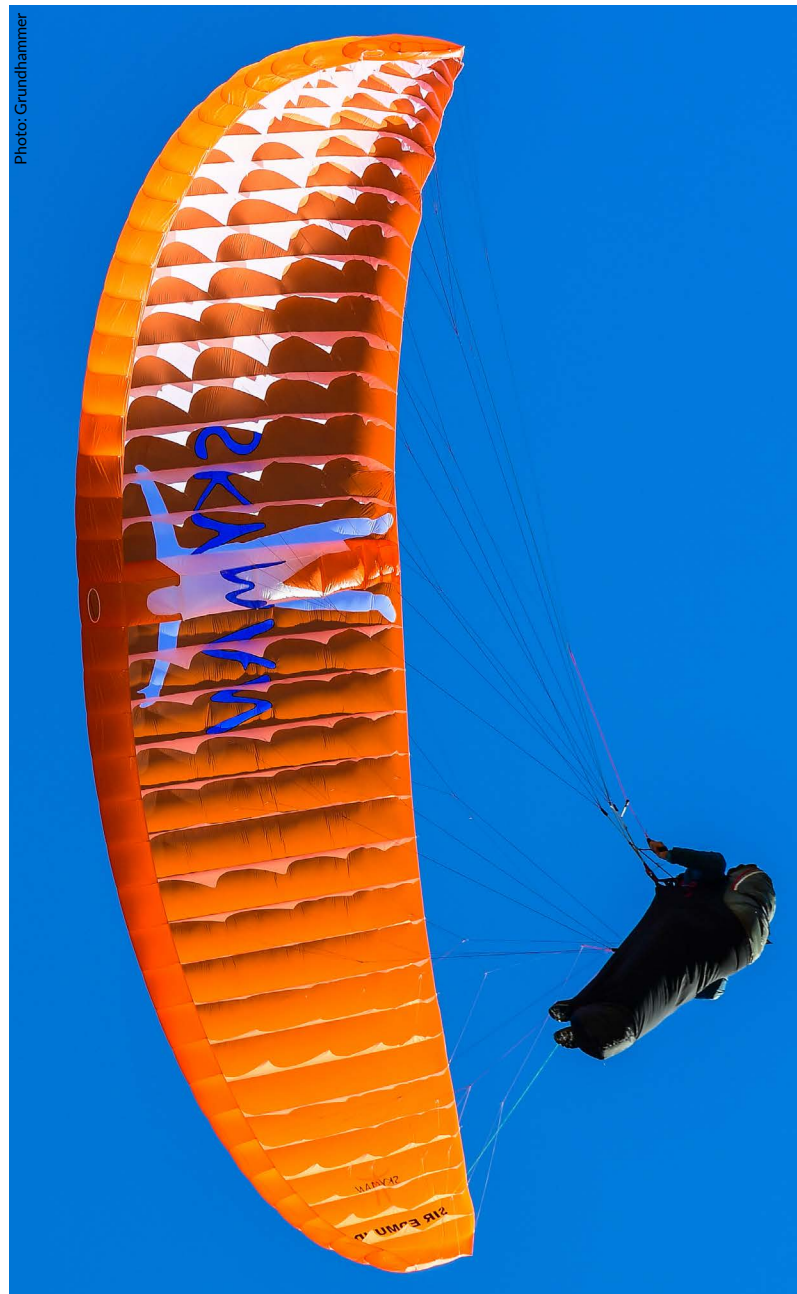


Photo: Grundhammer



Markus Gründhammer after a night bivouacking, with the Sir Edmund in its final version which has only one cell in the middle.

GARMIN INREACH

InReach-Delorme has been bought by Garmin. Everything that we've written about the principle of Delorme tracking remains valid, but the new instruments, which will be available soon, will integrate in the "Explorer +" version all the functions of a normal GPS with a topographic map.

Size: 6.8 x 16.4 x 3.8 cm

Weight: 213 g

Water resistance: IPX7

Screen: 200 x 265 pixels

Price: between 450-500 € depending on the version.

www.garmin.com

Here's a reminder of our detailed test of the Delorme system:

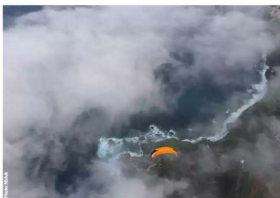
<http://www.free.aero/en/contentsHTML/instruments-e/?page=30>



TRACKING PAR SATELLITE

Que ce soit pour un petit vol dans le Vercors ou pour un cross dans l'Himalaya pour la sécurité du pilote solitaire, les systèmes de tracking satellitaires restent imbattables.

Ils sont financièrement très accessibles, et de nouveaux services les rendent encore plus faciles d'utilisation.



AIR-SPORT

BETWEEN 160-320 KG!

A Polish company, manufacturing in Europe with European products (Skytex/Liros/Peguet), is selling, amongst other things, a new 'Halny' tandem, 42 m² for paramotors and paragliders, but which is only DGAC certified.

All up weight: 160-320 kg!

Price: 3 500 €.

<http://air-sport.pl/>



SEA

BETWEEN

1380-1560 €!

The Ukrainian manufacturer SEA is selling their versatile new 'SR' wing, with a semi-reflex profile, for high speed travelling as well as for slalom and acro.

The controls are in 2D (one central line and one external).

The price is a very powerful argument: between 1380 and 1560 € depending on the size (19-25).

<https://www.facebook.com/seaukraine/>



ELECTRIC EXOMO

The manufacturer of Exomo electric motors, George Blottin, wants to make his mark in the electric motor market by producing propulsion units (battery, motor, propeller, motor supports) which are easily adaptable to every existing paramotor chassis.

They can be mounted 'without any technical knowledge' with a 'plug and play' connection.

According to Exomo, the 'very high quality' batteries allow a thousand charge/discharge cycles, allowing flights of an hour with 30 kg machines (20 HP and 60 kg of thrust).

<http://aeronature.com/>



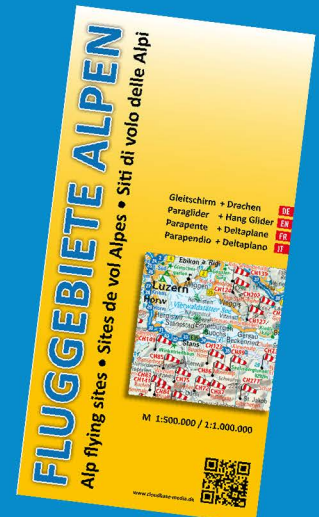
Above, the integral model. An Exomo basic pack of 15 kW, as on the right, with a 45 Ah battery, costs 11430 €.



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YVES PARLIER'S SINGLE SKINS

Yves Parlier is a world renowned French sailor who has proved his ingenuity more than once, for example by repairing his carbon mast during the Vendée Globe in an oven knocked up from what he had on board.

For ten years, he has devoted his energy to a revolution in maritime transport: kite wings for pulling boats, from small ones right up to container ships.

Yves, who is a former paraglider pilot, experiments with, amongst other things, single skin wings.

For more information on this project in collaboration with Porcher Sport:

<http://www.beyond-the-sea.com/beyond-the-sea/concept-projet/>



777 TRIPLE SEVEN QUEEN 2, KNIGHT AND DLIGHT

The Queen 2 (EN/LTF C) should have better performance, especially when climbing, thanks to changes to the profile.

The aspect ratio is only slightly higher, but it has more cells than the EN D King.

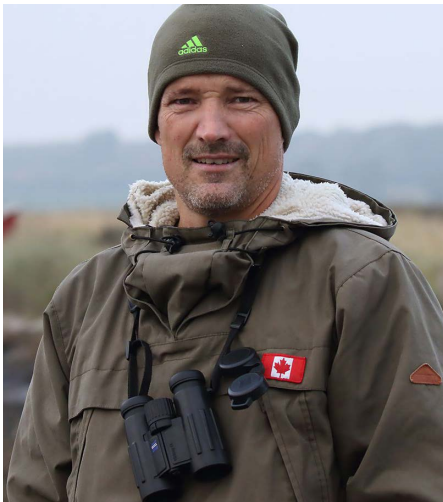
The technical data still hasn't been published, but there will be four sizes for an all up weight of 65 to 125 kg.

The Knight is the new EN B entry level wing, with sophisticated details such as mini ribs, SharkNose and optimised openings in the ribs.

The D-Light is 777's first lightweight wing. It only weighs 2.7 kg in size S and is certified EN A.

The 777 team have a new member, former competition pilot Mads Syndergaard who has left UP after fourteen years to reinforce the Valic brother's team

<http://777gliders.com/>



Mads Syndergaard





QUEEN 2

777 TRIPLE SEVEN



D-LIGHT

KORTEL

VERY FLEXIBLE...

Kortel have brought out two harnesses which are very easy to adapt to different body shapes.

The «K-Flex» can be adapted for passengers (or pilots) from 1.5 m to 2 m. The "Kid" can be similarly adapted for children from 0.8 m to 1.5 m being taken tandem.

Both harnesses let you adjust:

- The width of the seat
- The height of the hang points
- The length of the back
- The inclination of the back

Both harnesses have an anti-forget waist strap. The K-Flex has a preformed Air Bag protector whilst the Kid has a foam bag.

Price: K-Flex 585 €, Kid 430 €
<http://www.korteldesign.com/>



AIR DESIGN

Air Design was also one of the forerunners of 'Light', but this doesn't stop their products being manufactured to be hard wearing and robust. A visible example: the seams on the ribs of the single skin UFO wing.

In addition, the work on the tandem single skin is progressing. According to Air Design, during a load test (being pulled behind a laboratory vehicle), the runway was too short to destroy the wing.

The maximum force was 2 tonnes, which corresponds to a maximum all up weight of 247 kg.

www.ad-gliders.com

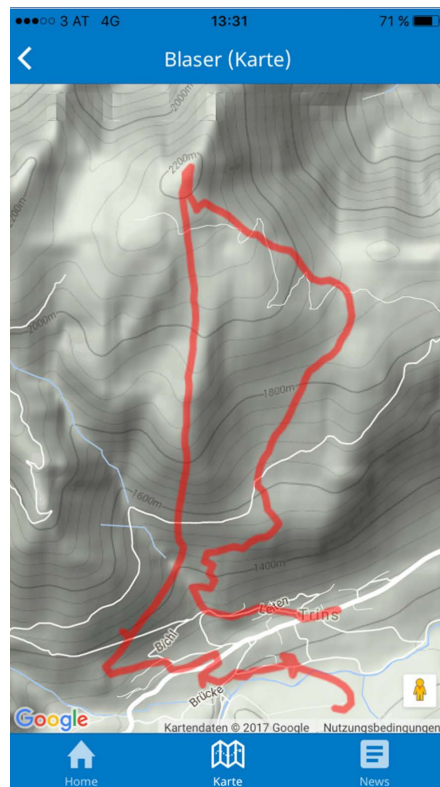


Air Design is the main sponsor of the site "hikeandfly.info" where everyone can describe a hike and fly day out, including uploading a KML file of their walk and/or flight.

Now there is an iOS/Android app (in German) so that you can easily look at outings in your area.

For the moment, those taking part are mainly German-speaking, but it has potential.

www.hikeandfly.info





DUDEK CODEN PRO

The three sizes of the Coden Pro have been certified using the new version of the CCC norms.





DUDEK COLT 2

The Colt has evolved: it has got a SharkNose and technology from the Coden competition wing, plus a type of reflex profile. It remains a C, but at the same time should have 'the agility and performance of an EN D'.

<http://www.dudek.eu/en/>

| COLT 2 TECHNICAL DATA | | | | |
|---|-------|--------|--------|---------|
| Manufacturer: DUDEK | | | | |
| Web : http://www.dudek.eu/en/universalne-pg/colt-2.html | | | | |
| Mail : info@dudek.fr | | | | |
| SIZE | 23 | 25 | 27 | 30 |
| CELLS | 61 | | | |
| FLAT SURFACE AREA [M ²] | 23.20 | 25 | 27.20 | 30 |
| FLAT WINGSPAN [M] | 11.99 | 12.45 | 12.99 | 13.64 |
| FLAT ASPECT RATIO | 6.20 | | | |
| ALL UP WEIGHT [KG] | 65-90 | 80-105 | 95-115 | 110-135 |
| WEIGHT OF THE WING [KG] | 5.20 | 5.55 | - | 6.25 |
| CERTIFICATION | C | | | |

SKY PARAGLIDERS

The Exos is an EN C made from Skytex 32. In size M it only weighs 4.05 kg.

The Zorro is an 'all terrain' reflex wing for intermediate and expert pilots and includes 'tip-steering'.

<http://www.sky-cz.com/>

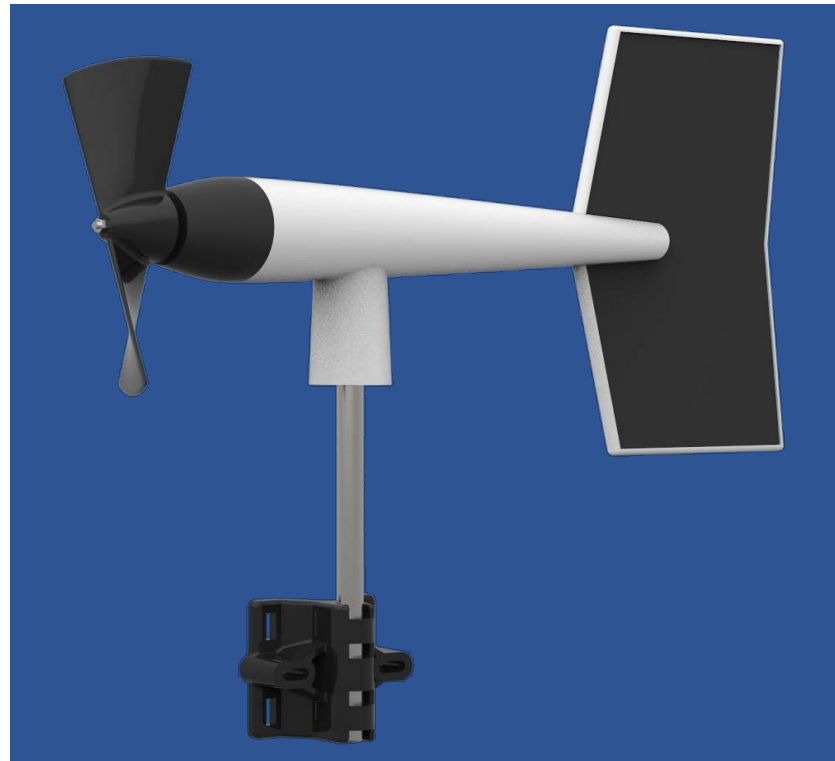


PIOUPIOU

THE NEW VERSION

A new version of the PiouPiou windtalker will be available from the middle of 2017. It will also be more international: thanks to GSM communication it will work all over the world. Its inventor, Nicolas Baldeck, has travelled to trade shows such as the CES in Las Vegas.

<http://pioupiou.fr/en/specs>



A NOTE FROM THE EDITOR



The PiouPiou is an amazing invention, making local weather information available to everyone, even on the smallest site. You can clearly see on the map of France the numerous take-offs which already have one (and they are not all marked on the site). By adopting the GSM network instead of the SIGFOX network, the product has become more universal, but also more expensive. During our first test of it in 2013, it cost 199 €. (www.free.aero/en/media/Hitec-E.pdf, p.8). Now it costs 650 €, but with a possible rental agreement of 25 € per month. For an individual it's a bit expensive, but for clubs, even small ones, it is still possible, fortunately, and pays for itself, as knowing what the wind is doing all the time on 'your' site allows pilots to save time and money that they would otherwise spend on numerous pointless trips.



ITV BOXER 2

ITV are designing a new version of the well known Boxer. The Boxer 2 will be launched this spring. It has much better performance (glide ratio of 9.5 instead of 7), is even easier to inflate, has greater stability in the air and is aimed for school use, both for paragliders and paramotors.

Certified EN A/DGAC. It will have a slight SharkNose and three lines (and a half) instead of four. ITV are also working on a 'promising' single surface, the Siam 2 (see photo), which should be out this summer. Objective: mid EN C, glide ratio 11+, maximum speed 58 km/h at a glide ratio of 10.5, aspect ratio: 6.4. There has been a major change at the head of the company created in 1982 in Annecy. It has been bought by designer and former competitor Mika Regnier, who already works there.

The former boss Heniu Dyduch isn't really retiring; he will be head of the French testing laboratory 'Aerotest' (along with the DHV, one of the oldest laboratories in Europe). ITV earns 70% of its turnover exporting to 57 countries and is particularly well known in the paramotor world.

www.itv-parapentes.com/



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TREKKING

BIRD

The new Bird from Trekking has been certified EN B. It's placed just above the Senso Sport as far as performance and speed are concerned.

Compared to the Senso Sport, it has 15% less lines.

Trekking have fitted leading edge rods in P14 Polycomposite, a material which remembers its shape and is moisture resistant, unlike polyamide.

The catalogue price is 3800 €, but the launch price is 2950 € until 30th April.

<http://www.trekking-parapentes.fr/>

BIRD TECHNICAL DATA

| BIRD TECHNICAL DATA | | | | | | |
|--|---------|---------|---------|----------|----------|-----------|
| Manufacturer: TREKKING Web : http://www.trekking-parapentes.fr/index.php/en/ | | | | | | |
| DATE | 2016 | | | | | |
| SIZE | XS | S | SM | M | ML | L |
| CELLS | 45 | 45 | 45 | 45 | 45 | 45 |
| FLAT SURFACE AREA [M ²] | 22 | 23.5 | 24.75 | 26 | 27.25 | 28.5 |
| FLAT WINGSPAN [M] | 10.83 | 11.20 | 11.48 | 11.75 | 12.05 | 12.32 |
| FLAT ASPECT RATIO | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| ALL UP WEIGHT [KG] | 50-75 | 60-85 | 70 - 95 | 80 - 105 | 90 - 115 | 100 - 125 |
| WEIGHT OF THE WING [KG] | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| CERTIFICATION | EN926-1 | ENLTF B | EN926-1 | ENLTF B | EN926-1 | ENLTF B |
| PRICE [€] | 3 800 | 3 800 | 3 800 | 3 800 | 3 800 | 3 800 |



HANNES PAPESH LAUNCHES PHI

A new company is born: Hannes Papesh has left Advance and started 'Phi'...

Φ or 'Phi', is the name of the new brand created by Hannes Papesh, a designer who has played a significant part in the history of paragliding. His career started in 1988 when, as a young student, he sewed together his own paraglider. To optimise it, he wrote a computer program which ran on a Commodore 128. The core of this program still forms part of today's software. The profile was a mini revolution with its nose partially closed and its downward-facing openings. Then Hannes made the Comet CX: very accessible but, nonetheless, with enough performance that, during the 1989 Stubai Cup, this 'wing stole stardom from the high performance Ailes de K Trilair.'



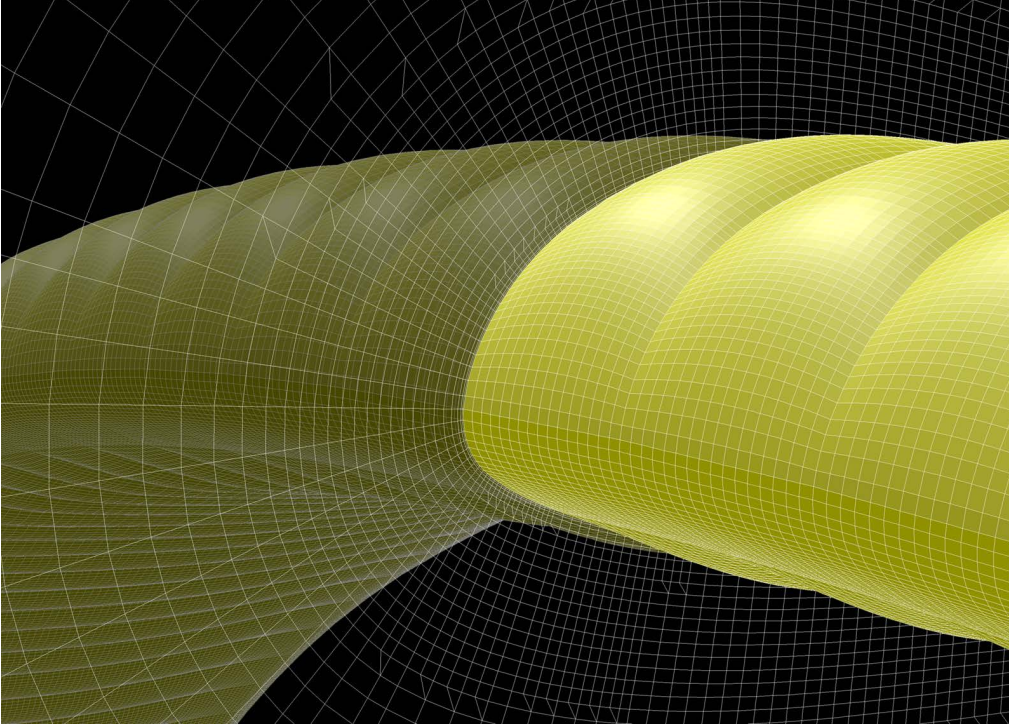
Hannes Papesh, 51 years old, paraglider designer. The fact that the Austrian was wearing one of his favourite t-shirts that day was just a happy coincidence, and one we weren't upset about.

First prototype 1988, 'home made'.



Hannes' first Nova wing: the CXC, an improved version of the CX.



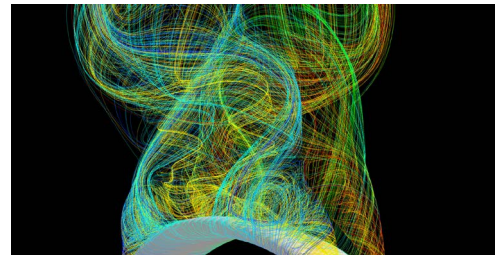
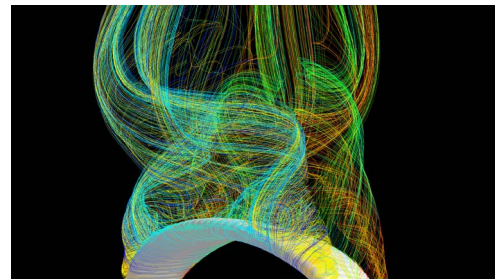
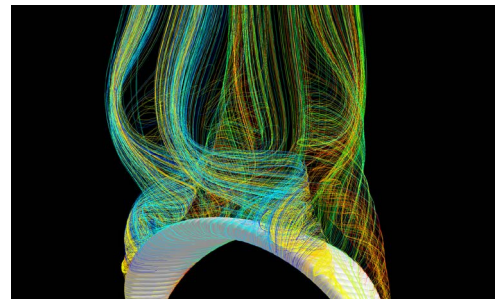
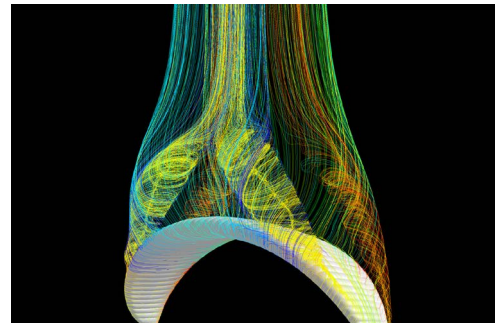
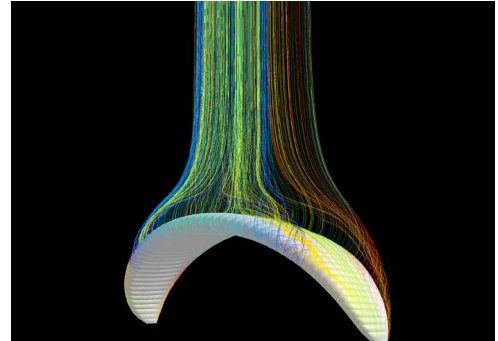
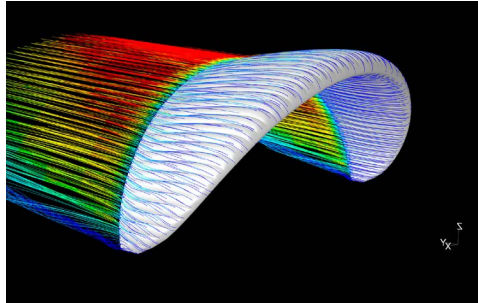
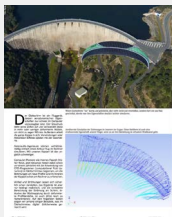


Peter Mack, one of the partners at Phi

FIFTEEN YEARS AFTER: CFD

Fifteen years ago, Hannes Papesh and Peter Mack introduced into paraglider design the digital technique, 'CFD' (computational fluid dynamics), to calculate and simulate in detail the flow of air around a profile. Coming from the car industry, Peter Mack, was a specialist. On the images from 2007, you can see the visualisation of flow around Nova's Ra model, including in the parachutal phase. Hannes Papesh systematically used this technique when designing. Having said that, CFD isn't indispensable for making high performance paragliders: the designers at Ozone, for example, don't use it.

There is more information about it in our article "Making Of":



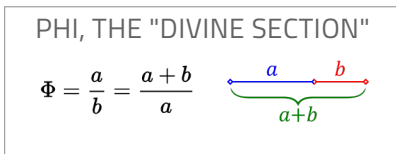
Mike Küng, test pilot and partner at Phi.

Papesh stayed with Nova for more than two decades: The Phantom came out in 1991 and Urs Haari did 200 km on it. Then the Phocus surprised everyone, by being an easy, yet high performance, intermediate wing.

One design principle has been the hallmark of Hannes Papesh's career: relatively accessible wings, but with good performance, especially in the EN B niche. The Nova Mentor is a good example.

In 2013, when Thomas Ripplinger left Advance, Hannes Papesh commenced collaboration between Nova and Advance, in particular, by providing his design software and support. In March 2014, he left Nova altogether and joined Advance.

Three years later, in March 2017, he left Advance to set up Phi: 'Phi', with the initials of "Papesh Hannes", already in Philou, Phantom and Phocus. Phi is also the symbol for the 'Golden ratio' or the "divine proportion", harmoniously present in both art and nature. So, French presidential candidate, Jean Luc Mélenchon, wasn't mistaken when he also chose it as the symbol for his growing political party.



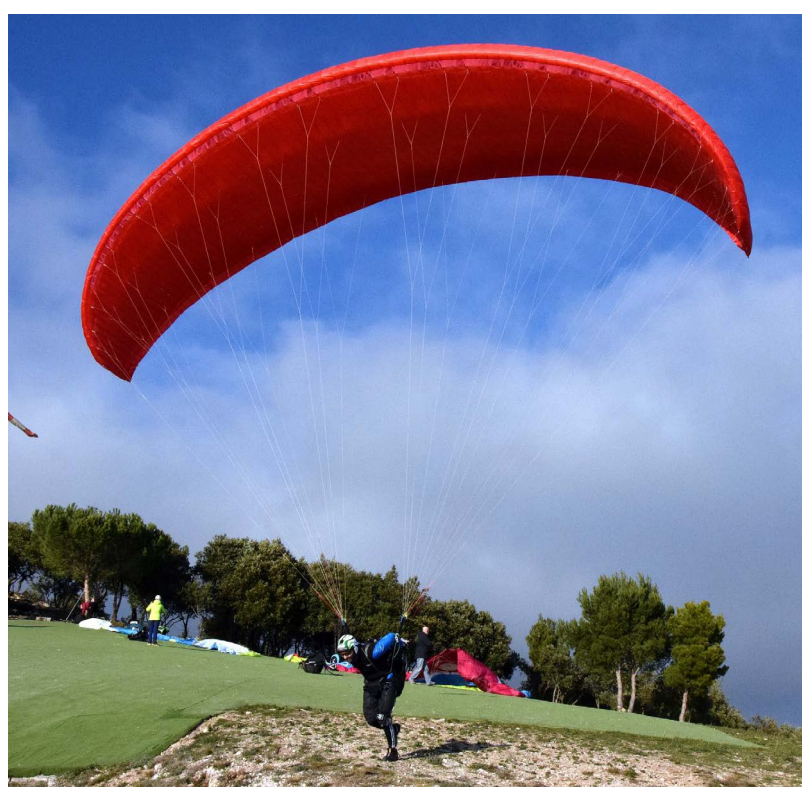
Hannes also played a big part in the start of the craze for 'hike & fly': in 2007, when the small wings were all 'speedriding', he launched the Ibox, the first small paraglider capable of thermalling efficiently.

Hannes will no doubt be happier with his new found independence, free of the hierarchical shackles associated with a big company. This gifted designer is known for his openness and kindness, but also for his love of pursuing his ideas without being held back by anything other than technical constraints.

In the company Phi, there is also Peter Mack, owner of the factory in Hungary, and the brand Evotec (Companion reserves), as well as test pilot Mike Küng and Hannes' partner, Franziska Bucher.

The first models, no doubt a 'Low' EN B and a 'High' EN B, will be ready for the 2017 Coupe Icare. Hannes will also be working on his project for an EN A/EN B wing with more than 100 cells, which he started in the winter of 2015-16. This should be in Nova, and their designer Phillip Medicus's niche market, one they have occupied since the summer of 2016, with their 99 cell Phantom.

Apparently, up until now, Hannes Papesh hasn't been able to work on his project at the speed he would have liked. Now, with Phi, 'PH' will have as much freedom as he wants... 🙌



A Papesh Prototype in the winter of 2015-2016: 90 cells for an EN A/EN B.

Hannes Papesh during our interview on the subject of Phi: clearly work is back to being fun again.





TEST
AIRCROSS U-CRUISE



AirCross U-Cruise size M (75-100 kg) loaded to 93 kg. Photo : Aircross

The AirCross U-Cruise is aimed at an 'ambitious range of pilots right up to competition pilots' who want to make the most of the comfort of a playful EN B, which is fast and has nonetheless good performance. In fact Konrad Görg, the owner of AirCross, flew 446 km on the wing that we tried.

by Estéban Bourroufiès



Photo: Aircross

MANUFACTURE

It isn't a lightweight wing: 5.8 kg for the U-Cruise M that we tested at 93 kg, in a range of 75-100 kg. It's clearly a wing which is built to last.

On that subject, remember that AirCross offer free, for any wing bought new, an all risks insurance for four years, which takes care of any necessary repairs, after a tree landing for example.

The U-Cruise was designed by the AirCross R&D team led by Paul Amiel who needs no further introduction.

Decades of experience have been combined with the most modern technology such as this very pronounced SharkNose.

Konrad Görg, owner of AirCross took an active part in the development. He was also the one who showed its potential by flying 446 km in Brazil.

The lines are very airy, indispensable for good performance at high speed.



Photo: Estéban Bourrouffés



The fabric is a mix of Skytex 38 g/m² and Dominico D20 35/m², and the manufacture is more tough than lightweight. Photo : S. Burkhardt

INFLATION/TAKE OFF

The wing comes up lightly and progressively and comes to a stop at the correct angle of attack. It's a real joy to play with. At take off, it's disconcertingly easy. As far as the take off run and the load take up are concerned, the wing starts to bite as soon as it accelerates, which gives a good load take up at the end of the acceleration.

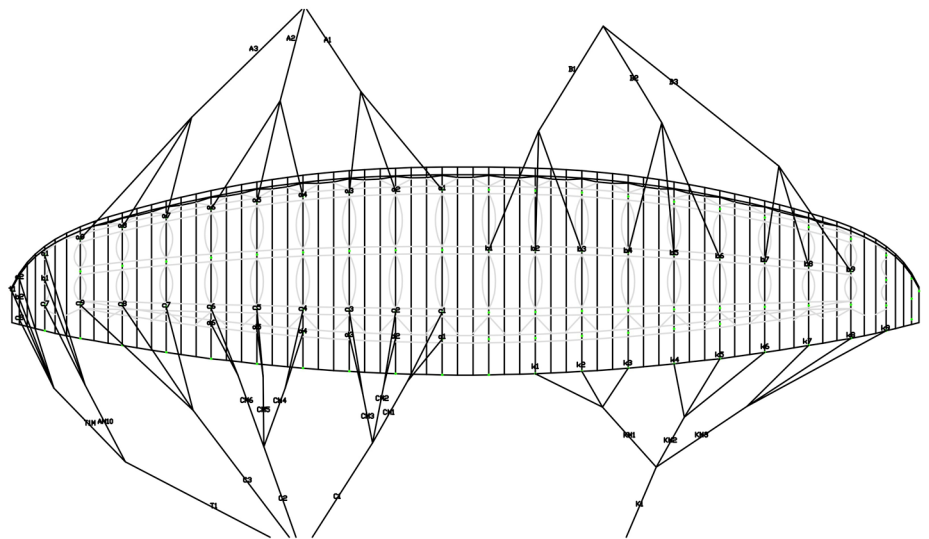
TURNING IN A THERMAL

This wing handles well in thermals. You can try different types of turns to adapt them to the conditions.

The flat turn, turning with a minimum of roll, requires a certain radius of turn, but works very well. If the pilot wants to reduce the radius, he can pull more on the inside brake and manage the yaw movements with the outside brake.

The wing takes a steep roll which is perfectly reasonable on the reduced radius of the turn, whilst keeping its high performance and handling.

The wing reacts fairly well going into thermals and crossing cores. It remains efficient even when subjected to a few pitches thanks to its glide which it retains, and the brake travel through the controls.



A simple riser and minimalist lines: quick and easy at take-off. Photo: S. Burkhardt





The wing is very well behaved during small collapses, taking a bit more bank after a bigger collapse, photo taken from a video: Estéban Bourroufiès.

The U-Cruise is lovely in thermals, you can ask it to do anything and it'll do it no problem.

BEHAVIOUR

It's pretty much a single block, with no tendency to distort. On rare occasions, it's just at the wing tips and of no consequence as far as steering and handling are concerned.

ACCELERATED

In accelerated flight, it has good glide. The wing remains stable above your head, and I didn't notice any tendency to collapse even when crossing thermals.

On the other hand, I didn't have an opportunity to test its accelerated flight for a long time in very rough air.

BIG EARS

The ears are stable. They start to reopen by themselves but can potentially need a bit of help from the brakes to finish opening the last cells at the wing tips.

COLLAPSES

During small collapses, the wing almost doesn't bank at all. Sometimes it reopens by itself, sometimes it needs the pilot to start it.



Video by Estéban Bourroufiès <https://youtu.be/TaAD1qq5dZs>



This strange rod in the stabilo, giving a full profile, has a fairly aesthetic function according to the manufacturer. Photo: S. Burkhardt



Quite a sophisticated interior. Photo: Aircross

On the other hand, during big violent collapses, the wing can dive radically to a great angle.

LOW SPEED

This is its strong point. The low speeds are great, and I could really reduce the speed but stay in the flyable zone. The wing remained easy to handle even at low speed. In addition, it's ideal for top landing! The only negative point: it can be difficult to bring down.

STALL

Getting into these manoeuvres is fairly physical and takes a long time because of its capacity to continue flying at low speeds, which is, in the end, a good point.

During the stall, you can keep the wing stable going backwards. At the exit, it clearly wants to return to flying normally. This can then, depending on the way it's being flown, lead to pitches forwards of varying sizes.

PERFORMANCE COMPARISON

Carried out in calm air (no thermals, prevailing wind ± 5 km/h) and written in the order the tests were done. These tests were carried out twice and the results were identical both times.

TRIM SPEED

We compared different glides where the trim speeds were equivalent. The test was carried out amongst others with a Niviuk Ikuma 23, which was therefore smaller. The pilot was in the top of the wing's range. With this configuration, the difference in glide was almost zero. Accelerated 50-60 %: with an accelerated configuration of a bit more than 50% for the U-Cruise, the two other pilots were almost on maximum acceleration to have the same speed. Comparing glides at this speed: at the end of the transition for which we started at the same height and with stabilo against stabilo, the U-Cruise degraded a bit more and ended up slightly lower.



Paragliding Map

Paragliding sites mashed up with live weather & forecasts.
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ACCELERATED 100%

The best was therefore at the end. Whilst the others were almost on maximum, the U-Cruise was on 50-60%, we ended by all putting on maximum accelerator 'pulley to pulley', end of the equal speed comparison.

The maximum speed on the U-Cruise is higher than the Ikuma; no need for a long transition to demonstrate this.

We swapped the Ikuma and U-Cruise pilots over to have different all up weights: The U-Cruise loaded in the middle of the range and the Ikuma loaded at the top end of the range.

Here once again, the speed difference in favour of the U-Cruise was blatant. But on the other hand, the Ikuma is a wing which is, a priori, a little more accessible.

CONCLUSION

The AirCross U-Cruise is homogenous, solid and efficient in thermals.

At the same time it allows the minimum speed to be greatly reduced, whilst benefiting from a very good glide at top speed: an interesting characteristic for a wing that you can roll out and do big distances on!

As far as the level of pilot targeted by AirCross goes, the formula of 'ambitious pilot' upwards seems reasonable, even if remains an EN B. ☺

The good behaviour at low speeds is useful in thermals, and also, in addition, for top landing. Photo: Estéban Bourroufiès





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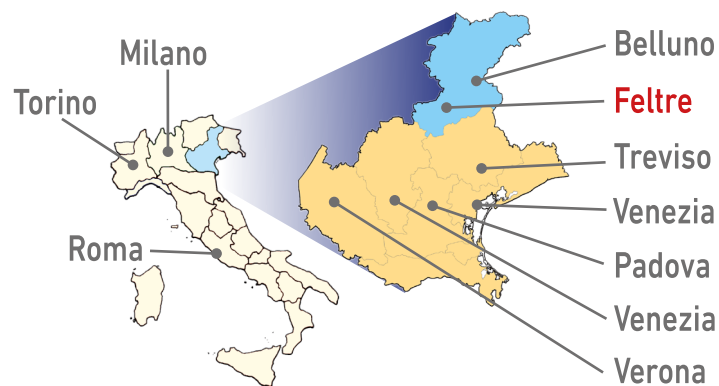
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15 July: Prize-giving & Closing Ceremony

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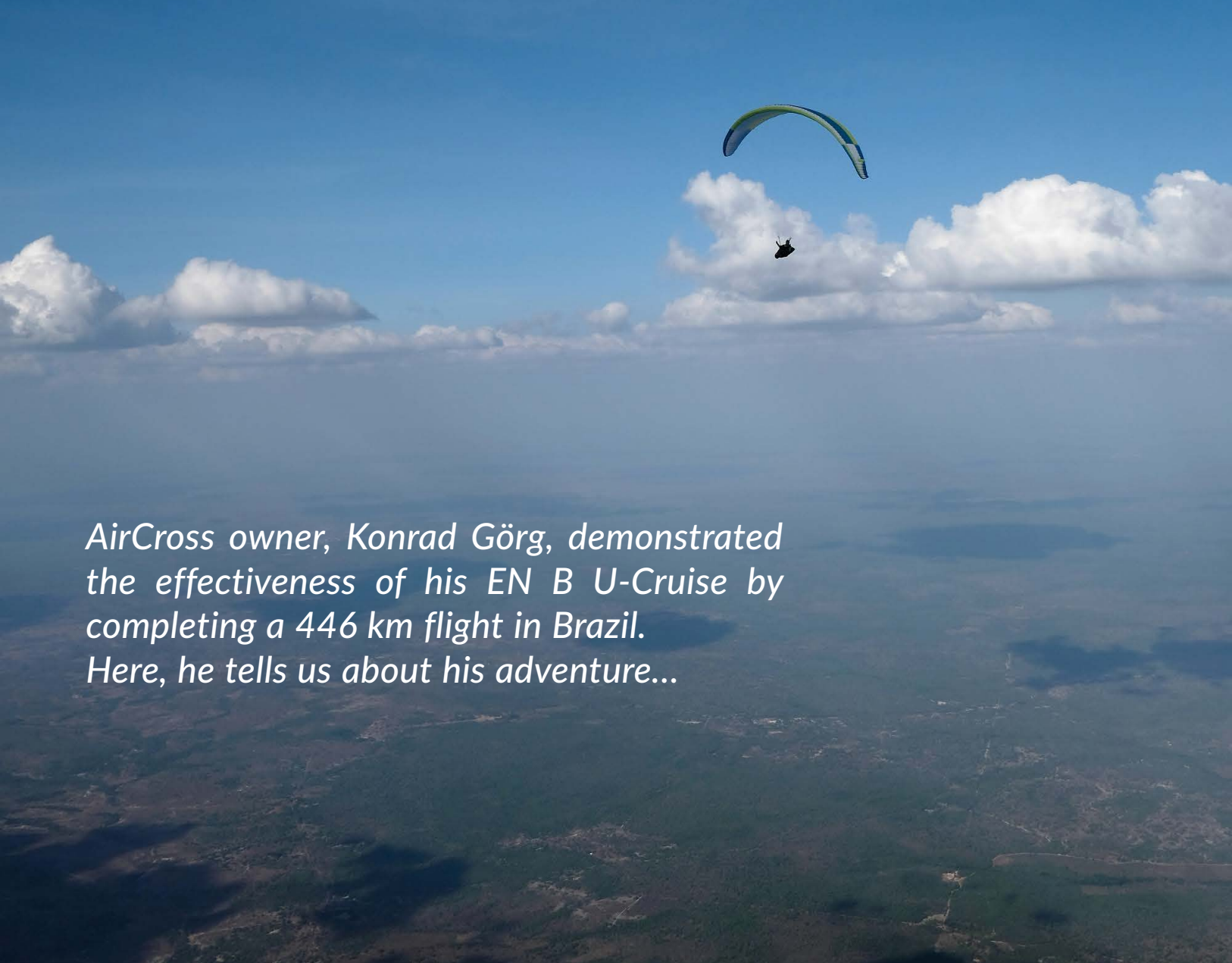
More info: www.dolomitiprealpi.it





RECORD

446 KM ON AN EN B



AirCross owner, Konrad Görg, demonstrated the effectiveness of his EN B U-Cruise by completing a 446 km flight in Brazil. Here, he tells us about his adventure...

Autumn 2016 in Quixada was the right place and the perfect time for chasing records. The flats and hills let you take off with good thermals from seven in the morning, and there are long days and strong winds... With these flatland conditions, only taking off and landing are demanding for pilots. In the air, it's calmer than on lots of Alpine sites, where I have experienced situations which were much more turbulent and unpleasant.

During my third trip to Brazil I wanted to beat an official record with my U-Cruise. I set a declared goal of 425 km from take-off. The friends who came to fly at the same time as me were all on higher performance, 2 liners. I therefore had to fly more aggressively to have the same speed.

The 446 km flight on the Xcontest website:
<https://www.xcontest.org/world/en/flights/detail:konroo/1.11.2016/09:48>

Flight detail Konrad Görg · 1.11.2016 · 446.38 km

| | |
|-----------|----------------------------|
| pilot : | Konrad Görg [konroo] DE |
| date : | 01.11.2016 06:48 UTC-03:00 |
| launch : | Quixadá BR |
| route : | 446.38 km 446.38 p. |
| glider : | AirCross U Cruise |
| airtime : | 10:40 h 42.65 km/h |

IGC file Google Earth

Desc Flight Route Start Land

Was für ein Wahnsinnsflugtag - nach 100km, die innerhalb einer Stunden, nach dem Abflug bewältigt waren, hatte ich den ersten Gedanken, dass es etwas mit dem Weltrekord zum deklarierten Ziel passen könnte, aber dazwischen lag noch eine ganze Menge Arbeit ;-) Als ich dann die letzte schwache Thermik erwischte und gesehen habe, dass es locker reicht (456km wäre drin gewesen - Entfernung zum Startplatz, da ist Lex hin, mit dem ich den letzten Bart gedreht habe) bin ich schon früher abgehauen. Die Emotionen kamen hoch und ich wusste selbst nicht, wie mir geschah, weinen und lachen auf einmal! Eigentlich wollte ich dort beim deklarierten Punkt landen, dort war aber nur Palmenwald, also glitt ich noch ab bis Miguel Alves -, den Ort den ich kurz vorm Starten nochmal am Startplatz ausgerufen habe ;-) Ich bin überglücklich.

<https://www.facebook.com/aircrossgliders/?rc=p>



Soaring around, waiting above a 'hill in the flats'.



In the flats, more so than in the mountains, flying in a group lets you see more easily the areas that work. At the World Cup Super Final, in similar conditions, the pilots also stayed very much in a gaggle.

Flying in a team is very useful in the flats, especially at the beginning of the flight, when the thermals are weak and base is still very low. At the take-off in Quixada, as is often the case, there was a strong 40 km/h wind. My wing allowed me to manage this sort of situation well at take-off and didn't snatch as much as my friend's racing machines.

One hour of soaring around waiting before finally getting the first thermal which took me up to 1350 m. At base, one thing was clear: I'm not going anywhere into wind, so the decision was made, time to go.

My motto: use even the smallest bubble. Apart from that: straight line to the goal with the wind on my back. After two hours, I'd done the first 100 km. An average of 50 km/h: today, that could be it for the record.

After successfully passing the first difficult point at 120 km, there was a change in the relief, where it went up to 500-600 m.

Climbing to 2700 m, a nice cloud street opened up in front of me. Thank goodness! Below it was the 'Roubada', a desert landscape where it's really not a good idea to land.

For the next 40 km I hardly turned at all. Next was a very demoralising section; my vario began to cry and the ground got nearer and nearer.

Mercy! Please don't let me land 300 km from take-off, with a ground speed of 80 km/h...

Then it came: the famous low save. At 280 m above the ground, a 6-7 m/s thermal took me back up to 3000 m.

At about 16h30, after 400 km of flying, I met up again with my friends on their competition wings. We flew almost side by side towards the setting sun, above the palm trees.

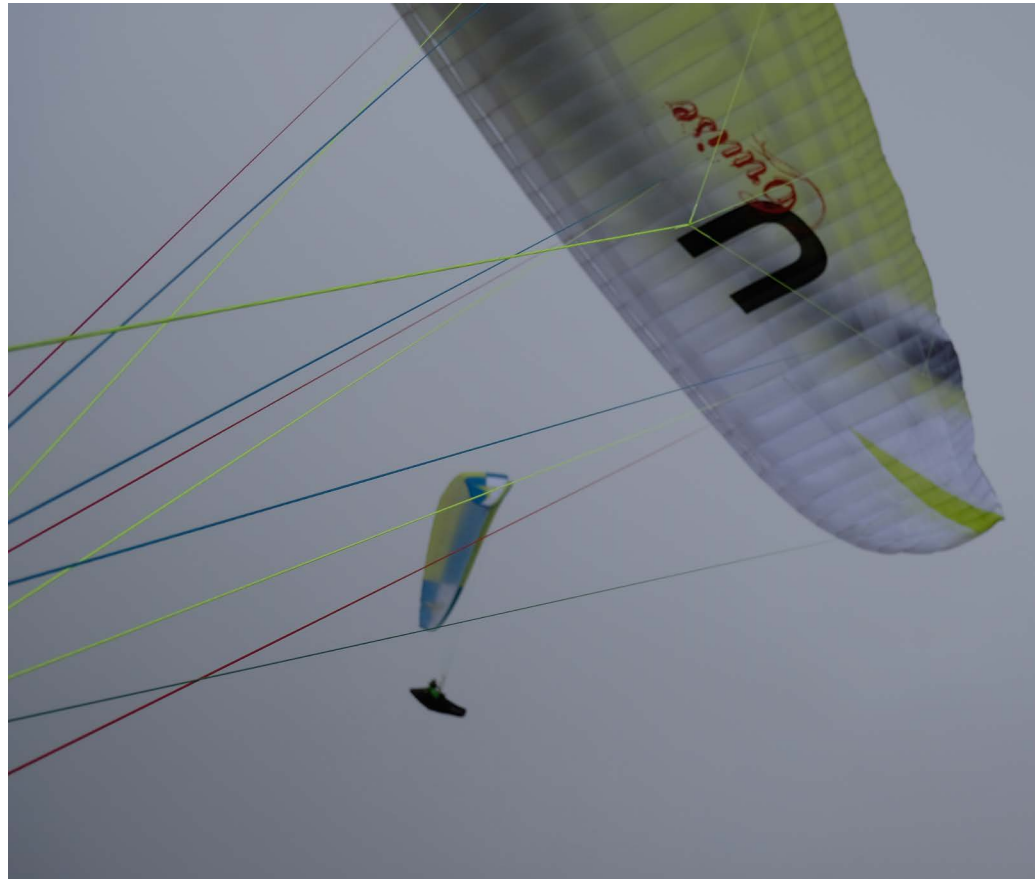
I still needed one more thermal and the record would be in the bag... And just then, my vario beeped into life to show me an area of zeros. After a dozen turns in 0.2 m/s, it wasn't working...



And then, little by little, the thermal strengthened and took me up to 2500 m. The way was clear... I landed after eleven hours and 446 km of flying and straightaway asked some of the villagers to act as my landing witnesses, as is required for an official record.

Fantastic!

Unfortunately, in the end, the record won't be officially recognised. Due to an error before take off in entering the coordinates into my GPS, I missed the declared goal that I over flew at an altitude of 2000m ...by 800 m on a horizontal plane. But 446 km remains the longest ever flight on an EN B, so at least it's an unofficial world record and, obviously, this really amazing day, flying my U-Cruise, will remain an unforgettable adventure. 🌍



Konrad Görg, owner of AirCross was warmly welcomed (thus officially witnessing his landing) by the villagers.





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LTF/EN B

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www.independence.aero



PARAGLIDERS



HARNESSES



RESERVES

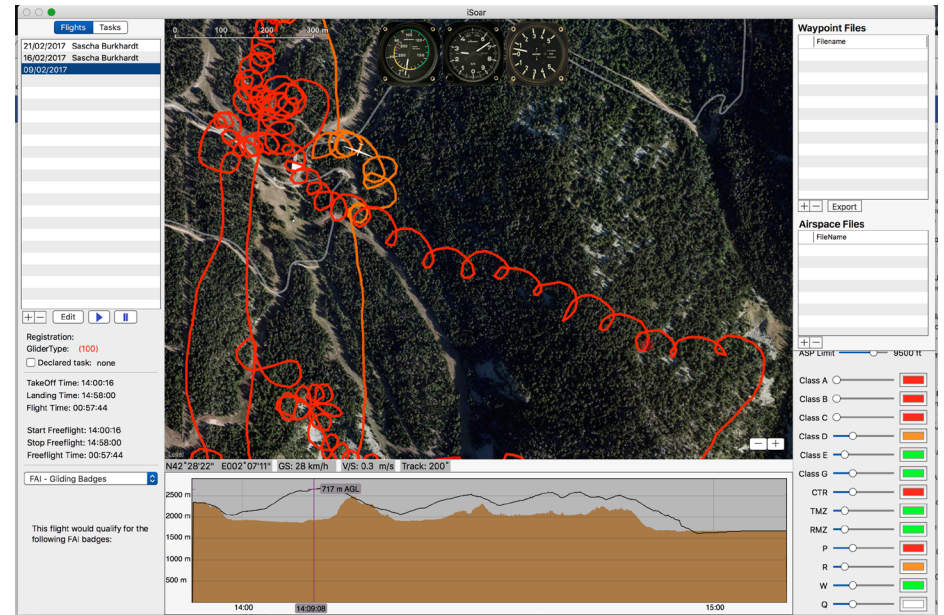


ACCESSORIES

TEST: ISOAR IGC READER FOR MAC

For Mac users, there are not many applications which let you read flight recordings in an IGC format so that they can be analysed on a map. The 'iSoar' application in the MacAppStore costs nearly 20€, but it works like a charm as soon as it's installed. It automatically loads a Google Maps background, as well as the relief profile of the region to let the user visualise the height of the ground in a graph. This also lets you choose each point in the flight to see the speed over the ground (contained in the IGC file) and the climb rate (calculated from the altitudes) at this point.

The automatic upload of the Google map and the topographic profile is handy.

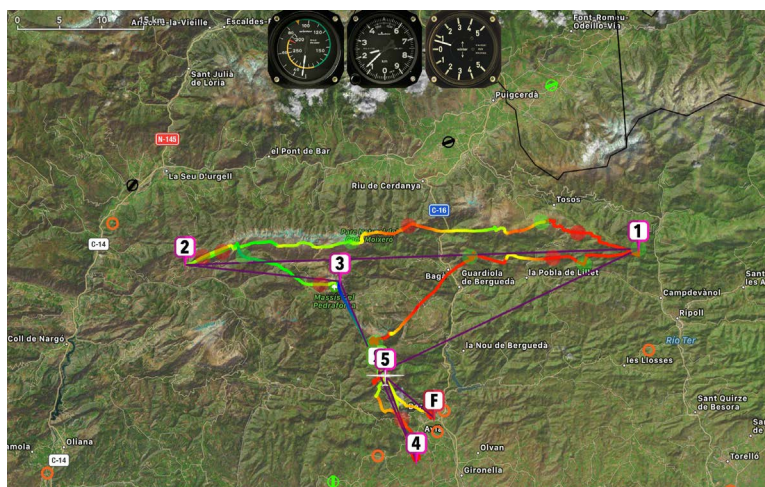




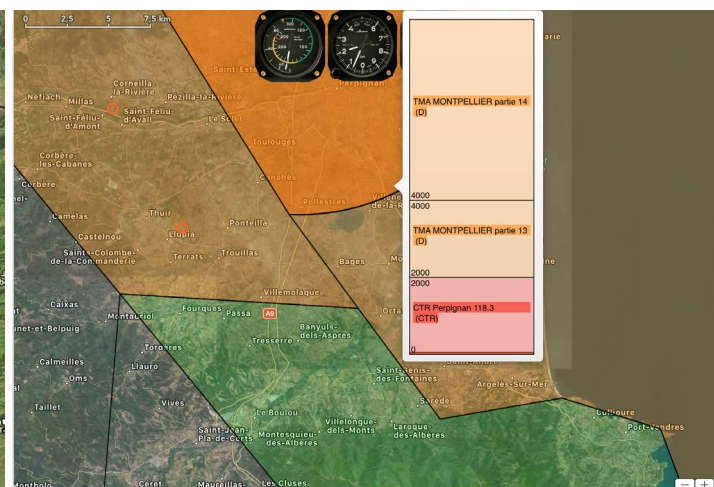
Technology and fun



www.trekking-parapentes.fr



The calculation of the points is integrated, but it still isn't compatible with the XContest rules.



Airspace can be visualised to check that there haven't been any infringements.

Everything runs smoothly, quickly and intuitively. It is also possible to display air space for the region concerned, after initially uploading a file in OpenAir format, and adjusting the colour transparency. An estimate (without any guarantee), of the calculation of the kilometres which would count for the online servers is also included.

Alternatives for Mac: Skywind

<http://skywind.eu/SkyKick/EN/index.html>

A reminder of alternatives for Windows:

Naviter SeeYou <http://www.naviter.com/products/seeyou/>,

CompeGPS Air, <http://www.twonav.com/fr/logiciels/air>

www.isoar.info

INSTRUMENTS

FLYTEC BY VOLIRIUM

Jörg Ewald, owner of Flytec up until the make was sold to Naviter, continues to develop and commercialise the Flytec 6030 and Flytec Connect1 instruments with his new company Volirium whilst, at the same time, being in partnership with Naviter.

www.volirium.com



Photo: Sascha Burkhardt

- 
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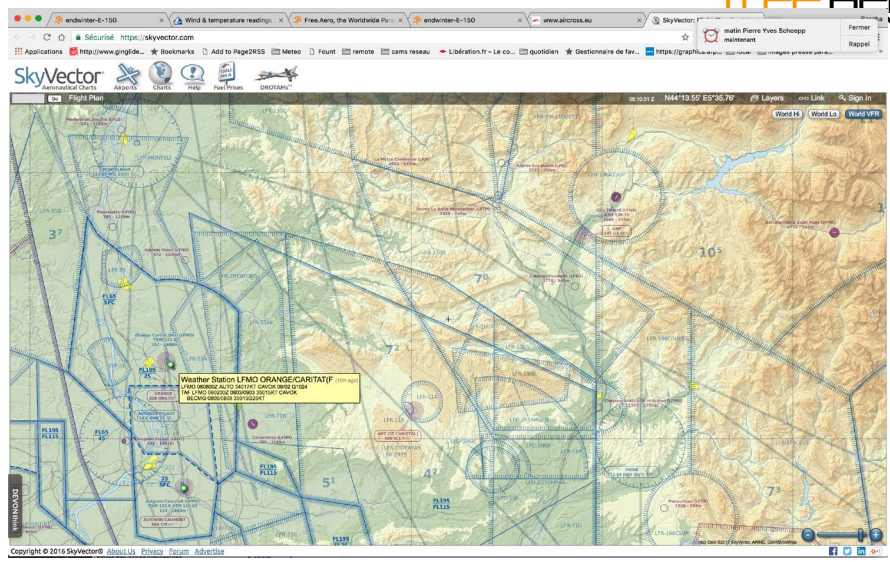
www.nova.eu/mentor-5



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<https://skyvector.com/>



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- Riser - Super simple 3 legs only
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- Four colour combinations

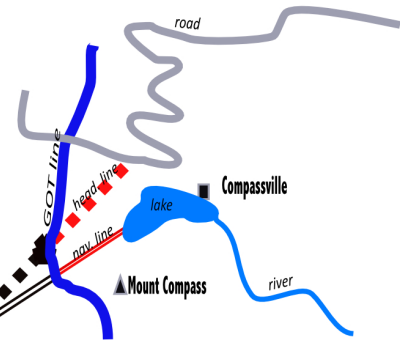
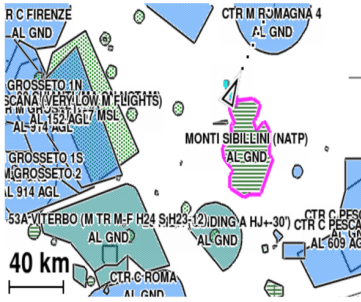


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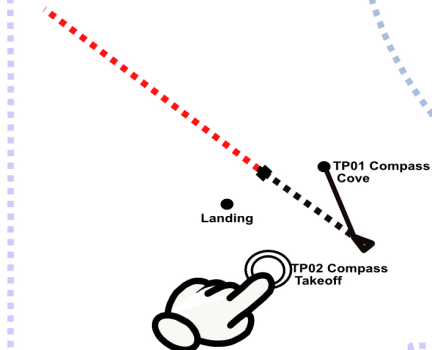
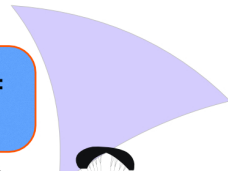
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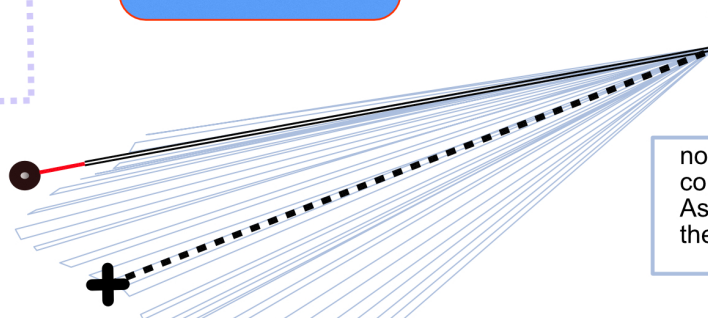
NAVIGATION BY TOUCH



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The XC - INSTRUMENTS

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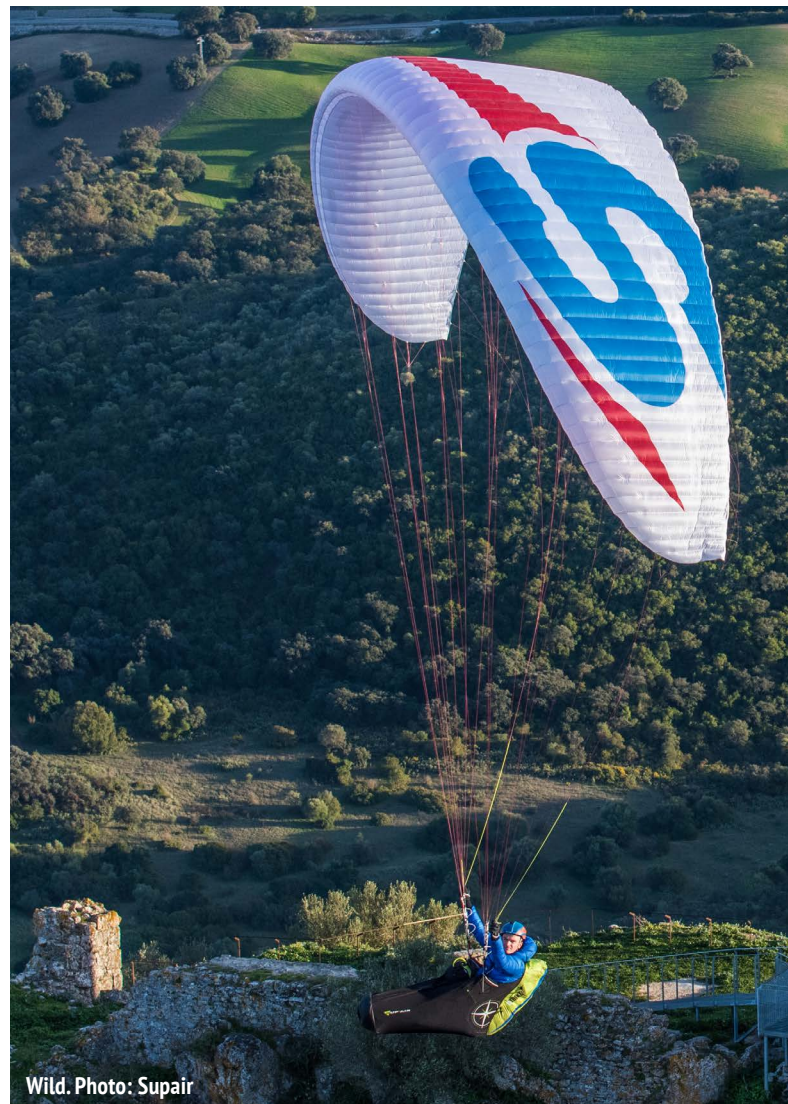
SUPAIR WILD - LEAF

Supair will be competing in the X-Alps in 2017 with 26 year old Benoit Outters on the Supair Wild, a lightweight high performance wing, currently under development. Also new in the 'light' range: a lightweight version of the Leaf (Photo on the following page). Saving in weight: 1.5 kg! (3.2 kg instead of 4.7 kg for the S).

www.supair.com/en/produit/leaf-light/



Benoit Outters, Supair will run the X-Alps 2017.



Wild. Photo: Supair

The Leaf light: very light (3.2 kg in the S). It's worth noting the 3D-Shaping on the trailing edge. Photo: Romain Rousset



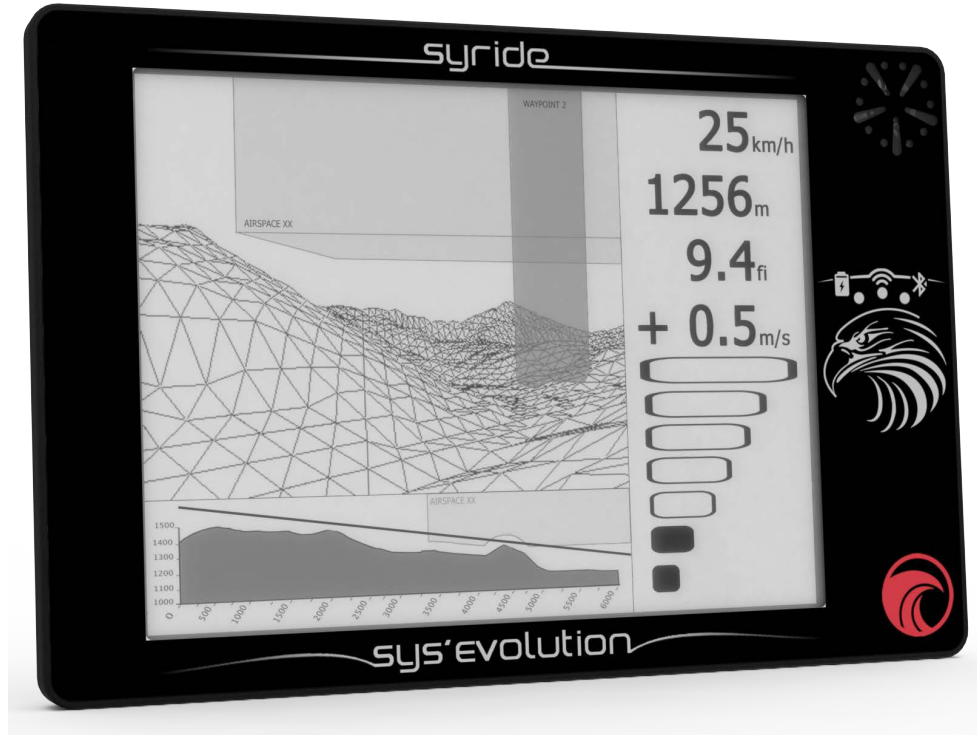
SYRIDE SYS'EVOLUTION

We've already mentioned the French manufacturer Syride who, up until now, have only been active in making very small, but nonetheless high performance, instruments (Test Syride SysNav 3: <http://www.free.aero/en/contentsHTML/instruments-e/?page=81>). Bit by bit, they have designed a flight computer, with an operating system proprietary to Syride.

The SYS'Evolution has a 6 inch contrast E-Ink touch screen with a resolution of 800 x 600 pixels and a 16 level grey scale display. They seem to have succeeded in making it very readable!

The price will be from 649 €.

www.syride.com



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www.skyman.aero

CrossAlps EN/LTF C 4,0 kg (Size M)

APCO

KARISMA

The Karisma is an EN A principally designed for beginners, but equipped with the most recent technology like a SharkNose, and based around three lines.

There is also a paramotor version available.

www.apcoaviation.com

| KARISMA TECHNICAL DATA | | | |
|--|-------|--------|--------|
| Manufacturer: APCO Web : http://www.apcoaviation.com/ | | | |
| DATE | 2016 | | |
| SIZE | S | M | L |
| CELLS | 39 | | |
| FLAT SURFACE AREA [M ²] | 25 | 27 | 29 |
| FLAT WINGSPAN [M] | 10.97 | 11.4 | 11.81 |
| FLAT ASPECT RATIO | 4.8 | | |
| ALL UP WEIGHT [KG] | 70-90 | 80-100 | 95-120 |
| WEIGHT OF THE WING [KG] | 5.2 | 5.5 | 5.8 |
| CERTIFICATION | EN-A | | |
| PRICE [€] | 3 000 | | |



APCO SWIFT

The Swift, Apco's competition harness is now available in a lighter version, with a seat plate which saves 500 g. The ensemble thus weighs 5.5 kg.

A new version of this harness is currently being finalised: smaller, with reduced fairing, less expensive and aimed at leisure pilots for weekend XC flying.

www.apcoaviation.com



Photos : Apco





NOVA MENTOR 5

Finally there's a follow up to the famous EN B Mentor: the Mentor 5 is a three liner with fifty-nine cells and a low aspect ratio of 5.4. Its weight has been slightly reduced: in size S, it's 5.05 kg instead of 5.3 kg for the Mentor 4. (Compared to 3.75 kg for the Mentor 4 Light).

The Mentor 5 will benefit from better performance when gliding and climbing, whilst being very accessible.

This has already been demonstrated by some amazing flights of around 250 km:

www.xcontest.org/world/de/fluge/details/:luki_ls/19.1.2017/04:05

www.xcontest.org/world/de/fluge/details/:v.rinaldo/24.1.2017/04:27

| MENTOR 5 TECHNICAL DATA | | | | | |
|--|-------|-------|--------|--------|---------|
| Hersteller: NOVA Web: https://www.nova.eu/en/gliders/mentor-5/ Mail : info@nova.eu | | | | | |
| DATE | 2017 | | | | |
| SIZE | XXS | XS | S | M | L |
| CELLS | 59 | | | | |
| FLAT SURFACE AREA [m²] | 21,84 | 24,16 | 26,49 | 28,88 | 31,24 |
| FLAT WINGSPAN [m] | 10,86 | 11,42 | 11,96 | 12,48 | 12,99 |
| FLAT ASPECT RATIO | 5,4 | | | | |
| ALL UP WEIGHT [kg] | 55-80 | 70-90 | 80-100 | 90-110 | 100-130 |
| WEIGHT OF THE WING [kg] | 3,35 | 4,8 | 5,05 | 5,3 | 5,55 |
| CERTIFICATION | B | | | | |
| PRICE [€] | 3 950 | | | | |





QUICK TEST NOVA PHANTOM M

Here are some details about our very quick test of the Nova Phantom M.

We've already discussed the Phantom a few times: it's an amazing wing which was launched with a big fanfare, but was initially difficult to get hold of to test. Therefore we flew a Phantom M, which was slightly too large; an S would have been preferable. It's certainly a complicated model and takes a long time to make: 99 cells and more than 3000 pieces to assemble just to make an EN B.

The 'lace' inside.

Part of the reason is the reduction in weight of the wing although, in the end, it isn't a particularly light weight wing (5.25 kg in M), quite simply because 99 cells require a lot of material!

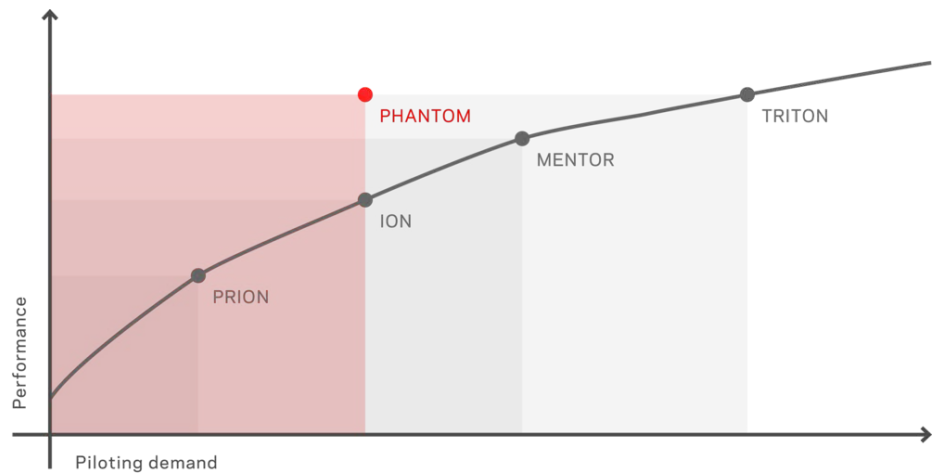
COMPARISON:

An Enzo 2 M is 23.7m², has 101 cells and weighs 6.1 kg; a Zeno ML is 24.1 m², has 78 cells and weighs 5.3 kg; a Gin Boomerang 10 is 23.59 m², has 96 cells and weighs 6.6 kg. Weighing 5.25 kg, the Phantom therefore comes out well. One reason is that the lower and upper surfaces are made in Skytex 27 and the leading edge in Skytex 32, as with a very lightweight wing.

The other reason is the extra work that Nova have done inside the wing: the ribs have been radically opened up and the diagonals cross several ribs (Needle Eye Ribs). On the other hand, the similarity with 'Top Gun' wings like the Enzo 2 and the Boomerang 10, clearly ends with the aspect ratio:

5.19 for the Phantom compared to 7.7 for the Boom 10, 7.55 for the Enzo 2 and 6.9 for the Zeno... And the Zeno is already a wing with a 'reasonable' aspect ratio, simply to calm its behaviour. This is a new trend. Read more on this subject in our test of the Zeno in this issue.

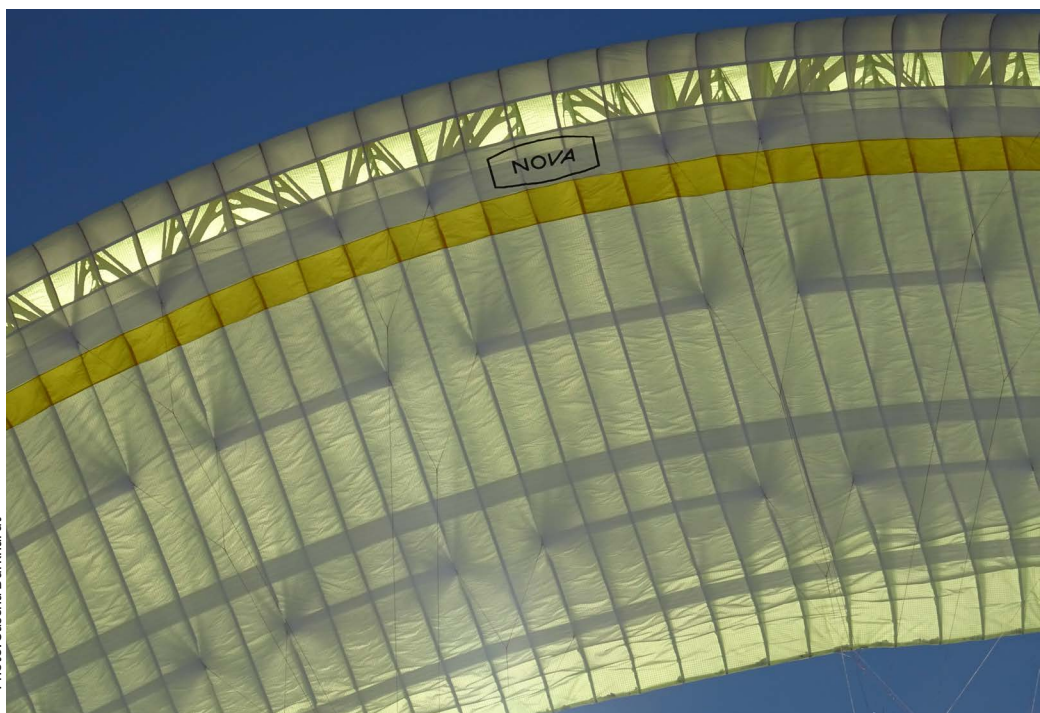
Photo: Sascha Burkhardt



As far as performance is concerned, Nova put the Phantom at the top of their range, comparable to the Triton.

Numerous diagonals cross a rib.

Photo: Sascha Burkhardt



So 5.19 is clearly the aspect ratio of an EN B. And the Phantom got this classification (21 A and 6 B at the top of the all up weight range in the DHV test) opening it up to a very large group of pilots.

The price, on the other hand, is logically higher: the Enzo 2 costs 6 200 € and the Zeno 5 760 €, but the Nova Phantom costs 6 500 €. For an EN B paraglider, it's certainly a lot but, compared to the racing wings, it's not outrageous.

The idea is that its owner flies a high performance wing, whilst benefiting from the safety and comfort of a top of the range EN B wing. To be clear: obviously an Enzo or a Zeno still have better performance because the aspect ratio will always be a determining factor (followed by the parasitic drag caused by the lines and the pilot).

But on the Phantom, our test pilot, who is used to flying an Enzo 2, felt it had the glide and performance of a very good wing; it was consistent and the stability was very reassuring. It seemed to go forward well when facing into wind. We didn't take any measurements in calm air but, without a doubt, it exceeded 50 km/h.

As far as inflation is concerned, the high number of cells and, as a consequence their narrower openings in no way prevented the wing from scooping quickly, regularly and symmetrically. After coming up fairly quickly, the Phantom took off like an EN B as well, and thus a lot easier than a wing like an Enzo!

The initial assessment after this brief test flight is positive: the manufacturer has created a nice machine, powerful, comfortable and reassuring. In addition, it's a nice looking wing.

To determine its potential more accurately, we are looking forward to the coming season. In the meantime, on XContest, some pilots are already clearly enjoying it:

<https://www.nova.eu/fr/xc/?singleRanking=9973&date=curSeason>

<https://www.nova.eu/en/home/>



The trailing edge has been sewn without a strip.

The Phantom is mainly made from Skytex 27.





Care has been taken in the detail and the raw materials chosen, but there is nothing extraordinary either, as some of those buying it would think, given the price. But the sophisticated work is inside the wing.

Photo: Sascha Burkhardt



Photo: Sascha Burkhardt

A basic riser: A, A', B and C.



Photo: Sascha Burkhardt

A nice wing with a classic planform and low aspect ratio.



Photo: Sascha Burkhardt

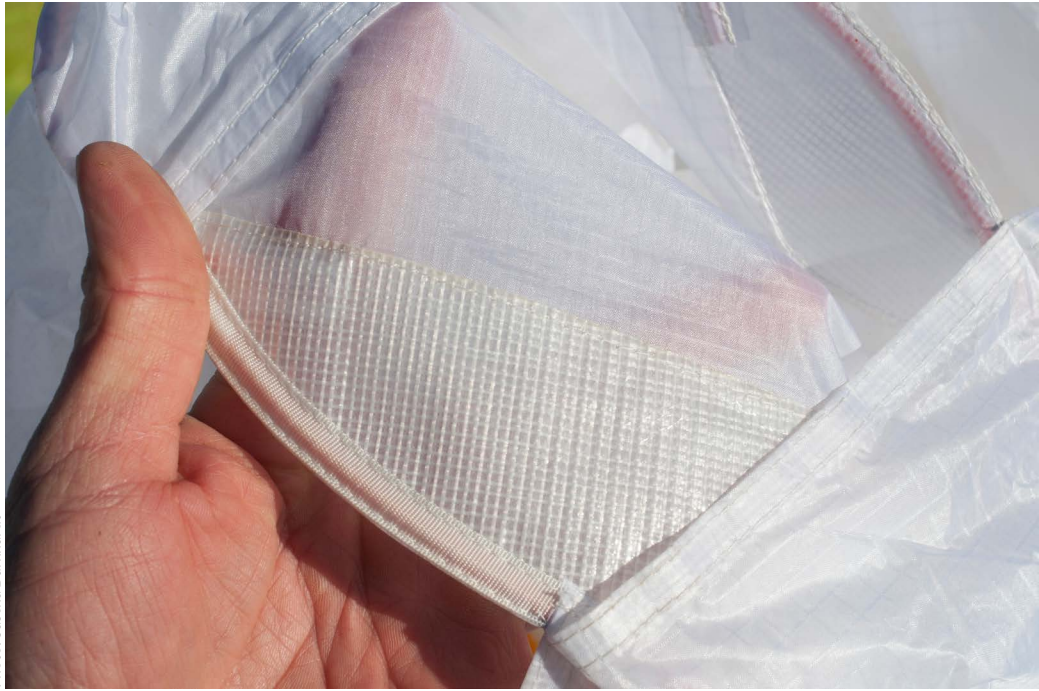
To accommodate 99 cells into a wing with a low aspect ratio, the cells need to be very narrow.

Photo: Sascha Burkhardt



Despite being made principally from light weight material, it has, all the same, Mylar film.

Photo: Sascha Burkhardt



The leading edge rods go far on the upper surface.

Photo: Sascha Burkhardt





A NOTE FROM THE EDITOR

Quick test by Estéban Bourroufiès

Nova Phantom M (90-110).
Test pilot: about 94 kg

INFLATION/TAKE OFF: The wing comes up as a single block, nicely and very progressively. Facing the wing, it can however be difficult to regain control of when it's coming down. The load take up is excellent.

THERMALLING: The wing is a real toy in thermals. In size M, for an all up weight of 94 kg, where an S would be preferable, it is certainly a bit slower to get into a turn. It can seem a bit slow to execute.

Once the turn has started, it has a good potential to glide, which lets it make nice flat turns, whilst keeping its speed so that it can comfortably go into the next turn.

The Phantom has a great capacity to give feedback about the air in an agreeable fashion, especially through the brakes, thus allowing the pilot to efficiently recentre the wing. Its glide and power are really very high for an EN B.

Behaviour: the wing seems to be very rigid and doesn't distort. The wing tips seem solid. Even at the bottom of the all up weight range, the wing tips rarely blink. Induced collapses don't seem to produce violent behaviour. Everything remains well behaved and it reopens all by itself.

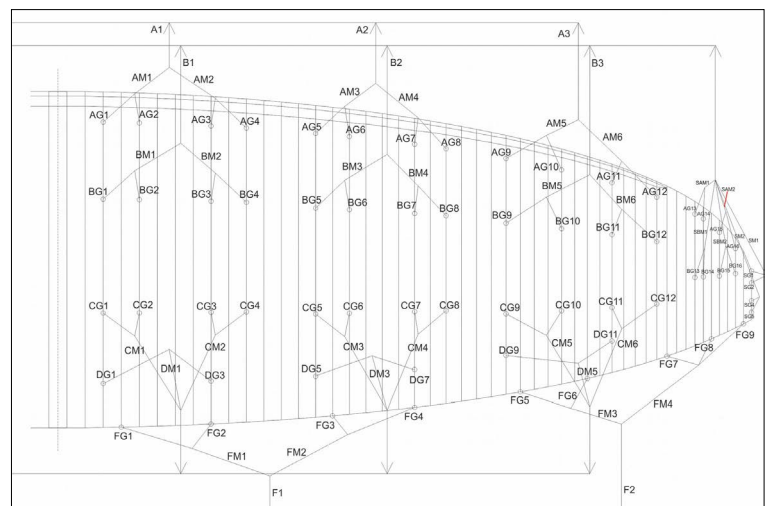
BIG EARS: The last cells remained stuck. To reopen them, the pilot needed to do some work.



PHANTOM TECHNICAL DATA

Manufacturer: NOVA Web: <https://www.nova.eu/fr/parapente/phantom/>
Mail: info@nova.eu

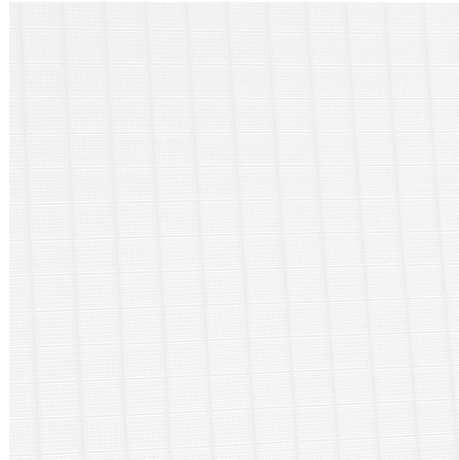
| DATE | 2017 | 2016 | 2016 | 2016 |
|-------------------------------------|-------|--------|--------|---------|
| SIZE | XS | S | M | L |
| CELLS | 99 | | | |
| FLAT SURFACE AREA [M ²] | 11,05 | 11,58 | 12,09 | 12,58 |
| FLAT WINGSPAN [M] | 23,52 | 25,84 | 28,16 | 30,46 |
| FLAT ASPECT RATIO | 5.19 | | | |
| ALL UP WEIGHT [KG] | 70-90 | 80-100 | 90-110 | 100-130 |
| WEIGHT OF THE WING [KG] | 4,8 | 5 | 5,25 | 5,5 |
| CERTIFICATION | B | | | |
| PRICE [€] | 6 400 | | | |



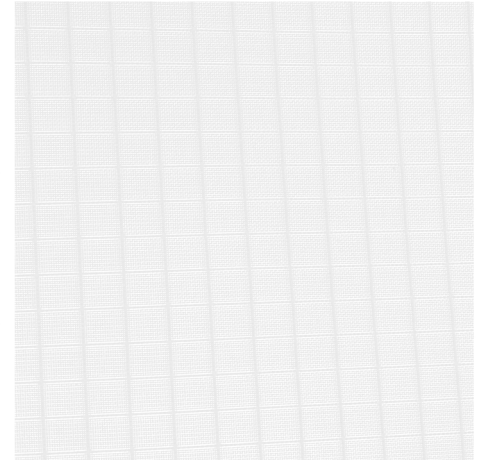
SOL

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<http://www.solparagliders.com.br>



Traditional Dyeing White



No Dyeing - Natural



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Paramotors



Trikes

KANGOOK
PARAMOTORS

WWW.KANGOOK.CA 



Accessories



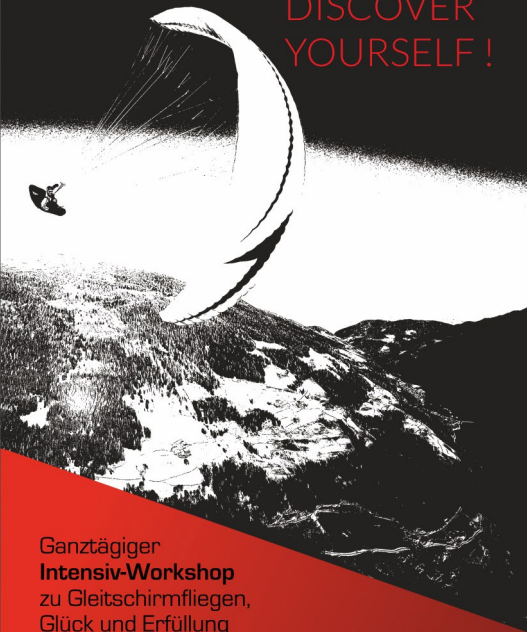
U-TURN BLACKLIGHT 2

An EN B designed for distance flying. It is available in four sizes from XS to L, from 55 kg to 120 kg. It weighs from 4.4 kg to 5.7 kg, and its aspect ratio is 5.61.

The SharkNose and 3D Shaping should stabilise the profile up to its maximum speed of around 54 km/h.

<http://www.u-turn.de/web/english/home>

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UP TRANGO X-RACE

The UP Trango X-Race is an EN C designed, amongst other things, for 'hike & fly', based on the Trango XC3, weighing 450 g less in the size M.

BASISRAUSCH RUCKSACK

A new back pack for hike&fly from the Swiss manufacturer "Basisrausch".

Only 900 g for a volume of 85 litres, made from Polyamid 500D Rip-Stop with a highly developed carrying system including even a frame.

For the moment, it's made in Switzerland (about 7 hours of sewing) with a high price tag of 390 €.

<http://basisrausch.ch/>



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Ja

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MAC PARA

ELAN 2 ET PASHA 6

The Elan 2 will come out in April and it's currently being certified. It's still high end EN C, but lighter; it's lost about 850 grammes. The aspect ratio has gone from 6.18 to 6.27 and, amongst other things, its nose has been redone, stabilising the profile at high speed (53-55 km/h). The new tandem Pacha 6 has come out.

The priorities for the manufacturer: make it lighter to improve take off. Using Skytex 32 and 38 (the previous one used 40/45), it comes up faster on the flat and overflies less on a steep take off.

Two sizes 39/42

<http://www.macpara.com/en/elan-2.html>



The Mac Para Elan 2

The Mac Para Pasha 6



| ELAN 2 - TECHNICAL DATA | | | | | | | |
|--|-------|-------|--------|--------|---------|---------|---------|
| Manufacturer : MacPara Web : http://www.macpara.com/en/elan-2.html Mail : mailbox@macpara.cz Tel: +420 571 11 55 66 | | | | | | | |
| DATE | 2017 | | | | | | |
| SIZE | XS | S | M | L | XL | XXL | XXXL |
| CELLS | 63 | | | | | | |
| FLAT SURFACE AREA [M²] | 22.18 | 23.7 | 25.8 | 28 | 30.28 | 33.27 | 38.66 |
| PROJECTED SURFACE AREA [M²] | 18.82 | 20.11 | 21.9 | 23.76 | 25.7 | 28.23 | 32.8 |
| FLAT WINGSPAN [M] | 11.79 | 12.19 | 12.72 | 13.25 | 13.78 | 14.44 | 15.57 |
| FLAT ASPECT RATIO | 6.27 | 6.27 | 6.27 | 6.27 | 6.27 | 6.27 | 6.27 |
| ALL UP WEIGHT [KG] | 55-75 | 70-90 | 82-102 | 92-112 | 105-130 | 115-145 | 145-180 |
| WEIGHT OF THE WING [KG] | 4.45 | 4.6 | 4.8 | 5.2 | 5.5 | 5.9 | 6.15 |
| CERTIFICATION ONGOING | EN C | | | | | | |
| PRICE | 3 600 | | | | | | |

PARATROC

COLLECTION FLY WITH ME

A new unique collection of clothes from Paratroc, all in 100% semi-combed Ring-spun cotton.

COLOUR BOY

Size S to XXL
Short sleeves: 25€
Unisex long sleeves: 35€

COLOUR GIRL

Size S to XL
Short sleeves: 25€
Unisex long sleeves: 35€

SMILEY

Size S to XL
Short sleeves: 18 €
Long sleeves: 25€

<http://www.paratroc.com/en/88-clothing>



VITTORAZI

The Moster 185 will finally be available from April 2017 with a particularly light electric starter.

New throttle: from now on it will be in polycarbonate and therefore stronger. In addition, it can be made transparent.

<http://www.vittorazi.com/>

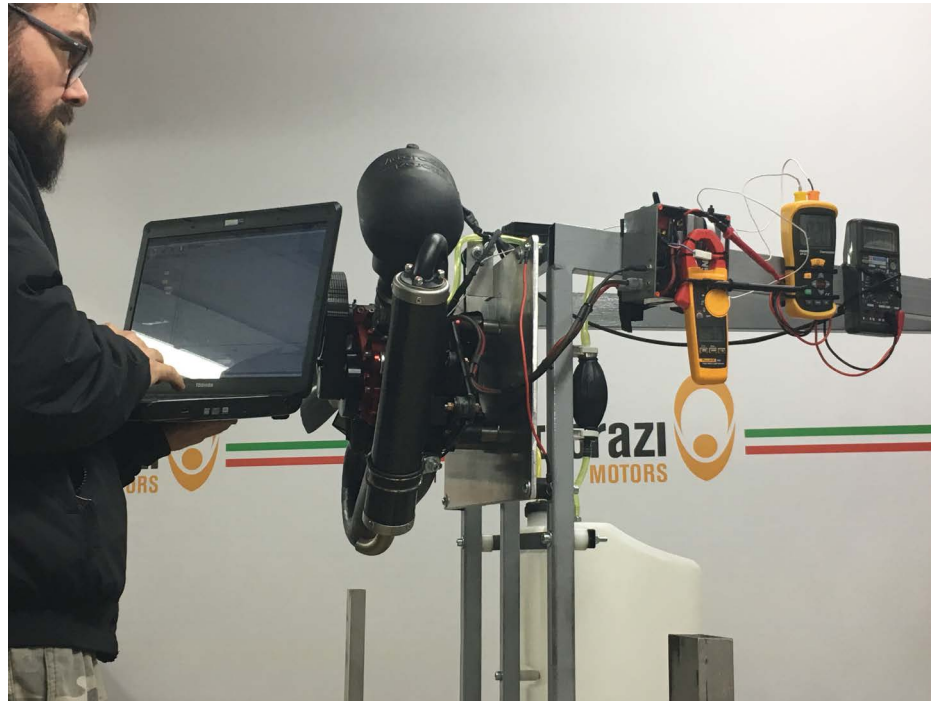


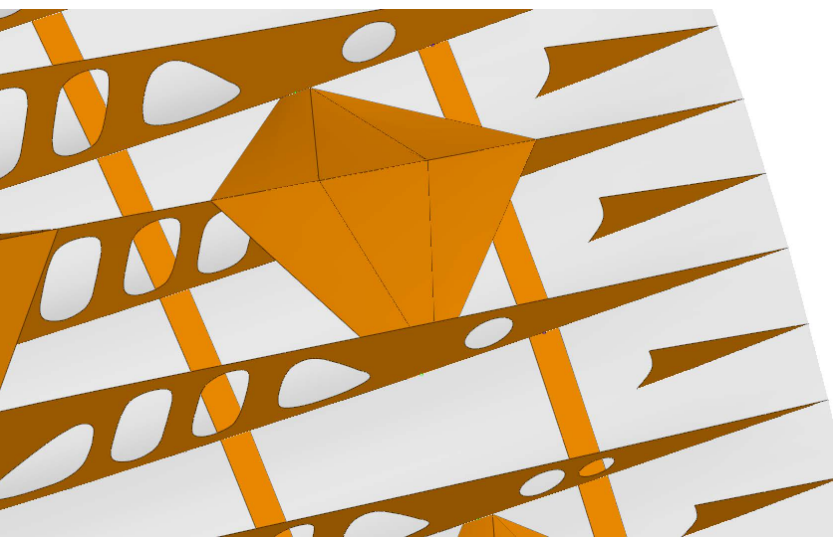


Photo:

The new EN B Epic from BGD: a reassuring wing which is relatively light. It's good for 'new pilots who want to do their first XC flight as well as more experienced pilots who are looking for something nice and comfortable.'

Although it's a wing with only forty cells and an aspect ratio of 5, Bruce has given it all the modern technology such as mini ribs, uncluttered diagonals, a SharkNose and obviously his own CCB 3D-Shaping.
www.flybgd.com

BGD EPIC



| EPIC - TECHNICAL DATA | | | | | |
|--|-----------|-------|-------|--------|---------|
| Manufacturer: BGD Web: http://www.flybgd.com/en/paragliders/paraglider-epic-en-1tf-b-210-0-0.html Mail : bruce@flybgd.com Tel : +33 (0)493 36 56 57 | | | | | |
| DATE | 2017 | | | | |
| SIZE | XS | S | M | ML | L |
| CELLS | 42/80 | | | | |
| FLAT SURFACE AREA [M ²] | 21 | 23 | 24.97 | 26.83 | 28.85 |
| PROJECTED SURFACE AREA [M ²] | 17.86 | 19.56 | 21.24 | 22.81 | 24.54 |
| FLAT WINGSPAN [M] | 10.26 | 10.73 | 11.18 | 11.59 | 12.02 |
| PROJECTED WINGSPAN [M] | 8.02 | 8.39 | 8.75 | 9.07 | 9.40 |
| FLAT ASPECT RATIO | 5.01 | | | | |
| PROJECTED ASPECT RATIO | 3.6 | | | | |
| ALL UP WEIGHT [KG] | 50-65 | 60-80 | 75-95 | 90-110 | 105-125 |
| WEIGHT OF THE WING [KG] | 4.2 | 4.6 | 4.9 | 5.1 | 5.4 |
| CERTIFICATION | EN/LTF -B | | | | |



Photo: Rebecca Bredehopt/Ozone

OZONE

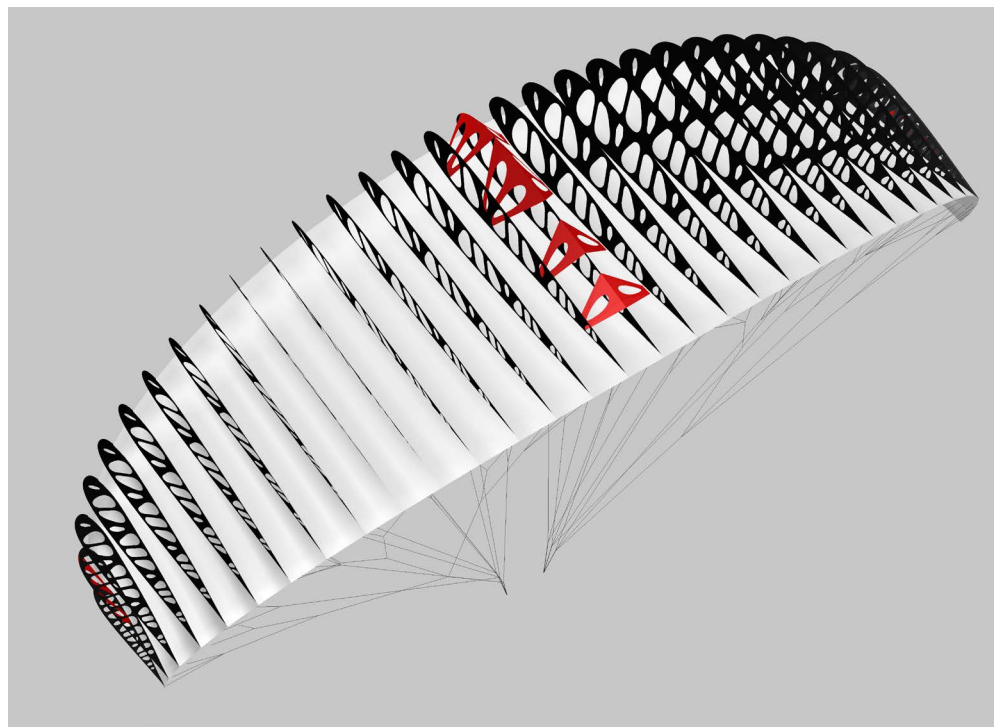
ULTRALITE 4

The Ultralite 4 has come out five years after the version 3. It will be certified EN A rather than EN B (as was the 3), except for size 19, which will be EN B. The planform and aspect ratio have stayed the same.

The weight has been reduced by 100 g, thanks to, amongst other things, the use of thinner diagonals called 'finger ribs', which have allowed the lines to be reduced by 13.4%.

It has 34 cells instead of 35. The openings on the leading edge have been optimised and the upper surface has now got 3D-Shaping.

<http://www.flyozone.com/paragliders/en/products/gliders/ultralite-4/info/>





A NOTE FROM THE EDITOR

Ozone seem determined to prove that the two surface wings are almost as light as the 'Single Skins': 2 kg for the 19 m² Ultralite - amazing.

That doesn't stop us betting that one day Ozone will bring out a mellower follow up single skin (along the lines of an EN B) to the 2012 pioneer XXlite (Size16: 1.4 kg, Size 19: 1.4 kg), which was the most demanding Single Skin in our comparative tests.

| ULTRALITE 4 - TECHNICAL DATA | | | | |
|---|----------|----------|----------|----------|
| Manufacturer: OZONE Web: http://flyozone.com/paragliders/de/products/gliders/ultralite-4/info/ Mail: team@flyozone.com | | | | |
| DATE | 2017 | | | |
| SIZE | 19 | 21 | 23 | 25 |
| CELLS | 34 | | | |
| FLAT SURFACE AREA [m ²] | 19 | 20.9 | 23 | 25.2 |
| PROJECTED SURFACE AREA [m ²] | 16.7 | 18.3 | 20.2 | 22.1 |
| FLAT WINGSPAN [m] | 9.3 | 9.8 | 10.2 | 10.7 |
| FLAT ASPECT RATIO | 4.5 | 4.5 | 4.5 | 4.5 |
| ALL UP WEIGHT [kg] | 55-90 | 55-95 | 65-105 | 75-120 |
| WEIGHT OF THE WING [kg] | 2.03 | 2.19 | 2.36 | 2.56 |
| CERTIFICATION | EN/LTF B | EN/LTF A | EN/LTF A | EN/LTF A |
| PRICE [€] | 2 600 | 2 600 | 2 600 | 2 600 |





Photo: Jorge Atramiz, Pilot Cade Palmer

OZONE

DELTA, ENZO 3

The Delta 3 includes a whole range of technology which has already been tested in the Enzo and the Zeno.

Ozone measured an improvement in glide ratio of 0.3 points at trim speed and 0.5 points at the D2's maximum speed. The D3 should be faster. In mid March it was certified EN C.

The Enzo 3 has been certified using the 2016 version of CCC. In the photo on the right, David Dagault, Fred Pieri, Russell Odgen and Honorin Hamard on, and around, the Enzo 3 which went to the certification laboratory.

Photo: Ruth Jessop





Photo: Goran dimiskovski

OZONE

ZENO & ZENO LIGHT (Z-ALPS)

The Zeno has had an amazing career so far. It has been used by a large number of pilots in the World Cup, and has also been chosen by a lot of switched on 'amateur' pilots.

It was even on Chrigel Maurer's list of candidates for the 2017 X-Alps. A light version the "Z-Alps", is currently being worked on and may be finished for this event.

It remains to be seen how many pilots currently flying a Zeno (EN D)/Enzo 2 (former CCC) will rush to get the Enzo 3 (new CCC) when it appears in April.

<http://flyozone.com/paragliders/en/products/gliders/zeno/info/>

| ZENO - TECHNICAL DATA | | | | |
|---|-------|--------|--------|---------|
| Manufacturer: OZONE Web : http://flyozone.com/paragliders/fr/products/gliders/zeno/info/ Mail : russ@flyozone.com | | | | |
| DATE | 2016 | | | |
| SIZE | S | MS | ML | L |
| CELLS | 78 | | | |
| FLAT SURFACE AREA [m ²] | 21 | 22.5 | 24.1 | 26.5 |
| PROJECTED SURFACE AREA [m ²] | 17.8 | 19 | 20.4 | 22.4 |
| FLAT WINGSPAN [m] | 12 | 12.5 | 12.9 | 13.5 |
| FLAT ASPECT RATIO | 6.9 | 6.9 | 6.9 | 6.9 |
| ALL UP WEIGHT [kg] | 75-90 | 85-100 | 95-110 | 105-125 |
| WEIGHT OF THE WING [kg] | 4.8 | 5 | 5.3 | 5.8 |
| CERTIFICATION | EN D | | | |
| PRICE [€] | 5 700 | 5 700 | 5 700 | 5 700 |

Two Zenos in Cerdagne (Eastern Pyrenees), the blue one is flown by Estéban Bourrouffiès.

A QUICK TEST

OZONE ZENO VS. ENZO 2

free.aero
MAGAZINE

A NOTE FROM THE EDITOR

A quick test by Estéban Bourrouffiès

The Ozone Zeno has been very successful in competitions as well as with XC enthusiasts. We compared the famous Zeno with the Enzo 2. We noticed that in accordance with the rumours, as far as performance was concerned, the Zeno is very similar to the Enzo 2. Yet the Zeno has a smaller aspect ratio and is 'softer' in terms of steering.

The comparisons were done with new Zenos but the Enzo 2s were a bit older. At trim speed: There was no difference, on long glides they were identical. Accelerated: the Zeno seemed to do a little bit better, but that could have been due to the age of the wings being tested. On the other hand, it appeared obvious that during an accelerated transition where the aerology required piloting, with two pilots with the same technical experience, the Zeno seemed to do better! We also took advantage of the occasion to compare the Zeno with a Niviuk Peak 4, which is older. The results were obvious: when trimmed the difference was very little but, as soon as you touched the accelerator, especially into wind, the Peak 4 could no longer keep up in terms of glide and maximum speed.

A few detailed comments about the Zeno MS (all up weight 85-100 kg) loaded to 96 kg.

LOW SPEED:

Very good behavior in terms of low speed. In fact we noticed that the wing deformed at the wing tips, which dropped very far back and really pitched backwards when the brakes were applied. It was by holding it in this position for a prolonged length of time, that the wing finally stalled.

ACCELERATED BEHAVIOUR:

This was a real strong point! The wing became rigid once accelerated and didn't flinch at all. It's very easy to accelerate it up to about 70%. Up until then, the wing showed no tendency to want to collapse. All it wanted to do was glide. With maximum acceleration, the wing seemed a bit less solid, but despite everything, it didn't seem very sensitive to collapsing.

THERMIC FEED BACK:

This was the only negative point: it gave less thermal feedback than the Enzo 2. This seems logical, given its lower aspect ratio. On the other hand, even though it gives less feedback it is just as good as the other wings in its EN D class.

THERMAL FLYING:

Flying an Enzo 2 regularly, I found it difficult to have an impartial opinion of the Zeno in a thermal. I immediately managed to adapt to its movement in a thermal. Is it particularly easy to fly, or just similar to the Enzo 2 and therefore I'm used to it? It's difficult to say. In any case, the Zeno has speed, which allows it to do nice smooth turns, even in disorderly thermals.

In addition, compared to the Enzo 2, there's no need (or almost) to worry about the outer wing tip.

STEERING WITH THE REAR RISERS:

Steering with the rears, once accelerated, it's one of the best wings I've ever tested. Its behaviour in accelerated flight doesn't require much pilot intervention. But when it does, the comfortable steering and the ensuing reactions are excellent! 🙌



Photo: Téo Bourvard <https://www.facebook.com/teobourvard/>

PARAJET

LIGHT: MAVERICK PRO

The new Maverick is in titanium, is equipped with a Vittorazi Moster and only weighs 21.5 kg with a 'Pro' version of the harness. It comes with a specially adapted travelling bag.

<https://www.parajet.com/maverick>



RWANDA

EXPEDITION

Two Belgian, Alain Gillot and Jean-Michel Hausman plan a unique parameter tour in Rwanda in July 2017. The aim is to promote the activity and tourism in Rwanda. They will fly over the best spots and National Parks of the country, showing its beauty

by means of aerial pictures and videos. Principal sponsors are Niviuk, Flymecc and Brussels Airlines.

<https://www.facebook.com/parwanda2017/>



The X-Alps, a challenging mix of running and competing in the air. Shown here, Sebastian Gruber and Stanislav Mayer at the fifth turn point in the Dolomites. Photo: Sebastian Marko

X-ALPS 2017

On the 2nd of July 2017 the most gripping competition in the paragliding world will begin: the Red Bull X-Alps. The list of competitors has been decided; time to get ready...



Four times winner, Christian Maurer. Pictured here training for the last X-Alps.
Photo: Felix Woelk

The pilots must cover more than 1000 km along the Alpine chain, from Salzburg in Austria to Monaco on the edge of the Mediterranean sea – either flying or on foot. In 2011 Michael Gebert walked 991 km!). 19 of the 32 competitors succeeded in getting to Monaco in 2015. Chrigel Maurer took eight days, four hours and thirty seven minutes.

For information:
http://en.free.aero/contents/portfolioxalps_E.pdf

Amongst the 32 participants in 2017, there will also be the top three from 2015: Chrigel Maurer, Sebastian Huber and Paul Guschlbaur.



The list of competitors, including the two 'jokers' added in January 2017.
<http://www.redbullxalps.com/athletes.html>



Two Ozone wings above the Dachstein in Austria. Photo: Felix Woelk

Chrigel Maurer in front of the fabled Matterhorn, on his Advance Omega X-Alps and CM Magic Eagle harness, on the 10th of July 2015. Photo : Sebastian Marko

Four times winner, Chrigel Maurer, is competing for the first time without his supporter Thomas Theurillat. Remember that the X-Alps is won by a team of two made up of a pilot competitor and a logistical helper who is the brains on the ground. The youngest pilot in 2017 will be 23 year old Tobias Grossrubatscher. Unfortunately there are no women in it this year.

THE CHAMPION'S WINGS

The winner of the last four X-Alps, Chrigel Maurer still hasn't chosen his wing for this year. Contrary to the previous races where he was on an Advance Omega X-Alps, he might do this one on the Niviuk Klimber, the Gin GTO2, the Ozone Zeno or the future Zeno Light, or another top model.

If the Zeno Light (Z-Alps) comes out in time, a lot of pilots will use it.







In 2015, Antoine Girard lets it all hang out on his Ozone LM5 and Kortel harness in front of the Monaco apartment blocks, before landing on the raft. In 2017, he's going to be flying a GIN Boomerang X-Alps 2017.
 Photo: Sebastian Marko



Sebastian Huber (GER3, Advance Omega X-Alps) at the start in Salzburg in 2015. He finished second. Photo: Harald Tauderer



From the mountains to the sea, hike and fly over 1000 km: a fascinating mix which has become very popular. Pictured here, the arrival of superstar Chrigel Maurer.
 Photo: Sebastian Marko

Unlike 'classic' paragliding competitions such as the Paragliding World Cup where, in 2016, two manufacturers, Gin and Ozone, provided 99% of the wings, in the X-Alps, on the other hand, smaller manufacturers such as UP (here with the Trango XRace) can also take part. Photo: Harald Tauderer

A NOTE FROM THE EDITOR

The Red Bull X-Alps is the competition which interests the maximum number of spectators, who follow the race on the live tracking. Everyone can picture the physical and mental commitment that these flights and forced marches represent.

There have been at least two positive consequences for all paraglider pilots:

- 1) The Red Bull X-Alps has encouraged numerous pilots to take up hike and fly.
- 2) Much technology to reduce the weight of equipment has been tested and validated during this race and then been integrated into mass produced wings, including paragliders not designed for hike and fly. An example: the "Sliced Diagonals" on the Advance Omega X-Alps aren't just found in the Pi 2, but also in the Epsilon 8 and are being increasingly used by numerous manufacturers in all types of wings (the BGD Epic, for example).



Photo: Harald Tauderer





One example of the benefits it brings to mass produced paragliders: Skywalk made the Poison in an X-Alps version, and it's now available in mass production. Pictured above, flying over Switzerland. Photo : Felix Woelk

Under the watchful eye of the spectators and helicopters, Paul Guschlbaur, already guaranteed 3rd place, takes off bare foot for the final landing on the raft. Thanks to the back lighting on his Skywalk wing, the use of every bit of modern technology, bringing both performance and light weight, can be clearly seen: SharkNose, lighter mini ribs and diagonals which have been optimised at all the anchor points. Photo: Harald Tauderer.



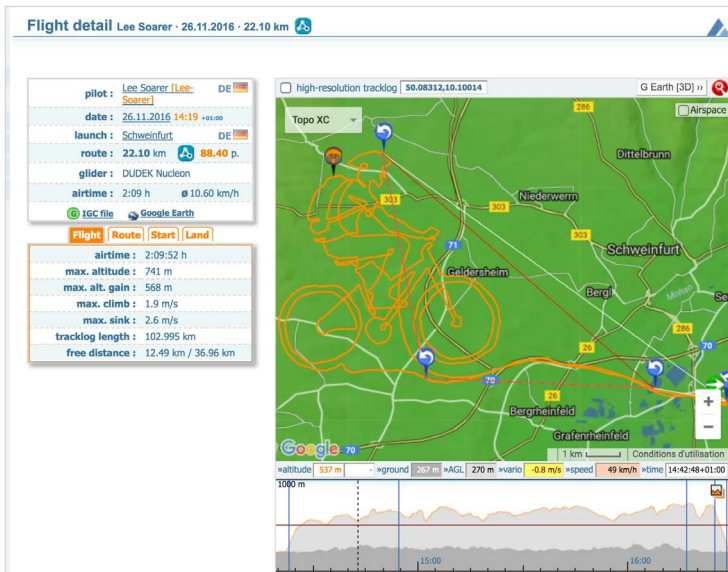
ADVENTURE ANDALUSIA

Pascal Vallée, co-owner of Adventure and former world champion, has made a nice film about Andalusia which clearly shows the playful side of fuel powered thermals.

<https://youtu.be/aIASxQ3Y9J8>



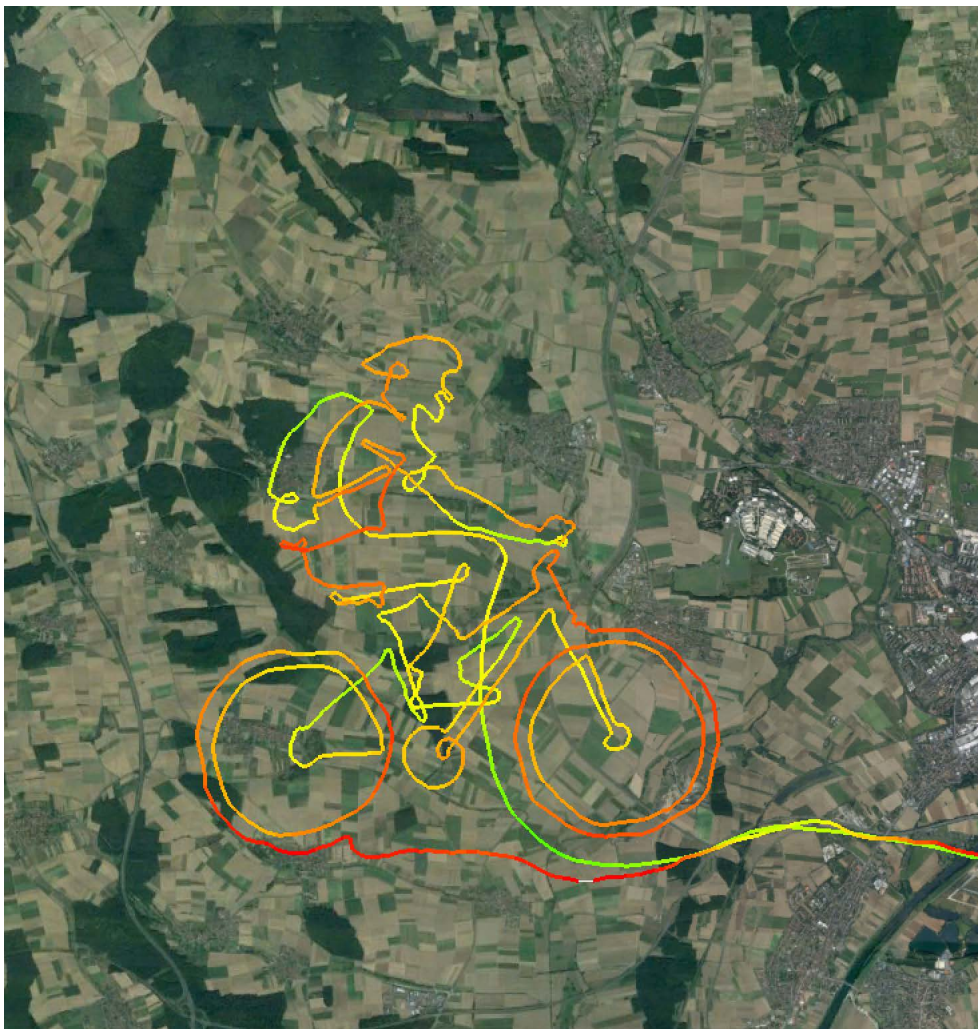
TRACKPAINTING



A picture drawn in 2 hours 10 minutes flying a Polini 100/ Nucleon 29 with trimmers open throughout the whole flight.
Link XContest:
<https://goo.gl/PQ0i4c>



Michael Merz foot launched on a Flyke.



"Trackpainting" is the art of drawing pre-defined figures from a tracklog of a very precisely planned flight. It works particularly well on the flats with a paramotor. A very gifted artist, Michael Merz, pseudonyme "Lee Soarer", draws his flights on the German plains.

First of all, he traces out a suitable drawing on Google Earth, avoiding flying over villages if possible and tries to position the turn points in easily recognisable places. Then he transfers the tracklog, by hand, onto a paper topographical map! When he's flying, he tries to follow as best he can, the line by keeping an eye on the map. It was only when he was drawing the bicycle that he used a GPS to follow it point by point. The other tracks really are navigated by sight only, by finding the points in the countryside with the help of a paper map. A wonderful exercise for pilots who like precision...

Four amazing examples on XContest (a server which is very interesting not just for free fliers, but for paramotorists as well).

Following page:

Charlie Brown

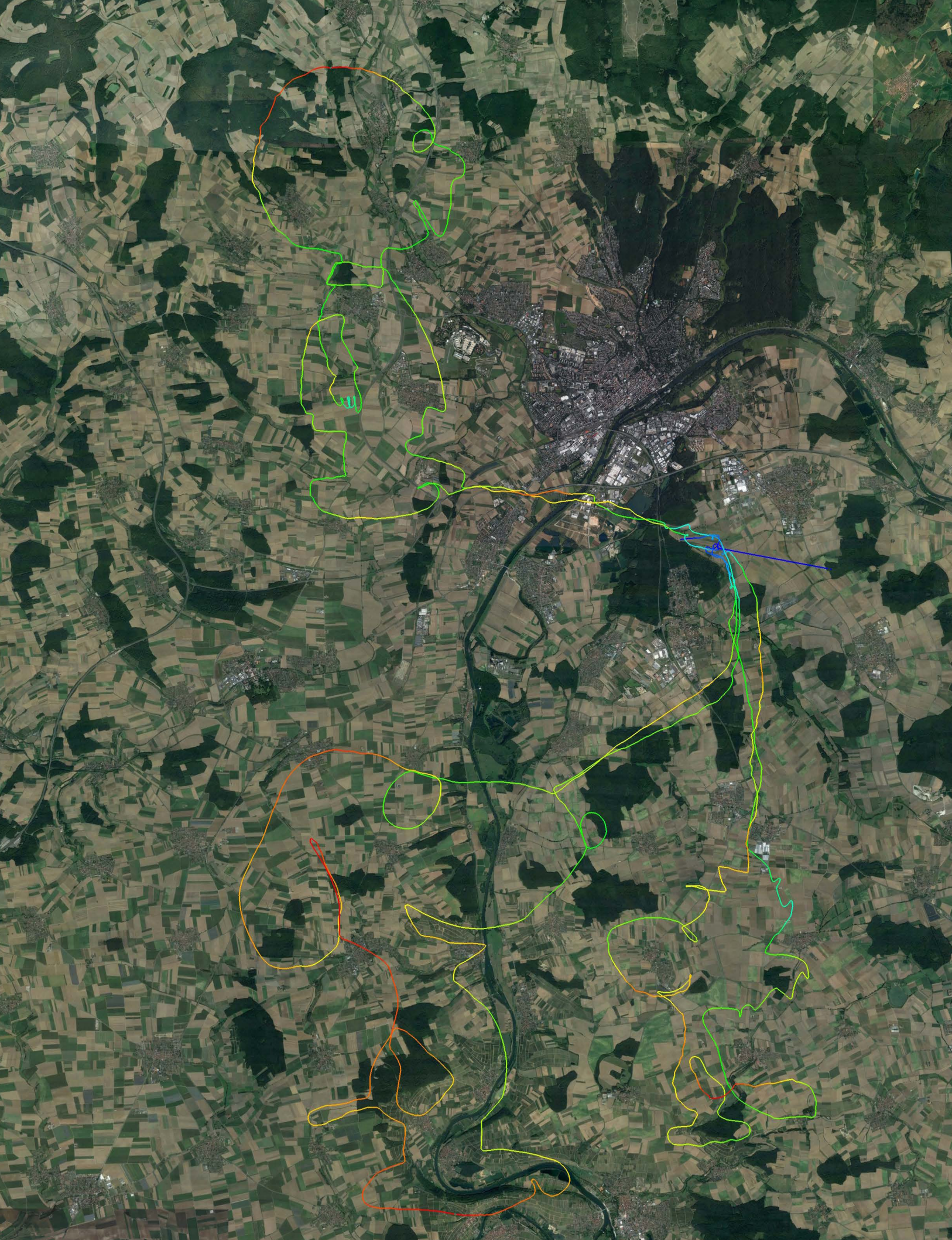
<http://paramotors.xcontest.org/2016/world/en/flights/detail:Lee-Soarer/10.3.2016/14:58>

Snoopy

<http://paramotors.xcontest.org/2015/world/en/flights/detail:Lee-Soarer/26.08.2015/15:57>

Woodstock

<http://paramotors.xcontest.org/2016/world/en/flights/detail:Lee-Soarer/20.03.2016/15:57>



MONDIAL AIR PARAMOTEUR

This gathering of paramotors, with an impressive manufacturer's trade show, will take place at the Breuil Aerodrome in the Loir-et-Cher department of France, from the 23rd to the 25th of June 2017.

It's one of the biggest events of this type for paramotors and the organisers hope to have sixty stands and 5000 visitors.

There is more information on the site:
<http://www.mondialairparamoteur.com/>



DULV FESTIVAL 2017

The Motorschirm-Pokal takes place in the east of Germany, at Ballenstedt, on the 23rd to 25th of June, the same weekend as the Mondial de l'Air. It's an aerodrome that is well protected from the wind.

The focus of the exhibition is the trade show for paramotor and ULM manufacturers, many of whom will have to be in two places at once, to be present at both Blois and Ballenstedt at least 600 km from the border at Strasbourg.

There will be a film festival, competitions and, of course, a party as well.

<http://www.dulv.de/UL-Festival-DMP/E1242.htm>



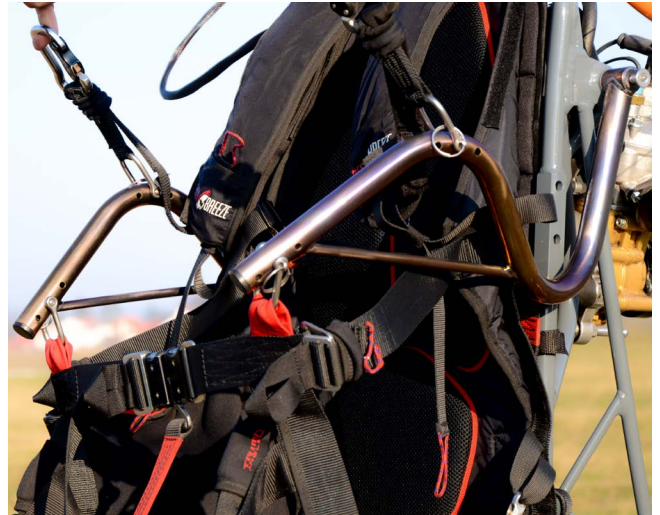
FRESH BREEZE

TITANIUM AND FOLD UP TRIKE

The new "Sportix Pro" arms are in titanium and therefore make the chassis lighter.

Totally new: a request from the army for a fold up trike has started the development of this amazing machine, which will soon be available to everyone...

<http://www.fresh-breeze.de/en/home.html>



A film folding, and especially unfolding, the new trike:
<https://goo.gl/TaldPw>

E-PROPS QUADRI BLADE

E-props have launched a new propeller for trikes: the Quadri Plug'nFly is a quadruple propeller which is very easy to assemble. 100% carbon, very light, available for lots of models such as the Thor 250, Thor 200, Rotax 447 and 503. The leading edge has been reinforced. Thanks to the shape used the propeller should be 'ultra silent'.

Sizes: 125 or 130, 650 €

150/155/160, 744 €

www.e-props.fr



KANGOOK SKI

This winter we tested the new skis which are adaptable to Kangook trikes. They are both practical and efficient. The front ski has a metal rail which stops it skidding. We'll have more details in the autumn.

Photo: Christian Reuter



KANGOOK NEW GENERATION TANDEM BAR

Kangook already have a tandem bar for their foot launch motors; assembling it requires removing the swan neck arms. Now there is a bar which fits directly onto the swan neck.

Changing from solo to tandem couldn't be easier: for example, to end a solo flying day by taking a child up in calm evening air.

Price: 590 €.

www.kangook.ca



KANGOOK LIGHTER STILL

The Kangook Lite model is now even lighter: thanks to the fitting of the Apco Split Legs harness on the Lite chassis equipped with a Thor 80 and lightweight e-prop blades, the total weight has dropped down to 20.8 kg for the whole thing...

www.kangook.ca



MINARI

Stratos engine:

Project in progress. Boxer engine with 360cc, HP 45 and 125/130 kg of thrust. Weight of complete engine, around 30 kg. Ready for sale in the second half of 2017.

The Minari Clutch engine is on sale. Available 180 and 200 cc., respectively 27 and 29 Hp, with 72 and 80 kg of thrust. Engine weight 14,90 kg.

<http://www.minari-engine.com/>



Soufflez, Inspirez

ADVENTURE



NAC INTERCOM INTEGRATED HELMET

The Spanish manufacturer still sells the Anubis, an integrated helmet with good sound insulation designed for paramotorists. EN966 certified. The headset cups are totally protected under the helmet. Noise cancelling microphone. Price: 346 € with headset (cable with mini XLR plug).
Visor: 39 €.
Carbon Optic look: + 23 €

Without the headset: 243 €
www.nac-inter.com



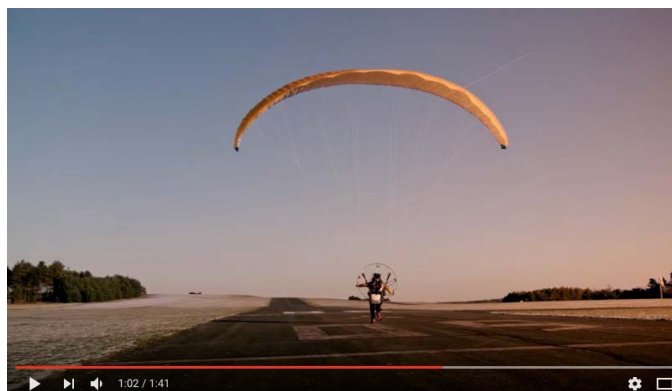


NOVA SPEEDMAX 2

Seventeen years after the Speedmax 1, Nova have brought out the second version of this paramotor wing.

The Speedmax 2 is based on the technology used in the Mentor. Nova have added a reflex profile when the trimmers are open. It's a very interesting mix of genres. We are currently testing one.

| SPEEDMAX 2 - TECHNICAL DATA | | | | |
|---|----------------|----------------|----------------|----------------|
| Manufacturer: Nova Web: https://www.nova.eu/en/gliders/speedmax-2/ Mail: info@nova.eu Tel: +43.5224.66026 | | | | |
| SIZE | S | M | L | XL |
| CELLS | 55 | 55 | 55 | 55 |
| FLAT SURFACE AREA [M ²] | 23,78 | 26,09 | 28,39 | 30,68 |
| PROJECTED SURFACE AREA [M ²] | 20.53 | 22.54 | 24.48 | 26.51 |
| FLAT WINGSPAN [M] | 11.36 | 11.89 | 12.41 | 12.90 |
| PROJECTED WINGSPAN [M] | 9.08 | 9.51 | 9.91 | 10.32 |
| FLAT ASPECT RATIO | 5.43 | 5.43 | 5.43 | 5.43 |
| PROJECTED ASPECT RATIO | 4.01 | 4.01 | 4.01 | 4.01 |
| ALL UP WEIGHT PPG [KG] | 70-120 | 80-135 | 90-150 | 100-170 |
| WEIGHT OF THE WING [KG] | 5.4 | 5.7 | 6.1 | 6.4 |
| CERTIFICATION | EN/LTF DGAC | EN/LTF DGAC | EN/LTF DGAC | EN/LTF DGAC |



<https://www.youtube.com/watch?v=a70-ojNHv0>

Given the technical details, this wing seems to have inherited a lot of its vital statistics from the excellent Mentor 4.

The Speedmax 1 reviewed 11 years ago by Sascha Burkhardt.



Photo: Veronique Burkhardt

The Speedmax 2 in 2016.



Photo: Mario Eder www.photography.aero

Concept, editor in chief, webmaster: Sascha Burkhardt
test pilots: Sylvain Dupuis, Pascal Kreyder, Estéban Bourroufiès, Philippe Lami
Layout: Véronique Burkhardt
Translations: Ruth Jessop
iOS development: Hartwig Wiesmann, [Skywind](#)
Android development: Stéphane Nicole [www.ppgps.info](#)
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