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WORLDWIDE PARAGLIDING AND PARAMOTORING MAGAZINE. FOR FREE.



2018

TRENDS

Photo: Jérôme Maupoint/Gin




NIVIUK.COM > TANDEM

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The Takoo 4 meets the most stringent demands of tandem pilots and is one step above the rest thanks to greater performance in all aspects of the flight.

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Cover photo: an anticyclonic December morning, Tim Bollinger taking off on his Gin Explorer. Photo: Jérôme Maupoint/GIN

Translation by Ruth Jessop

The 2018 season is almost here. Since the Coupe Icare, lots of new products and trends have surfaced. Here's a resumé of the wings and equipment that we'll see in the air...

WHO'S WHO?

We're making the most of this equipment tour to introduce some of the essential figures from the world of paragliding and paramotoring. There are a lot of amazing pioneers and personalities...

CONTENTS

THE MASTER OF GROUND LEVEL FLYING.	4	TREKKING BIRD	56	SILK-SCREEN PRINT T-SHIRT	95
JBC'S FLYING TECHNIQUES	7	BGD LYNX	57	INSTRUMENT TRENDS	97
UTAH	11	BGD PPG	58	SKYTRAXX FANET&FLARM	97
PWCA SUPERFINAL IN COLOMBIA	17	BGD ECHO	58	THE GPS-BIP	98
OZONE	18	AIR CROSS U FLY 3	59	XCTRACER	98
APCO INNOVATE	22	PRICES ARE FALLING	59	FLYMASTER	98
SKYWALK MASALA 3	23	ADVANCE IOTA 2	61	STODEUS GPSBIP	98
SKYWALK CUMEO	24	ADVANCE PROGRESS 3	61	SYRIDE SYS'EVOLUTION	99
SKYWALK RANGE X-ALPS 2	26	THE SUPAIR EVO LITE HARNESS	62	NAVITER AND VOLIRIUM	99
SWING ARCUS RS LITE	28	SUPAIR ROMANIA VIDEO	62	WOODY VALLEY WANIZ	100
SWING APUS RS HIKE, NYOS RS	29	ICARO BUTEO & BUTEO LIGHT	64	APOLLO BI	101
MACPARA	30	ICARO PANDION	65	NIRVANA GO LIGHTWEIGHT	102
THE RETURN OF THE KANNIBAL RACE II	31	FLYING TECHNIQUES: TO GO UP, GO DOWN...	67	THE ICARES OF THE CINEMA	103
PHI	32	NIVIUK ROAMER 2	68	LITTLE GEMS AND FAVOURITES	109
A WHOLE PHILOSOPHY	33	NIVIUK TAKOO 4	69	OTEMANU	109
THE TOILET	34	NEW SIZES FOR THE R-BUS	70	BROAD PEAK	110
U-TURN CROSSROCK	35	NIVIUK ROAMER P AND OTHERS...	71	ENTRE CIEL ET CIMES	111
U-TURN JOKER	36	PHARAONIC PARAMOTORING	72	AZIZ, THE STORY OF A MOROCCAN PILOT	112
NEO: LIGHT AND COMFORTABLE...	38	AIR DESIGN RISE 3	78		
NEO: LIGHT AND SAFE...	39	GIN GENIE RACE 4	80		
ITV : BOXER 2	40	NANO 4 AND GANGSTER 2	81		
RESERVATION PLATFORM.	41	VITTORAZI ATOM 80	82		
TRIPLE SEVEN QUEEN 2	42	VITTORAZI MOSTER PLUS STARTER	82		
TRIPLE SEVEN K-LIGHT	43	ADVENTURE : PRIMUS & PLUMA	83		
INDEPENDENCE	44	RAZEEBUSS :	84		
SINGLE SKIN FOR STUDENTS...	45	POLINI GOES FOR TITANIUM	85		
SMOKING	46	TECHNIQUES: THIS IS SERIOUS!	86		
HELIX GO LIGHTWEIGHT	47	PLAYING LIGHT	87		
DUBAI	49	THE LABS ARE TALKING TO EACH OTHER	88		
NOVA SECTOR	50	THE DHV GETS YOUNGER	89		
NEWS SKYMAN	53	ALAIN ZOLLER : TRAINING FOR PILOTS.	90		
JEWELLERY	54	TEST : TOUCH AND SNOW	91		
UP ASCENT 4	55	TECHNIQUE: TRIKE ON SNOW	92		
UP MERU	55	WINDSRIDERS : PRIMALOFT WIND	94		

JBC
THE MASTER OF GROUND LEVEL FLYING.
WEIGHTLESS





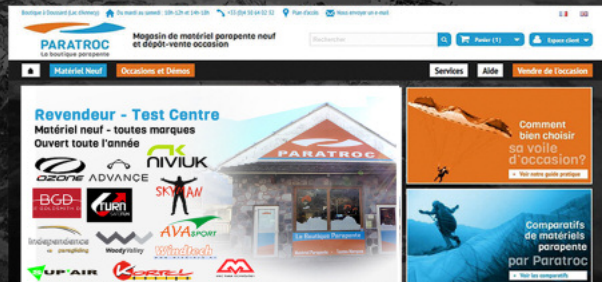
PARATROC
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We buy used equipment

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



Jean-Baptiste Chandelier has brought out a new video: even longer flights skimming the ground...

'I messed up my ski instructor's giant slalom exam so many times that I decided to give up the profession and concentrate totally on paragliding. Making the film 'Weightless', let me get my own back on the giant slalom course, but this time from the air!' (JB Chandelier).

Jean-Baptiste is, above all, known for his flights gently skimming the ground. Like nobody else, he knows how to 'caress' the ground and other obstacles with his feet, before taking off again like Peter Pan in our most extravagant dreams of freedom.

Even more so than his last masterpieces, which were already stunning, his new film 'Weightless', transmits a feeling of weightlessness... For all these lengthy 'slides', along the ground, JBC uses various prototypes of the Dudek Mach available in version 1.2, and which should come out next year in a 1.3 version.



As a reminder, here's our edition about playing close to the ground, with an interview with Jean Baptiste Chandelier.
http://en.free.aero/contentsHTML/playing_with_wings/?page=1

Dream. Touch. Believe.



GIN



Sports Performance Wing

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.

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JBC'S FLYING TECHNIQUES

Depending on the requirements of the filming, he uses a prototype which is more pitchy or glidy. The long 'slides' at ground level or along a structure are obtained by a big build-up of speed (often by braking, then letting go of the controls) followed by a horizontal trajectory.



advertising



PHI-AIR.COM

From the French Alps to the South African coastline, the Azores Archipelago to the Brazilian beaches: it took two years to do all the filming for a 5:49 minute long clip.



The new video with a sequence shot at Serre Chevalier. 'The problem wasn't the scene passing between the bells but getting to the landing field in the town behind,' said JBC. Jean Baptiste Chandelier on Youtube : <https://youtu.be/Oos4ojut0MM>





According to JBC, the crane was the most difficult obstacle. It isn't obvious how to assess distances in 3D with metal tubes.

A more classic wing will automatically pitch backwards, but the Mach keeps its horizontal speed and allows a 'millimetre precise pitch' near the ground. If JBC were to brake suddenly, he would go up by several metres. This upwards surge also lets him get out of trouble. But, in any case, as JBC says, 'up to a distance of five metres from an obstacle, I keep an escape route via the sides. After that point, I understand my wings well enough to know that I'll pass just above.'



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





THANKS!

From all the Team at OZONE, to the many pilots who have chosen to fly our wings. We are honored to be able to support so many great pilots around the world, and we thank you, our friends and customers, for the continued support. Cheers, and all the best in 2018!

WWW.FLYOZONE.COM

Congratulations to Lex Robe (pictured first row far left), who snapped this photo of Markus Eder (above), and Alois Resinger for their outstanding year of XC flying, putting them on the podium of The FAI World XC Contest, 2017. All three pilots chose the Ozone ZENO.





PORTFOLIO UTAH

*Laurent Salinas and Chris Santacroce aired
their new Gin Carves in the Moab desert
and at Salt Lake...*



Laurent getting up close to one of the famous arches in the Moab desert. The goal: to fly through it. There are more than 2000 arches in this desert, but most are too small to go through. They are formed in layers of sandstone of varying toughness, in the presence of stocks of salt, left over from a sea which is now long gone.



Photo: Chris Santacroce

Passing through is nevertheless easy for a pilot like Laurent. Obviously, both pilots took off early in the morning. Moreover, for lots of paraglider pilots who have taken up paramotoring, it's an unusual sensation: flying for hours in the calm morning air, similar to a free flying ploop, which lets them play and train very near the ground with incredible precision.

CARVE TECHNICAL DATA				
MANUFACTURER	GIN			
	Web: gingliders.com/paramotoring/carve/			
DATE	2017	2017	2017	2017
SIZE	18	20	22	24
CELLS	56	56	56	56
FLAT SURFACE AREA [m ²]	18	20	22	24
FLAT WINGSPAN [m ²]	10.22	10.77	11.30	11.80
FLAT ASPECT RATIO	5.8	5.8	5.8	5.8
ALL UP WEIGHT [kg]	65-110	75-120	85-130	95-140
WEIGHT OF THE WING [kg]	4.9	5.25	5.6	5.9
FREE FLIGHT CERTIFICATION	-	-	-	-
FF CERTIFICATION LAB	-	-	-	-
PPG CERTIFICATION	DGAC	DGAC	DGAC	DGAC
PRICE [€]	3450	3450	3450	3450

Maillon Rapide

THE ORIGINAL

CE MAILLON RAPIDE
11-A WILL 150 Kg DB5
INOX-FRANCE

PEGUET

peguet.fr

Made in France

The new Carve by Gin is a freestyle and slalom wing, but which remains very flexible thanks to its good stability and performance. 'Its 18m², is as effective as a 20 or 21', Larent Salinas, who took part in its development, told us.

Clearly visible, the 2D steering system: like most wings of this type, the pilot can choose to act more on the centre or more on the outside of the trailing edge.

Here, Laurent dips the stabilo in the famous Great Salt Lake, also in Utah.





For years now Laurent has sworn by the Moster 185 by Vitorazzi. Now he flies with the Plus version with a clutch. More than twelve years ago, along with Mathieu Rouannet, Laurent Salinas brought freestyle close to the ground in paramotoring. It was the precursor to slalom and events such as Parabatix.

ARCUS RS

FREE AGAIN...!

The ARCUS RS, with its particular features and stylish appearance, joins this successful low-end B-tradition. Innovative and redesigned, it departs from the well-worn paths of paraglider development and provides completely new impetus for our sport.

The unique new partition system known as RAST now has additional valves, and the ARCUS RS is an impressive example of how it operates!

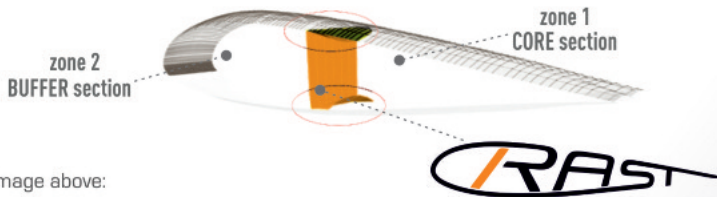


Image above:

The rear section acts like / forms the CORE section of RAST, that [almost] ever remains open.

The front section acts like / forms the BUFFER section for controllable ventilation



SWING ARCUS RS | PERFORMANCE LTF/EN-B | www.swing.de/arcus-rs-en.html

MITO | DISCUS | ARCUS RS | SENSIS | NYOS | NEXUS | TWIN RS | TRINITY RS | APUS RS | MIRAGE RS





"X-ALPS3
THE wing for winners!"

Congrats to our athletes on their amazing Red Bull X-Alps 2017 results
You guys rock!



Chrigel Maurer - Rank 1

"The ease and safety of the 3-Line-Concept allowed me to defend my title without stress..."



Paul Guschlbauer - Rank 3

"Under the X-ALPS3 I felt comfortable, even in risky situations. That opened the doors to take extraordinary routes."



Ferdy van Schelven - Rank 4

"With the necessary performance of the X-ALPS3 I could finally achieve a result in the top five!"



Simon Oberrauner - Rank 5

"I just had serious fun flying skywalks X-ALPS3 wing during the competition. To get a spot in the top 5 makes a dream come true for me."

PURE PASSION FOR FLYING

skywalk.paragliders skywalkparagliders www.skywalk.info

SKYWALK
PARAGLIDERS

P. photos: Red Bull Content Pool



The SuperFinal is being held in Colombia.

SUPER FINAL PWCA

PWCA SUPERFINAL IN COLOMBIA

The Paragliding World Cup Super Final is being held in Roldanillo, Colombia until the 20th of January.

This is one of the highest ranked competitions ever held. 18 previous overall World Cup winners are taking part along with 12 women's PWC winners!

Competing: Michael SIGEL who won the 2011 World Cup in Roldanillo, Aaron DUROGATI who won the Super Final there in 2012, Luca DONINI (World Champion in 2001) who won 4 of the 9 tasks at the SF in Roldanillo in 2012.

Honorin HAMARD who won the World Championship at Roldanillo in 2015 and Pierre REMY, current World Champion, are both also taking part.

To make the World Cup easier to watch on tablets and mobiles, the informative live commentary, revamped tracking, leaderboard, pilot list and results, are all now available on the shiny new World Cup App available for Android and Apple devices.

The commentary now also includes a *'Thought for the Thermal'*, a few words of advice each day from one of our more experienced pilots about competition flying.

To celebrate twenty-five years of the Paragliding World Cup, the Commentary this time includes facts, figures and anecdotes from the last quarter of a century of competition flying.

www.pwca.org



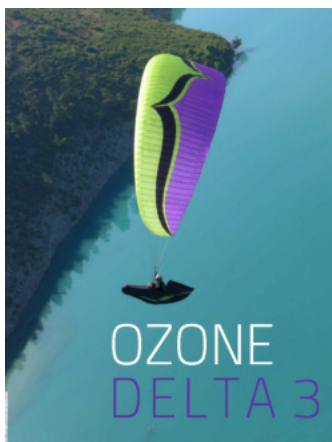
The Alpina 3: a lighter version of the Delta 3.

OZONE

OZONE ALPINA 3

As the technical characteristics show, the Alpina 3 which appeared at the end of November, is almost identical to the Delta3, but with a saving of 1 kg of weight.

It will therefore be the same as its heavier sister, but with better handling.



Reread our test of the Delta 3 here:
<http://en.free.aero/content/html/climbing2017/?page=51>

ALPINA3 TECHNICAL DATA					
MANUFACTURER	OZONE Web : flyozone.com/paragliders/fr/products/gliders/alpina-3/info/				
DATE	2017	2017	2017	2017	2017
SIZE	XS	S	MS	ML	L
CELLS	66	66	66	66	66
FLAT SURFACE AREA [m²]	20	21.9	23.1	24.4	25.9
FLAT WINGSPAN [m²]	10.97	11.46	11.78	12.11	12.47
FLAT ASPECT RATIO	6	6	6	6	6
ALL UP WEIGHT [kg]	58-70	65-85	75-95	85-105	95-115
WEIGHT OF THE WING [kg]	3.9	4.15	4.3	4.5	4.7
HOMOLOGATION	EN/LTF C	EN/LTF C	EN/LTF C	EN/LTF C	EN/LTF C
CERTIFICATION LABS	AIR TURQ.	AIR TURQ.	AIR TURQ.	AIR TURQ.	AIR TURQ.
PPG CERTIFICATION					
PRICE [€]	4980	5000	5050	5100	5160
MATERIALS	Dominico N20D / Skytex 27 Classic Edelrid 8000U				



The Session acro wing in 16 and 17 m² has been available to the public since the beginning of December. The 18 m² is coming soon. According to Ozone, the Session is the fruit of close collaboration between the 'veterans', who are very experienced and the 'young ones', full of fire... The wing is supposed to represent a new generation of acro wings: very accessible but nonetheless very dynamic. At any rate, the clip shows a nice sequence...

The Ozone development team is without a doubt the biggest development team working together in one office, at least 6 people! They are all based at Le Bar sur Loup in the Alpes Maritimes, near Gourdon. There, you can always find a break in the weather to fly, even in winter. In 2018, Antoine Girard joins the Ozone Team.



Photos : Sascha Burkhardt

David Dagault has been chief developer with Ozone for seventeen years and is also one of the shareholders.



Luc Armant has been with Ozone for nearly ten years.

WHO'S WHO?



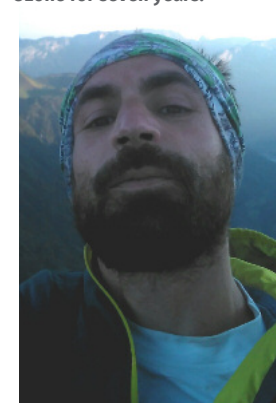
Russell Ogden has been with Ozone since 2004.



Fred Pieri, originally from the Pyrenees, migrated to Le Bar sur Loup, and has been with Ozone for seven years.



Honorin Hamard has been with Ozone for three years. Sam (right) joined Ozone in 2017 and is more specialised in harness development.



Photos : Ozone



Photo: Rebecca Bredelhoff / Ozone

When you ask Ozone how the follow up project to the XXLite is going, the reply is, 'we're working on it'. But also: 'A new single skin would have to do better than the UltraLite 4. That's difficult.' In fact, the mountain wing, the UL4 19 only weighs a little over 2kg.

Mike Cavanagh: CEO from the beginning, lives in England.



WHO'S WHO?

Matt Gerdes looks after communication. After years of speedriding in Chamonix where he used to live, he has now settled in the USA.



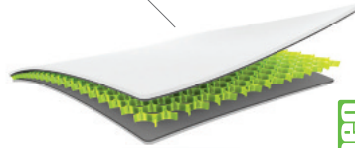


string cover leg



WEIGHT: 715 g

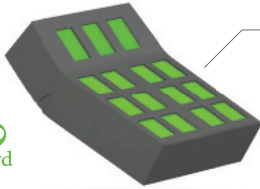
SANDWICH: TEXTILE LAMINATION



stay up

WEIGHT: 1.45 kg

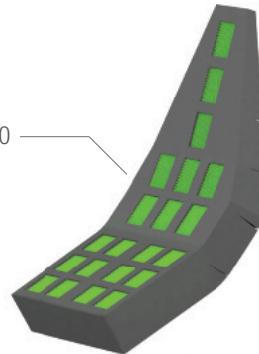
PROTECTION: NEO Koroyd 2.0



suspender

WEIGHT: 3.85 kg

PROTECTION: NEO Koroyd 1.0

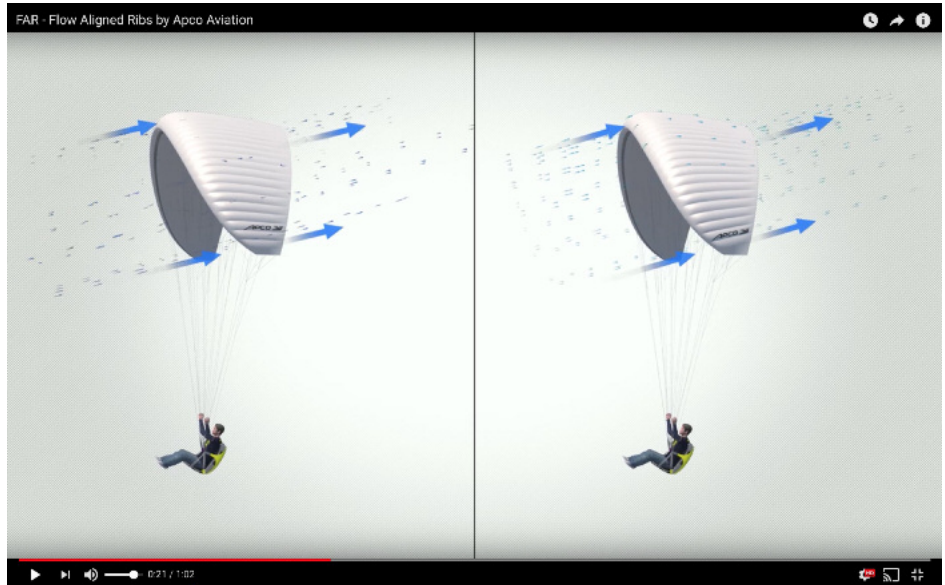


APCO

APCO INNOVATE

The Israeli manufacturer is at the origin of numerous inventions in paragliding: in 2002 they were one of the first manufacturers to use leading edge rods, for example the "Flexon Battens" on the Keara <http://en.free.aero/contentsHTML/Making-of/?page=85>

The most recent idea: slant the paraglider's external cells in the direction of the airflow to reduce the drag. Why not? Watch this space...<http://apcoaviation.com/>



https://youtu.be/w1AuPn_oBnU

Another idea for paramotor pilots: a cocoon harness, which obviously at take off mustn't get dragged into the propeller at the back, but is in front of the pilot who puts their legs into it from below. We'll test this harness as soon as possible.





SKYWALK

SKYWALK MASALA 3

An EN A wing, right up with the current trends: very light, not very bulky once folded and equipped with all the latest new technology such as a SharkNose and double 3D-Shaping. So, it's a hike&fly wing which can be carried everywhere and is perfectly usable in thermals too. The small sizes have been given an extended all up weight for more experienced pilots.

MASALA 3 TECHNICAL DATA

MASALA 3 TECHNICAL DATA					
MANUFACTURER	SKYWALK Web: https://skywalk.info/				
DATE	2017				
SIZE	XXS	XS	S	M	L
CELLS	38				
FLAT SURFACE AREA [m ²]	19.87	22.36	25.80	27.47	29.20
FLAT WINGSPAN [m ²]	9.76	10.36	11.13	11.48	11.84
FLAT ASPECT RATIO	4.80	4.80	4.80	4.80	4.80
ALL UP WEIGHT [kg]	55-70*	55-77	70-95	85-105	95-120
WEIGHT OF THE WING [kg]	55-85*	55-90	-	-	-
KAPPEGEWICHT [kg]	2.7*	3	3.3	3.5	3.6
CERTIFICATION	EN A				
CERTIFICATION LABS	DHV	DHV	DHV	DHV	DHV
MATERIALIEN	Porcher Skytex 38/27/27 *temporary				



SKYWALK CUMEO

CUMEO TECHNICAL DATA				
MANUFACTURER	SKYWALK Web: https://skywalk.info/			
DATE	2017			
SIZE	XXS	XS	S	M
CELLS	57			
FLAT SURFACE AREA [m ²]	21.39	24.59	26.41	28.29
FLAT WINGSPAN [m ²]	10.99	11.78	12.21	12.64
FLAT ASPECT RATIO	5.65	5.65	5.65	5.65
ALL UP WEIGHT [kg]	55-77	70-95	85-105	95-115
WEIGHT OF THE WING [kg]	3.7	4.1	4.3	4.6
CERTIFICATION	EN B			
CERTIFICATION LABS	EAPR	EAPR	EAPR	EAPR
PRICE [€]	3990	3990	3990	3990
MATERIALS	Porcher Skytex 38/27/27			

Photo: Tristan Shu

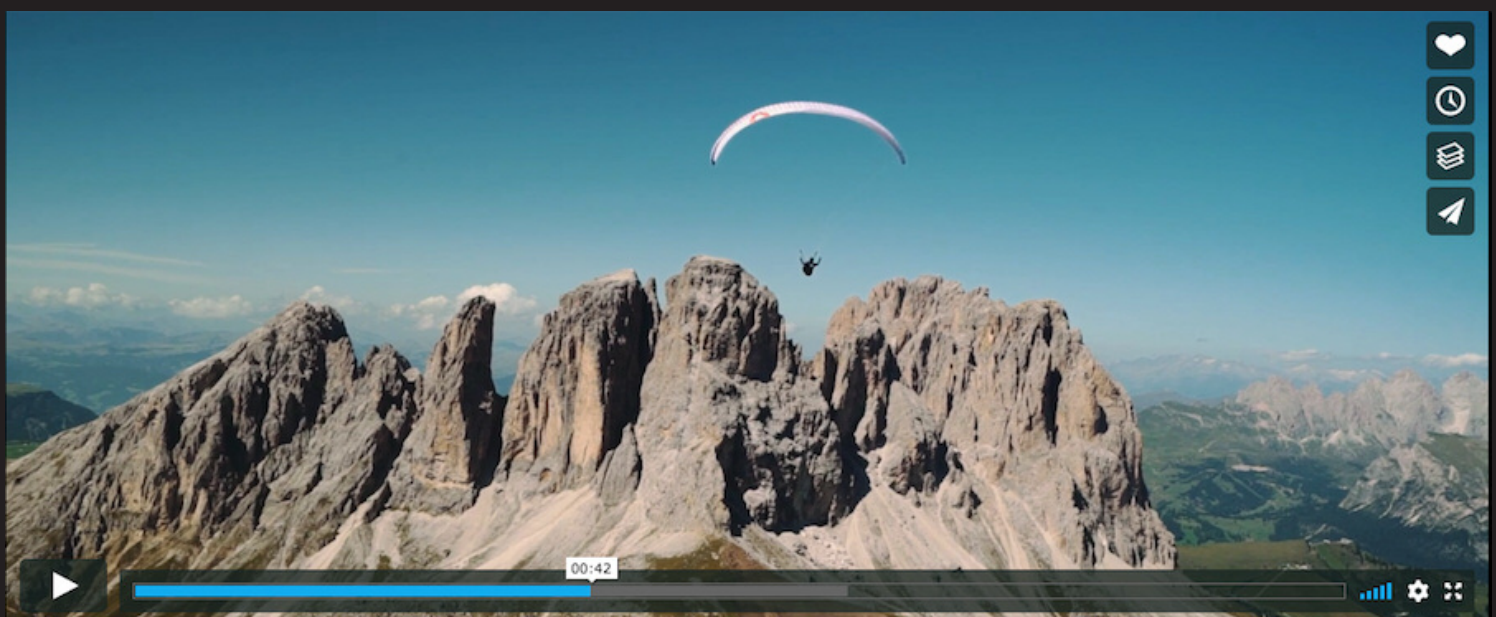


SKYWALK CUMEO

The Cumeo is a lightweight version of the Chili, and thus a relatively lightweight top of the range EN B. It takes off even more easily thanks to its reduced weight. The internal pressure should be relatively homogenous across the entire speed range, which will give it good stability and great comfort along with very good performance at top speed. The Cumeo is now certified and available in all sizes.

A nice publicity clip of this wing:

<https://vimeo.com/235508845>





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EN-A, BEGINNER



CLASSIC
EN-B, INTERMEDIATE



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BALLAD
PPG, BEGINNER



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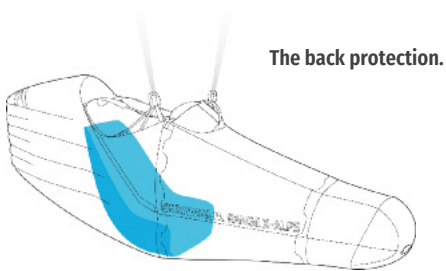
SKYWALK RANGE X-ALPS 2

At the Coupe Icare last autumn, Skywalk showed the identical version to the one used, for example, by Simon Oberrauner (right) during the X-Alps. This 'Athlete' version, was sold as a limited edition of fifty harnesses. Anyone else interested will have to wait for the production model which is due out in spring 2018.

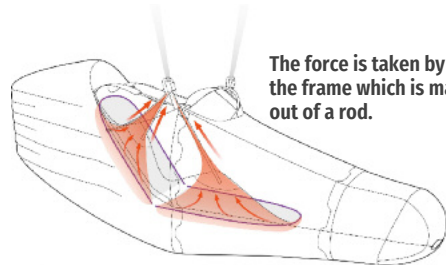
The back protection is inflated before take off. To combine comfort and light weight, the harness is kept in shape by a "Power-frame", which is a steel rod which threads round the seat and up the back.



Photo: Sascha Burkhardt



The back protection.



The force is taken by the frame which is made out of a rod.



ICARO2000

extreme sport helmets



Nerv Scratch Grey



Nerv Black & Green



Nerv Deep Forest



Nerv Blu



Nerv Carbon Optic



Nerv Black & Orange



Nerv Carbon White

www.icaro2000.com
staff@icaro2000.com



Photo: Profly

L'Arcus RS Lite

SWING

SWING ARCUS RS LITE

The RAST system is now found in all Swing paragliders. We are currently testing the Arcus RS and Arcus RS Lite. Benefits such as increased comfort and safety are clearly noticeable. The inflation, on the other hand, is slightly longer, but in some situations, that's an advantage. There will be more details in a future issue. The system has started to be of interest to their competitors too.

The nice sequence on the right is explained here : <http://www.free.aero/en/contentsHTML/light2017e/?page=14>

WHO'S WHO?

GÜNTHER WÖRL, the manager of Swing, explains the RAST system. He started flying paragliders in 1987. In 1988, he was a test pilot for Swing. In 1994 he bought the company which was, up until then, in Switzerland and relocated it to Bavaria, in Germany. Swing is one of the biggest manufacturers in the world.



Photo: Sascha Burkhardt



Apus RS Hike

Photo: Profly/Gudrun Öchsl



The all new NyoS RS, launched in December.

SWING APUS RS HIKE, NYOS RS

The APUS RS is an all terrain mini wing, designed to be a 'universal tool'. On the 'Hike' version, there is Porcher Skytex 27 g/m² everywhere instead of the combination of 41 g and 34 g on the standard version. In size 16, for an all up weight of 55-100 kg, it is certified EN C. All the versions and sizes benefit from the RAST system. It's the same with the new high-end EN B NyoS RS. Sizes L and XL of NyoS RS have been certified right now.

WHO'S WHO?

The Profly team, responsible for Swing's R&D, from left to right:

MICHAEL NESLER started paragliding in 1986 and has been an instructor since 1987. He was one of the first instructors in the world to specialise in acro, and is the author of books on the subject. He has developed paragliders for dozens of brands, as well as parachutes for the ESA Mars mission.

GUDRUN ÖCHSL is an acro and test pilot for small sizes, co-author of books, paragliding photographer and communications specialist, who has contributed numerous stunning photos to Free.aero.

ALESSIO CASOLLA is an instructor, acro and tandem pilot, who takes part in development and testing.



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PARAGLIDING
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ARE YOU
ready
to touch
the clouds?



Yes
I am.

new! even lighter!
Wani light, 2.6 kg (L)
www.woodyvalley.eu



Photo: Macpara

MACPARA

MacPara have got into hike&fly: The Outback will be available in the spring in size 21, weight: 2.7 kg and all up weight: 55-59 kg. The brand is distributed by Kortel Design, which could be the impetus for other lightweight innovations. The more classic wings like the Illusion (EN B) have also had good resonance.
<http://www.macpara.com>

XTRACER
II



XTRACER
mini II



THE MOST **PRECISE** VARIO.
QUITE **SIMPLY HIGH-TECH.**

XTRACER


www.xtracer.com

KORTEL DESIGN



THE RETURN OF THE KANNIBAL RACE II

At the end of November Kortel announced that the launch of the Kannibal Race II will be, for certain, in March 2018. Up until now, there have only been prototypes, such as those at the Coupe Icare. Orders are now being taken. One of the new features, and not insignificant: the system for taking the effort off your legs in the cocoon.

Three sizes: S, M, L. Weight between 7.2 kg and 7.8 kg, cockpit included.

For the top four hundred pilots in the CIVL world ranking and World Cup pilots, Kortel have a special offer price. For more information:

www.korteldesign.com



**WORLD RECORD
WITH EN B GLIDER**

AIRCROSS

U
Cruise



LTF/EN B


The **NEW** Benchmark of its category!

1st of november 2016 Konrad Görg - 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



The Symphonia, Phi's first wing. It's worth noting the variation on 3D-Shaping on the trailing edge.

PHI SYMPHONIA



Photo: Benjamin Hörburger/Phi



Photo: Sascha Burkhardt



Extreme pilot Mike Küng, one of the pillars of Phi.



He came from Icaro and is now a member of Phi: Benjamin Hörburger

One of the fathers of paraglider development: Hannes Papesh



WHO'S WHO?

We talked about the start of Phi and Hannes Papesh's biography in the spring:
<https://goo.gl/CxYPLj>



A WHOLE PHILOSOPHY

In the long term Phi want to offer a full range, covering all categories, but are starting with the Symphonia, an EN A whose qualities should be comparable with an EN B, or indeed an EN C. Hannes Papesh wants to do in the A classification what he did at the time in the EN B classification with the Mentor: bring a different level of performance to the class, whilst remaining very safe and accessible. The way this has been done is no doubt hidden in the profile and in the internal architecture, however there is no very marked SharkNose. The wing is, in addition, very fast and also well suited to paramotors.

The first examples arrived in mid November.



Photo: Phi

The first examples in size 22 and 24 arrived at the end of November.

SYMPHONIA TECHNICAL DATA					
MANUFACTURER	PHI Web : phi-air.com/project/symphonia/				
DATE					
SIZE	18	20	22	24	26
CELLS	50	50	50	50	50
FLAT SURFACE AREA [m²]	11.52	11.04	11.56	12.08	12.54
FLAT WINGSPAN [m²]	21.54	23.72	26	28.4	30.62
FLAT ASPECT RATIO	5.14	5.14	5.14	5.14	5.14
ALL UP WEIGHT [kg]	55-75	65-85	75-95	90-110	105-130
WEIGHT OF THE WING [kg]	4.10	4.30	4.50	4.70	4.95
CERTIFICATION	A	A	A	A	A
CERTIFICATION LABS	DHV	DHV	DHV	DHV	DHV
ENGINE CERTIFICATION	DGAC in progress				
PRICE [€]	4150	4150	4150	4150	4150
MATERIALS	Porcher Skytex 32, Porcher Skytex 38 Fabrication Aero Dynamics Sri Lanka				

HAVING FUN...

BRING YOUR PYLON

The paramotor pilot Tucker Gott became a star on Youtube after visiting a McDonald's Drive-In on his paramotor. He now throws various objects whilst flying.

In November he threw a toilet roll from 2000 feet and turned 360° around it: a great idea, for a transportable pylon. He also threw a paper aeroplane which glided perfectly. The incredible feat which looked like a fake: Tucker caught the plane whilst flying!

THE TOILET PAPER PYLON.



5:52 / 10:37

The toilet paper pylon.(> 5'20"): <https://youtu.be/aVRVCD6jsMw?t=5m20s>



4:00 / 14:06

The plane caught in the air. (> 4'00"): <https://youtu.be/Y6eKxjMA9ek?t=4m>

Photo: U-Turn



U-TURN

U-TURN CROSSROCK

U-Turn have launched the EN B CrossRock: a universal wing for travelling/XC/lightweight, a niche that more and more manufacturers are trying to occupy. The model has been developed based on the Blacklight 2.

Ernst Strobl put the accent on simplification, combined with a nicely shaped profile and good durability.

CROSSROCK TECHNICAL DATA				
MANUFACTURER	U-TURN Web : www.u-turn.de/web/francais/produits/parapentes			
DATE	2017			
SIZE	XS	S	M	L
CELLS	59			
FLAT SURFACE AREA [m²]	22.6	24.8	27.2	29.2
FLAT WINGSPAN [m²]	11.26	11.795	12.353	12.799
FLAT ASPECT RATIO	5.61	5.61	5.61	5.61
ALL UP WEIGHT [kg]	55-80	65-90	80-105	90-120
WEIGHT OF THE WING [kg]	3.6	4	4.6	5
CERTIFICATION	B	B	B	B
CERTIFICATION LABS	EAPR	EAPR	EAPR	EAPR
ENGINE CERTIFICATION	n.c.			
PRICE [€]	Skytex 32 partie avant extrados extrados/intrados Skytex 27			

- Innovative Technology
- Fast airspeed
- Passive safety

Made in Occitanie - France

www.trekking-parapentes.fr

U-TURN JOKER

U-Turn has always been very active in acro. The Joker is the new top of the range acro wing, reserved for very experienced pilots.

As with other acro wings by U-Turn, it comes with a system of valves which are supposed to maintain the internal pressure at times when it is usually 'slack' between certain manoeuvres. There aren't any trimmers on the risers so that they stay smooth and don't interfere with 'Twist' manoeuvres. 🪂

U-Turn Joker 17m first look



The Joker, with Brooke Whatnall at the controls, at Organya in the Catalonian Pyrenees.
<https://youtu.be/Jm21gVnytms>



Air-Foam Hybrid-Protector

Unique Versatility

Multifunctional Reversible Harness from 3.3 kg

Versatile, compact and safer than never before: the PROGRESS 3 has an Air-Foam Hybrid-Protector which offers full protection from before takeoff. Whether for travel, thermal flying, short Hike & Flies or in school: with the PROGRESS 3 you are always best equipped for all your exploits.

www.advance.ch/progress

ADVANCE PROGRESS³



Photo: U-Turn

This new U-Turn Progress has a semi-reflex profile combined with a SharkNose, which is becoming a clear trend in paramotoring. A characteristic of the Progress is that it was specially designed to be used with an electric paramotor, by making it more efficient.

ADD A LITTLE MORE COLOR TO YOUR SKIES

A pioneer in light weight flight instruments, **ascent** has been providing wrist and riser mounted varios since 2008.

Now in five exciting new colors!

The **ascent h2** gives you everything you need and want in a compact, affordable and lightweight package.

- Only 83 g with riser strap
(98 g with wrist strap)
- Only 8.3 cm x 5.4 cm x 1.5 cm
(Yes, it's that small...)
- Free software updates for life.

ascent[▲]
reach for the sky



www.ascentvario.com

facebook.com/freeaero

www.free.aero

NEO

NEO: LIGHT AND COMFORTABLE...

The Neo was one of the pioneers of string harnesses: in fact, their harness of the same name became a benchmark. Since our first test in 2014, the harness has been reworked and is now more aesthetic and functional.

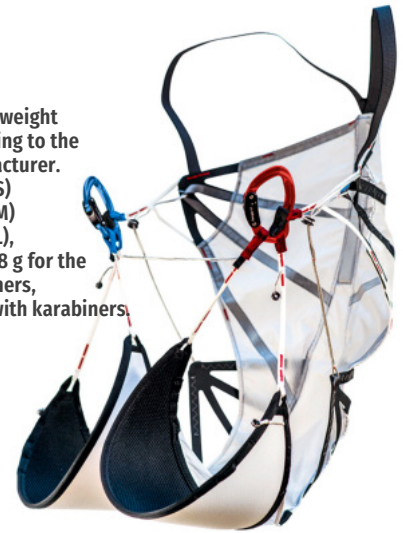
Also the optional cocoon "Coverleg", has been a great success. More and more pilots using lightweight equipment for climbing up to do hike&fly also want to benefit from thermals to notch up the kilometres. A cocoon is an undeniable means of comfort, on one hand for keeping the body warm, but also for its use as a foot rest.

With the Coverleg (about 415 g on our scales) and its unique accelerator (23 g), the String in size M (486 g including very sturdy Rocket karabiners, 66 g/each) weighs less than a kilo, whilst offering fairly good comfort during average length flights, even long ones, as we were able to see during our tests. Our only regret was that there wasn't any back protection for this set up. Apart from the comfort aspect, the String also stands out for its practical side. The harness is fastened with karabiners, and therefore it isn't necessary to put your feet through it as is the case with lots of other ultralight harnesses.

Obviously, hardcore lightweight fans can also fasten it with softlinks to save at least an extra 100 grammes.

Another arguable advantage: it's made in France...

String: weight according to the manufacturer.
320 g (S)
345 g (M)
370 g (L),
plus 128 g for the karabiners,
360 € with karabiners.



Coverleg: weight according to the manufacturer 430 g in size M.
Price: 240 €



The promotional video from the manufacturer is, at the same time, the manual. It clearly shows how it works as well as the easy change between standing and sitting.
<https://youtu.be/ymR4yhwHidc>



Photo: Sascha Burkhardt

NEO: LIGHT AND SAFE...

The Suspenders is a lightweight harness/coocon for XC which weighs less than 4 kg, made using 9 cm thick Neo-Koroyd protection weighing 480g. This protection is LTF certified as well as CE (a new obligation in France, but not the case in other European countries).

It was designed by Eric Roussel and is made from heat welded extruded tubes which are also found in bicycle helmets. Neo also make these protectors for GIN.

In the Suspenders which was on show at the Coupe Icare in 2016, the back protector already formed both the structure for the back and the seat so there was no need for a board... We'll test the most recent version, the 2018, with its minor changes before the spring.

Another brand new harness: the StayUp, a light-weight version of the Suspenders (only 1,45 kg: www.flyneo.com/en/stay-up/).



The Neo Suspenders, a top of the range lightweight harness, certified EN1651, LTF09 and CE.
Sizes: XS - S - M - L
Weight: 3.85 kg (M). Price: 1680 €.



WHO'S WHO?

Eric Roussel started working with Gin at Edel and was also manager at ITV. General manager at Gin Gliders from 2000 to 2011, today he is still their exclusive distributor in France. He created the brand Neo in 2013. Eric works closely with brands like Austrialpin whom he advises on the development of the Rocket karabiner.



Both light and strong at the same time: the tubes allow it to maintain a shape like a harness seat. The material absorbs a shock beyond a certain level by deforming in an irreversible fashion and thus protects the pilot. Afterwards, it is necessary to change some of the cells. For the spinal column it's well worth it...






Photo: Tristan SHU

ITV BOXER 2

ITV : BOXER 2 THE WING FOR BEGINNERS

The Boxer 2, designed for beginners, is flexible and can be used for paramotoring or paragliding. Its modern design integrates 3D shaping and leading edge rods. Obviously, the panels are cut using laser technology which ITV mastered back in their early windsurfing days. Inflation is very gentle. It is very forgiving of the normal inaccuracies of a beginner. Putting the Boxer 2 into a turn is very simple and precise despite its substantial brake travel, which makes it safe. 

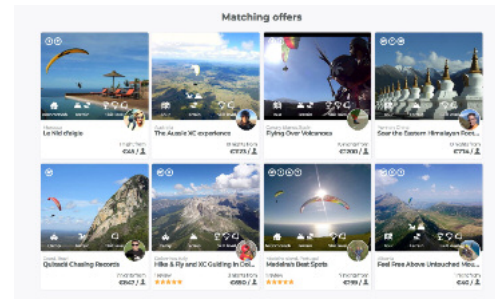
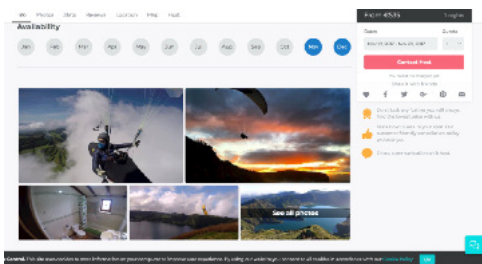
BOXER 2 DONNÉES CONSTRUCTEUR				
MANUFACTURER	ITV Web : https://www.itv-wings.com/en/wings-and-accessories/powered-paragliding-wings-itv/boxer-itv-powered-paragliding.html			
DATE	2017			
SIZE	S	M	L	XL
CELLS	34			
FLAT SURFACE AREA [m ²]	23 m ²	26 m ²	29 m ²	32 m ²
FLAT WINGSPAN [m ²]	10.5	11.2	11.8	12.4
FLAT ASPECT RATIO	4.8	4.8	4.8	4.8
ALL UP WEIGHT [kg]	60-113	80-140	100-166	120-200
WEIGHT OF THE WING [kg]	4.7	5.1	5.4	5.7
CERTIFICATION	EN A	EN A	EN A	
CERTIFICATION LABS	Aérotest	Aérotest	Aérotest	
ENGINE CERTIFICATION	DGAC	DGAC	DGAC	DGAC
PRICE [€]	2990			

BSTOKED FOR TRAVELLING

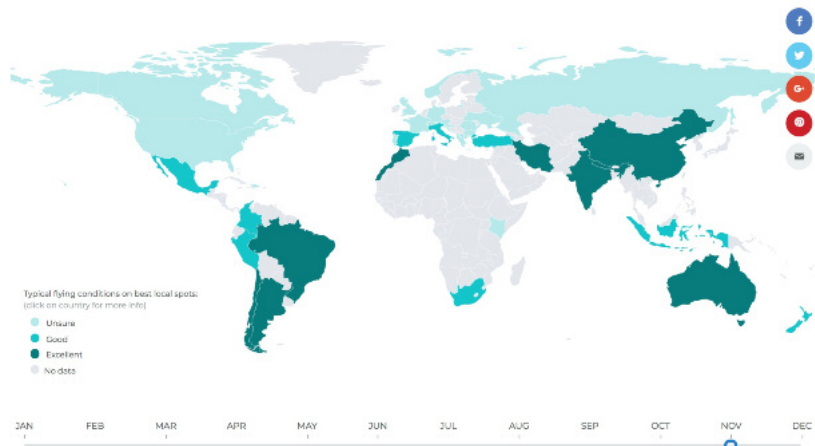
RESERVATION PLATFORM.

"Bstoked", has been in business for a year and lets pilots choose, depending on what they want and the season, offers of accommodation and/or a framework for their holidays, all around the globe. Those using it who have left feedback seem to have been won over...

<https://paragliding.bstoked.net>



When and where are the best paragliding conditions?



THE ALL NEW RISE

Precise handling with a new level of **performance**.
Packed with technical **features**.

LTF/EN-B ... **rise higher!**





777 TRIPLE SEVEN

TRIPLE SEVEN: QUEEN 2

It's been anticipated for a year now, having got behind schedule. However, it is finally ready in size MS, as is always the case for 777 launches.

The Valic brothers say it fits firmly in the middle of the EN C classification, an 'honest C'. The aspect ratio remains virtually the same (+0.1 to 6.3 flat). Following a current trend, the number of cells has noticeably increased, from 62 to 73.

QUEEN 2 DONNÉES CONSTRUCTEUR	
MANUFACTURER	TRIPLE SEVEN 777 Web : http://777gliders.com/fr/content/queen2
DATE	2017
SIZE	MS
CELLS	73
FLAT SURFACE AREA [m²]	25.3
FLAT WINGSPAN [m²]	12.6
FLAT ASPECT RATIO	6.3
ALL UP WEIGHT [kg]	79-99
WEIGHT OF THE WING [kg]	5.35
CERTIFICATION	LTF/EN C
CERTIFICATION LABS	AIR TURQUOISE
ENGINE CERTIFICATION	nc
PRICE [€]	4200
	Leading Edge Dominico 30D MF Upper surface Dominico 20D MF Lower surface Dominico 20D MF Profiles Profiles Porcher Skytex 40 Hard 9017 E29 Diagonales Porcher Skytex 40 Hard 9017 E29 Mini-ribs Porcher Skytex 40 Hard 9017 E29 Lines PPSL Liros, Edelrid A-8000-U

DEALERS
WANTED

SWIFT RACE HARNESS

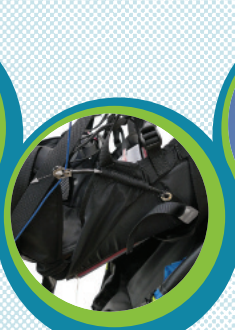
A true masterpiece of
mechanics and aerodynamic design



- Fully certified EN up to 120kg
- 17 cm foam protector + Lexan plate
- Ball Bearing pulleys with adjustable position – unique APCO feature
- 2 reserve compartments
- Automatic Skirt closing after take-off



Protection



Speed System
Adjustment



Aerodynamics



TRIPLE SEVEN K-LIGHT

The lightweight version of the 'mid EN B' Knight. Contrary to the initial announcements, the reduction in weight is only about one kilo instead of 1.5. However 4 kg instead of 5 kg for size MS, is, all the same, 20% less.



APCO AVIATION

WWW.APCOAVIATION.COM

At the leading edge of flying since 1974



World of XC paragliding

INDEPENDENCE

LOOPING: THE CONVERTIBLE HARNESS

A new convertible harness which turns inside out (hence the name) into a backpack. One of the distinctive features: an extra fabric panel to give better shape to the backpack when flying. The harness only weighs 3.7 kg in size M. Available with GetUp attachments (Looping Green) or with classic fastenings (Looping Blue).



A detail which is much appreciated on all the new Independence harnesses: left/right markings. This helps get ready quickly at take-off, especially when facing the wing.



Classic fastening vs. Getup fastenings: reread our analysis here: [T-Lock vs Get Up](#)



It's also comfortable in backpack mode.



Looping Green: GetUp buckle system.



Looping Blue: Classic buckle system



The Junior harness is the first harness for child passengers certified according to the LTF and EN norms. It is available in two sizes (Passenger < 120 cm or > 120 cm).



Reserve containers which close with a zip and have a strap linking the handle to the pod.



On some new models there is a band of fabric instead of a strap.



WHO'S WHO?

STEFAN KURRLE, the manager of Fly Market along with the brands Independence and Skyman. He's been flying since 1984. He is also a reserve and fabric specialist who works very closely with Dominico Tex. He is also a member of the WG6 working group, and his brother is the head of one of the biggest paraglider manufacturers, Sky Sport in Sri Lanka.

INDEPENDENCE

SINGLE SKIN FOR STUDENTS...

Lots of paragliding pros thought of it: since the start of 2018 the Grasshopper, is just that, the first single skin specially designed for students. The ease of inflation is obviously one of the main arguments. On the other hand, a lot of work needs to be done on its landing qualities.

In any case, even those in charge at DHV whom we contacted, didn't seem averse to this type of wing being used in schools. Another new wing in 2018: the Pioneer 3 (LTF /EN A)

www.independence.aero

Brand new: the Independence Grasshopper, Single Skin for students






Coupe Icare 2017
Photo: Gareth Goldthorpe
www.garethgoldthorpe.com

PARAMOTOR

SMOKING...

A nice photo showing the use of smoke when paramotoring: this allows a perfect visualisation of the trajectory. The long streamer trailing behind the paramotor is a lot less precise... 

full range of freeflying & paramotor wings



www.dudek.eu

HELIX

HELIX GO LIGHTWEIGHT

The manufacturer of propellers, Helix now sells lightweight products: instead of laminating an empty form, the propeller is shaped around a foam centre piece.

Thus, the wall can be thinner and therefore lighter.

But the other propellers are still available; they are, amongst other things, more elastic and less rigid.

<http://www.helix-propeller.de/>

WHO'S WHO?

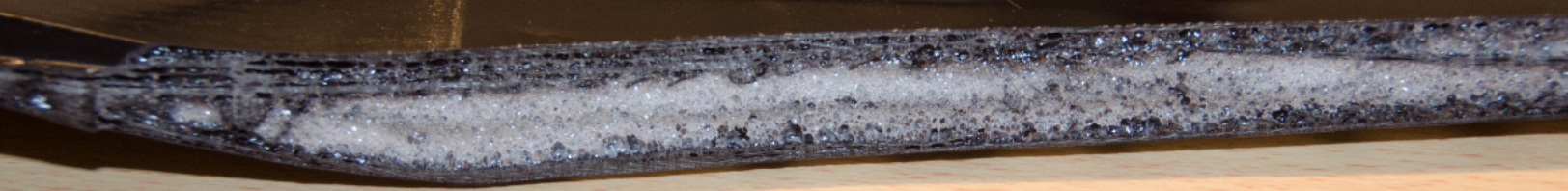
RICHARD KRÜGER-SPRENGEL set up Helix, the market leader for paramotor propellers, in 1990. The German company don't just manufacture for this sector: they have more than 600 models in their catalogue, including a significant number for microlight planes and military reconnaissance drones.

Photo: Sascha Burkhardt



Even propellers are going 'lightweight', thanks to foam.

Photo: Sascha Burkhardt



A paramotor equipped with a Helix propeller above a much bigger blade: this one in the Quittebeuf windturbine zone in Haute-Normandie is 123m high...
Photo: Francis Cormon



The image features a paraglider in flight against a clear blue sky. The paraglider's canopy is primarily red with a bright green section at the bottom. The pilot is wearing a blue jacket, a white helmet, and brown pants. A selfie stick is extended from the right side of the frame, holding a camera that captures the pilot. The background shows a mountainous landscape with snow-dusted peaks and a valley below. The Niviuk logo, consisting of a stylized green 'N' and the word 'NIVIUK' in white, is positioned at the top. Below the logo, the tagline 'AMAZING ADVENTURES' is written in a smaller white font.

NIVIUK
AMAZING ADVENTURES

NIVIUK.COM > P-SERIES

SKIN 2 P

Ultralight, hyper-adventurous

Meet your new travel mate, designed and optimised to meet the most stringent demands of mountaineers and high mountain lovers. Feel it like your second skin.

Discover the most Amazing Adventures on our Facebook and Instagram:



facebook.com/Niviuk



instagram.com/Niviukparagliders

EXTREME SPORTS EXPO



**DUBAI
EXTREME SPORTS EXHIBITION**
From the 12th to the 18th of January, in Dubai in the United Arab Emirates, there is going to be an extreme sports exhibition, which also includes paragliding and paramotoring. Manufacturers like Nirvana took part in the last event. Paramotoring is gaining in importance in this country which organised one of the Parabatix events. For more information about the event <http://extremesportsexpo.me/>



Live your adventure!

Ultra-light equipment for adventurers, XC and tandem pilots.

Sir Edmund EN /LTF B
1,58 kg (Size 20)



The freedom of lightness!



String RS 690g



Cocone X-Alps 2,4 kg



Front container 230g



UltraCross 100
975g



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

www.skyman.aero

NOVA SECTOR



One of the first Sector Cs in October 2017, photographed by Mario Eder. It will be available from the middle of February 2018. Characteristics: very reasonable aspect ratio of 5.92 for this EN C with sixty-seven cells and three lines.



Mario Eder 'going for it' with a Sector C in October 2017. The inside of this wing, with its "Diagonal Tape Ribs" and "Needle Eye Ribs", greatly resembles that of the new Phantom.

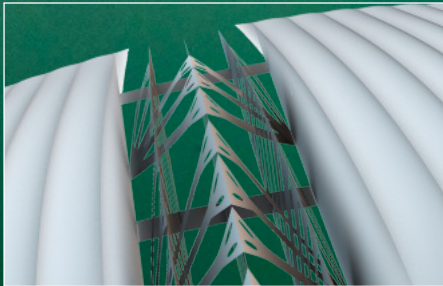




Photo: Sascha Burkhardt

NOVA

The Phantom in 2016, the Mentor 5 light in 2017, the Sector in 2018: wings which seem to hit the spot every time. Each one observing the current trends: combining light weight and performance whilst having the aspect ratio and accessible behaviour of their class. Brand new in 2018: the version 4 of the mini-wing pioneer lbex.

WHO'S WHO?

From left to right: **WOLFGANG LECHNER** created Nova with Hannes Papesh, Herrmann Habe and Toni Bender in 1989. Almost thirty years later, he is still at the head of the business. **PHILIPP MEDICUS** 'Pipo' has, since 2014, been the main designer in the company. Previously he was a test pilot and co-developer. **TONI BENDER** is one of the real dinosaurs of free flying and has always been at the heart of Nova. His books and films have encouraged more than a few people to start paragliding...

The Mentor5 Light came out this year: here's a nice publicity clip: <https://vimeo.com/231822568>





SKYMAN

NEWS SKYMAN

The solo and tandem single skin Sir Edmund, tested in our last edition, enjoying their long awaited launch.

There is also the double skin EN A wing 'The Rock', an improved version 2 of which will come out in 2018.

www.skyman.aero

WHO'S WHO?

MARKUS GRÜNDHAMMER

Underneath his tough guy looks, Markus Gründhammer, founder of Skyman, has a big heart. Moreover, he designs hearts everywhere, including in the hundreds of night skies a year (!) that he passes high up on the summits. In the morning, he flies straight down to work on his wing. A very untypical career which started off badly with life on the streets. André Bucher, founder of Angel, pulled him out of that at the beginning of the 1990s, to jump out of helicopters with some surprisingly modern of wings. Together they have had astounding commercial success, which continued with the famous Edel brand, then with Wings of Change, which was a little less well known. Now Markus is concentrating on Skyman and all that is lightweight and fits in a hiking backpack, leaving enough room for his camera which he is never separated from and allows him to convey everything close to his heart...



1994, an old, poor quality video: Markus & André Bucher jumping out of helicopters to do the first ever barrel rolls in the history of paragliding. <https://www.youtube.com/watch?v=IQWAV5a-Kdgh>



2012, Markus having fun here with a Wings of Change with an aspect ratio of 13! <https://www.youtube.com/watch?v=e1xjWefNFA>

JEWELLERY

René Hasle sells artisanal jewellery made in Hungary in his online shop.



Necklace with silver medallion
The medallion is in 925 silver and rhodium and the motif is in enamel.
2 models: male and female
Price: 96 €



Silver bracelet with a little "My wings" heart.
Brummel hooks and a little heart in 925 silver and rhodium
Two colours: gold and silver

Price: 61 €



Silver bracelet with little "My wings" heart.
Brummel hooks in 925 silver and rhodium The little heart is in coloured enamel.
There are five sizes and different colours.
Price: 61 €.



"My wings" silver bracelet for men or women.
Brummel hooks in 925 silver and rhodium. The cord comes in five different sizes and is available in multiple colours
Price: 41 €.

WHO'S WHO?

René Hasle

The head of the [Paragliding.rocktheoutdoor](https://paragliding.rocktheoutdoor.com/) website which gathers and disseminates information about paragliding. He also sells his own folding bag "le Tube" in his online shop where you can find numerous accessories.

<https://paragliding.rocktheoutdoor.com/>





The UP Ascent 4: 3D-Shaping and mini ribs to accompany the new pilot up high and for a long time.

UP ASCENT 4

UP are going to release the Ascent 4 bang on the 1st of January 2018. This EN A should be even easier to launch. According to the manufacturer, the improved in flight handling prepares pilots for wings in higher classifications in total safety.

www.up-paragliders.com/de/products/paragliders/ascent-4

UP MERU

Brand new: the EN D 2-Liner Meru will be released soon.

UP TECHNICAL DATA					
ASCENT 4					
MANUFACTURER	Web: www.up-paragliders.com/en/products/paragliders/ascent-4				
DATE	2017	2017	2017	2017	2017
SIZE	XS	S	SM	M	L
CELLS	34	34	34	34	34
FLAT SURFACE AREA [m²]	21,0	23,3	25,5	27,6	29,4
FLAT WINGSPAN [m²]	10,1	10,6	11,1	11,5	11,9
FLAT ASPECT RATIO	4,8	4,8	4,8	4,8	4,8
ALL UP WEIGHT [kg]	50-70	60-80	70-95	80-110	95-130
WEIGHT OF THE WING [kg]	3,9	4,2	4,4	4,8	5,1
HOMOLOGATION	A*	A*	A*	A*	A*
MATERIALS	Porcher Skytex 38 Universa Dominico DOKDO 30 DMF (WR) Edelrid 6480D-130/090 (Dyneema sheathed) Cousin 989-2,1/1,3 (Dyneema sheathed) <i>in progress</i>				

TREKKING

TREKKING BIRD

The Bird is Trekking's most recent model. We are currently testing it: it's a very safe EN B wing, of note, the very playful low speeds and great comfort in thermals. Our full article will be out soon...
www.trekking-parapentes.fr

The rods in P14, a material apparently exclusive to Trekking, form a SharkNose with a touch of "Brenneur". The low speeds seemed particularly safe to us.

WHO'S WHO?

NICOLAS BRENEUR

One of the earliest free flying pilots (1978) and above all one of the first paragliding manufacturers in the world (1985), the brand Brindazur was initially established in Grenoble, then Millau. Equally one of the most experienced specialists in paragliding servicing since 2000, he took over Trekking in 2013.



Photo: Sascha Burkhardt



Photo: Véronique Burkhardt, Pilote Sascha



Photo: BGD

The BGD Lynx, a lightweight version of the successful Cure.

BGD

BGD LYNX

Derived from the Cure, the Lynx has been optimised to be faster, while being lighter. This EN C will therefore also be more homogenous and easier to handle. Its weight is between 3.6 kg and 4.5 kg according to the size, therefore 600 to 900 g less than the Cure.

Cédric Nieddu tested the Cure for Free.aero.

His conclusion: 'It is correctly placed in its category of EN C certified XC wings. It's easy to launch in all conditions, super efficient in thermals and keeps its glide even when it's rough'.

<http://en.free.aero/contentHTML/Season2016/?page=67>





The "Low-EN B" Echo, the lightweight version of the Epic, with a pronounced SharkNose, mini-ribs, CCB (3D-Shaping), and a unique design...

BGD

BGD ECHO

The lighter version of the Epic: 500-700g less and with better performance and flexibility. Advertised trim and maximum speed: 38-50 km/h. Glide ratio: 9.

BGD PPG

BGD now have a full range of DGAC-certified paramotor wings, comprising the Echo Motor, Epic Motor, Luna 2 and Dual Motor.

WHO'S WHO?

Left, British pilot **BRUCE GOLDSMITH**, head of BGD. In 1989 he set up Airwave. In 1998, he was one of the co-founders of Ozone. In 2000, he went back to Airwave and won the Paragliding World Championship in 2007. After a time as a designer for Advance and another stint with Airwave, he set up Bruce Goldsmith Design in 2012. Right, **CHRISTOPHE SCHEER**, financial and logistical director at BGD.

BGD ECHO					
TECHNICAL DATA					
MANUFACTURER	BGD www.flybgd.com/fr/parapente/parapente-echo-en-ltf-b-213-0-0.html				
DATE	2017	2017	2017	2017	2017
SIZE	XS	S	M	ML	L
CELLS	42/80				
FLAT SURFACE AREA [m²]	21	23	24.97	26.83	28.85
FLAT WINGSPAN [m²]	10.26	10.73	11.18	11.59	12.02
FLAT ASPECT RATIO	5.01	5.01	5.01	5.01	5.01
ALL UP WEIGHT [kg]	50-65	60-80	75-95	90-110	105-125
WEIGHT OF THE WING [kg]	3.7	3.9	4.2	4.4	4.7
CERTIFICATION	EN-LTF B	EN-LTF B	EN-LTF B	EN-LTF B	EN-LTF B
CERTIFICATION LABS	AIR TURQ.	AIR TURQ.	AIR TURQ.	AIR TURQ.	AIR TURQ.
MATERIALS	Upper surface : Dominico D20 36g/m² Lower surface : Porcher Skytex 27g/m²				

Photo: Sascha Burkhardt





Photo: Véronique Burkhardt

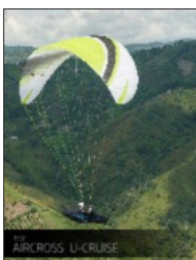
AIRCROSS

AIRCROSS U FLY 3

The manufacturer is getting version 3 of the U Fly ready for this year. The wing will be placed in the lower third of the EN B classification. It's big sister, the "high end EN B" U Cruise, is progressing slowly but surely. It has gained in notoriety since the owner of Air Cross, Konrad Görg, flew 446 km on it, but in some places, this high performance wing is still surprisingly unknown.

PRICES ARE FALLING

New prices in 2018, for example 2990 € instead of 3990 € for the U Cruise !See the website: www.aircross.de



Our full test of the Air Cross U-Cruise: <http://en.free.aero/contentsHTML/trends2017E/?page=57>

WHO'S WHO?

KONRAD GÖRG

His main occupation is farming, but he's also a top level paraglider pilot and owner of Kontest, which is a big repair workshop for wings which AirCross took over nearly ten years ago. He is also very closely linked to Edelrid.





AirCross also market (for all brands of wings) a 'Survival Kit' with all you need to repair your wing and, above all, to correctly make a line by splicing. 59 €. <https://goo.gl/ygddPd>



A little clip by the manufacturer shows the technique. <https://youtu.be/OzMQ7CoXa0k?t=1m40s>

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LTF/EN B

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<p>AIR TAXI</p>	<p>LOOPING</p>	<p>EVO CROSS</p>	<p>HI-TEC</p>
PARAGLIDERS	HARNESSES	RESERVES	ACCESSORIES

ADVANCE

ADVANCE IOTA 2

Even before it was launched, we started to test the new Iota. Here are our first impressions:

<http://www.free.aero/en/contentsHTML/Advance-Iota2-E/>

ADVANCE PROGRESS 3

This harness is supposed to be the 'queen of flexibility', from training to travelling and thermaling, up to moderate 'hike&fly'.

CHARACTERISTICS

This reversible harness has a hybrid foam/air protector to give protection during take off. Despite its 'thigh strap harness' characteristics, it has numerous very comfortable features. It will be available from mid December.



Very flexible: the
Progress 3
Three sizes S/M/L
Weight 3.3 kg, 3.6kg,
3.9 kg.



The Iota 2.
Our test:
<http://www.free.aero/en/content/sHTML/Advance-Iota2-E/#issue/Advance-Iota2-3/portrait/1>

WHO'S WHO?

SIMON CAMPICHE has been a pilot since 1993 and has been responsible for marketing with Advance since 2005.

Only 4.8 kg, the new Bi Pi, a classic double skin wing.





THE SUPAIR EVO LITE HARNESS

According to Supair, it's an ideal harness for progressing safely towards longer flights and going XC. Optional speedbag. A harness in lightweight fabric and without foam in the fairing to make it lighter: 3.7 kg in size M. It's 900g less than the EVO XC3 on which it is based. Back protection: Bumpair 17 cm foam bag <http://www.supair.com/produit/evo-lite/>

SUPAIR&GRADIENT

The purchase of Gradient by Supair shouldn't change anything for the pilots and clients of the Czech brand. At the very least, they will be better served because Ondrej Dupal will have more time to look after development, thus in the long run, giving their customers better service.

This summer, he got the Aspen 6 light certified in 22, 24 and 26 by Air Turquoise. This lightweight version of the Aspen 6 is made from Porcher Skytex 32 Everlast, 36 g/m² and Skytex 27 Classic II, 27 - 29 g/m². The wings weigh 3.7, 4.0 and 4.2 kg.

<http://gradient.cx/en/Aspen6light>

SUPAIR ROMANIA VIDEO

There aren't any spectacular sequences, but especially at the beginning, there is a nice publicity clip about the joys of simple hike&fly in the mountains. Gear: the Supair Taska and Strike harness.

<https://youtu.be/S0Z0mmKfLGw>



Photo: Supair



Going for a wander: two examples of the EN D Supair Wild, Benoit Outters' X-Alps wing, which we've already reviewed here: <http://en.free.aero/contentsHTML/climbing2017/?page=45>



ACCESS ALL AREAS

The ECHO is THE all-rounder in our range. With a solid blend of performance and no-stress safety the pilot who loves every kind of paragliding will find one wing does it all with this little lightweight package. Stripped-down, open-minded, and dressed to impress, the ECHO will please every pilot it floats over!

ECHO

www.flybgd.com

BGD
BRUCE GOLDSMITH DESIGN

Part of the BGD LITE collection



Photo: Sascha Burkhardt

Founder, Wolfgang Kaiser, and new recruit, Martello Heinlein, with a prototype of the Buteo: more than eighty cells partially doubled up in the interior.

ICARO

ICARO BUTEO & BUTEO LIGHT

A manufacturer which is getting younger and younger and modernising at every level, from conception to communication. A response to the Nova Phantom is underway: the Buteo by Icaro is an EN B made with more than eighty cells, based on the Gravis. Mini Ribs in the front part of the wing increase the effective number of cells to one hundred and sixty. The first size has passed certification and should be about mid EN B, with the performance of an EN C Production is expected in the spring. A lightweight version, the Buteo Light, is also anticipated.

ICARO CIRCUS

The Circus is one of the new harnesses fully optimised for acro: the chest is held firmly and there are nice details, such as the openings for emptying out water after a splash landing. Available at the end of the year.



A prototype of the Buteo Light. The essential detail, the weight, hasn't been revealed yet.

The Icaro Circus acro harness: Mesh for letting the water out after a splash landing...



Photo: Sascha Burkhardt



High-tech for a low EN B.

ICARO PANDION

The Pandion model is a 'low' EN B. It is placed slightly below the Gravis. Equipped with technology such as a SharkNose, it should be well adapted to thermal flying, according to Icaro. 🦅

PANDION TECHNICAL DATA					
MANUFACTURER	ICARO PARAGLIDERS Web : www.icaro-paragliders.com				
DATE	2017				
SIZE	XS	S	M	L	XL
CELLS	40 + 38				
FLAT SURFACE AREA [m ²]	22	24	26	28	30
FLAT WINGSPAN [m ²]	11	11.4	11.7	12	12.4
FLAT ASPECT RATIO	5.2				
ALL UP WEIGHT [kg]	-	-	-	-	-
WEIGHT OF THE WING [kg]	4.9	5.2	5.5	5.8	6.1
CERTIFICATION	EN B				
CERTIFICATION LABS	EAPR				
MATERIALS	Skytex 38 , Skytex Eazyfly				



The promotional video of the Pandion model.
<https://www.youtube.com/watch?v=hpKox30bFk8>

Photo: Icaro

An Icaro Pandion at Ölüdeniz (Turkey).

Windsriders.fr

Mountain&Flight

Ethic and awesome

Reversible Jackets,
Lady, Hybrid, Thermik Light,
Yéti, Nosleeve, Everest.

- Paragliding
- Down Jackets
- Flight Muffles

**BECOME
A DEALER**



Photo: Jérôme Maupoint / GIN



Dessin: Jean Paul Budillon

TO GO UP, GO DOWN...

... a category and accelerate!

The advice from our colleague Pascal Kreyder

During their flying careers, lots of pilots want to quickly change their wings to move up a classification, or for a new wing which flies better than the previous one, which penetrates the wind better, with a better glide ratio and which flies faster. But for many of them, it's perhaps a bit premature. Even worse, a certain number would fly better by choosing a more modern wing, but not from a class above. Sometimes it would even be better to go down... Because when you consider it more closely:

- how many pilots fly almost constantly with 10% brake?
- how many pilots don't use the accelerator during a transition?
- How many others never accelerate in descending air?

If these three elements are brought together, what percentage of our wing's per-

formance do we use? 40 % or 50 %? Therefore, wouldn't it be better to go down a classification level and progress by using 80% of the capabilities of our aircraft? And perhaps with the difference in price, invest in more training?

Take a concrete example, a wing in the category above which flies at 38 km/h at trim and 50 km/h accelerated and another inferior wing, which flies at 37 km/h at trim and 47 km/h accelerated. As you can see, there isn't a big difference in performance and speed between the two categories.

On the other hand, by keeping the accelerator half on, the speed can be improved by at least 10 km/h.

As we have explained several times, the advantages of using the accelerator are the

following:

- Increase in speed.
- More tension across the wingspan (solidity).
- Less pitching and diving crossing a heterogeneous air mass.
- Entering a thermal is cleaner and faster.
- Coming out of a thermal is more efficient, if you accelerate in the thermal
- Managing the pitch with the accelerator is possible.

Conclusion

To have more performance, it's better to stay in your classification, or even go down one to gain confidence in using the accelerator fully, rather than flying a wing a notch up, where you are constantly restraining it with 10 % brake...





NIVIUK

NIVIUK ROAMER 2

The new reversible Roamer 2 harness aims to be very universal with, however, a clear leaning towards mountains, including speed riding.

Two sizes M and L, weight 1425 g/1537 g.
 Price: 490 €. The airbag is optional, it costs 80 € and weighs 257 g/277 g.
 String helmet bag: optional, 34 g.
 Accelerator: optional, 32 g.
 Backpack volume: 37 l/45 l

<http://www.niviuk.com/harness.asp?i=eng&id=JNKRNG0&prod=&news=>





NIVIUK

NIVIUK TAKOO 4

A new version of the Takoo tandem is available: initially the aim of the 4 was to be a very accessible and comfortable tandem, but in the end, it also set itself apart by having a large net gain in performance.

The initial feedback that we got reported a very efficient glide, comparable to a solo high performance wing. We'll test it in a few weeks.

TAKOO 4 HERSTELLERANGABEN			
MANUFACTURER	NIVIUK Web: http://www.niviuk.com		
DATE	2017		
SIZE	39	42	44
CELLS	55	55	55
FLAT SURFACE AREA [m ²]	38.5	41	44
FLAT WINGSPAN [m ²]	14.55	15.02	15.55
FLAT ASPECT RATIO	5.5	5.5	5.5
ALL UP WEIGHT [kg]	110-190	120-220	150-238
WEIGHT OF THE WING [kg]	7.1	7.4	7.8
CERTIFICATION	B		
CERTIFICATION LABS	AIR TURQ.	AIR TURQ.	AIR TURQ.

ICARO Raudion

EN
B



www.icaro-paragliders.com



Photo: Sébastien FJ

NIVIUK

NEW SIZES FOR THE R-BUS

The R-Bus for tandem paramotors is now also available in sizes 31-34, with minimum all up weights of 100/120 kg, for use with a tandem paramotor foot launching or for solo trikes.

R-BUS TECHNICAL DATA				
MANUFACTURER	NIVIUK Web: http://www.niviuk.com			
DATE	2017			
SIZE	31	34	37	40
CELLS	35	35	35	35
FLAT SURFACE AREA [m ²]	31	34	37	40
FLAT WINGSPAN [m ²]	12.94	13.55	14.14	14.7
FLAT ASPECT RATIO	5.4	5.4	5.4	5.4
ALL UP WEIGHT [kg]	100-410	120-440	150-500	210-500
WEIGHT OF THE WING [kg]	6.6	7.1	7.6	8.1
ENGINE CERTIFICATION	DGAC	DGAC	DGAC	DGAC



Before the flight, the harness was packed along with a Skin Plume, into the little Kargo P25 backpack, which weighs 379g. <http://www.niviuk.com/accessories.asp?id=JNKSDPF8>

NIVIUK

NIVIUK ROAMER P AND OTHERS...

The String by Niviuk is called the 'Bikini', for a change. Its official name is the "Roamer P". Barely 170g for this ultralight harness.

<http://www.niviuk.com/harness.asp?id=JNKRGRLO>

Other new additions are anticipated for 2018, such as the Artik 5 and the Link 2. More about them later...

WHO'S WHO?

Behind the new "Bikini" Roamer P is the founder of Niviuk.

DOMINIQUE CIZEAU was born in France with Viking origins but settled in Catalonia in 2005 with his company. He worked, at the beginning of the noughties in paragliding marketing in Andorra, amongst other things. Photo: Sascha Burkhardt





Now, all competitions of this type take place over water. The pilots can concentrate, without worrying, on their speed and precision. http://en.free.aero/contentsHTML/playing_with_wings/?page=47

WPSC NOVEMBER 2017: PHARAONIC PARAMOTORING

For the first time since 1940, an international FAI event has been organised in Egypt: the World Paramotor Slalom Challenge.

Photos: Karen Skinner and Jason Whitehead



Karen Skinner, one of the best pilots in the world, also works regularly with Free.aero as a photographer.



Fast, optimised turns on a paramotor: quite an art, combining good knowledge of the foot accelerator and throttle adjustment along with classic and stabilo braking. Detailed explanations of this flying technique: http://en.free.aero/contentsHTML/playing_with_wings/?page=47

At the beginning of November 37 pilots, six of whom were women, took part in a very close run competition, but at the same time, very safe in the depths of the desert and above Lake Qârûn. Alexandre Mateos did a clean sweep winning all the tasks and captivated the spectators His wife Marie was also well placed in front of the other ladies... what a couple!

THE TEAM CLASSIFICATIONS:

1st France
2nd Czech Republic
3rd Spain

For this World first, the Egyptians were determined to assure total safety at all levels. Moreover, according to the participants, the organisers excelled in other areas too. This country clearly wants to develop tourism!





1. Marie Mateos (MacFly Thor 200, Dudek Snake XX 15)
 2. Aurelia Hallé (Yoda M25 Light, Dudek Hadron XX 18)
 3. Karen Skinner (PAP Thor 200, Niviuk Kougar 20)



1. Alexandre Mateos (MacFly Thor 250, Ozone Viper 4 14)
 2. Jérémy Penone (ALS Thor 250, Dudek Snake XX 15)
 3. Nicolas Aubert (PAP Thor 250, Niviuk Doberman 2 15)

Slalom, Touch and Go, Kicking Sticks...
 a paramotoring competition is like
 playing in a sandpit for big kids!





After the competition, there was a friendly little game of chase between the winner Alexandre Mateos (MacFly Thor 250, Ozone Viper 4 14) and second place, Jérémy Penone (ALS Thor 250, Dudek Snake XX 15), filmed by Matt Minyard. <https://youtu.be/wsUhDdg-HZE?t=29s>

The hotel also served as a free flying site... with poolside landings...





Wonderful countryside, within flying reach.
Just a few drops of fuel were sufficient.

A bit too low: going for a dip is sometimes all part of the game...

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throttle to match your style
or your glider type

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or **V2 + V3**
with a reversible KIT

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The call of the desert: two Niviuks off for a bit of sight seeing.

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Photo: Air Design

AIR DESIGN

AIR DESIGN RISE 3

The Rise 3 was developed at the same time as the EN D Hero (there will be a test of the Hero in a future issue). The Rise 3, as a top of the range EN B, therefore benefits from the high performance profile of the Hero. Particularly visible, the winglets which here bring, combined with the vortex hole, not just performance, but also roll and even pitch stability at high speed.

Air Design have taken care with the ears, and with reason, no doubt other manufacturers also have more or less pronounced winglets (Advance!), and as a general rule, all the modern top of the range wings have started to raise their ears. In commercial aviation and in nature, 'creators' also add winglets.

On the other hand, a speciality of Air Design: 'Vortex Holes', openings which offer an extra way of reducing vortex turbulence.



The winglets on a Condor in the Andes, by Ester Inbar.



Photo: TSgt Shane A. Cuomo/USAF



WHO'S WHO?

Air Design was created in 2011 by **MARTIN GOSTNER** (4th from the left) and **STEFAN STIEGLER** (5th). Martin has been flying since 1987; before that, he worked for Airwave. Stefan was with UP, then Airwave. He was Paragliding World Champion in 1995. Also in the photo: far left, **BORIS GOSTNER** (Martin's brother), who looks after marketing at Air Design; he's been a pilot since 2005. Second from the left **NICOLAS COCHET**, responsible for the French market. A pilot since 1989, he migrated from industry to paragliding. Third from the left, **LEON VAN RIGN**, who has been a pilot since 2005. Sixth from the left in the photo, test pilot **MIKE KREMER**, who also looks after international sales.

There's a clear trend: even EN B pilots are starting to fly using the Cs. On the Rise 3, there is a system which lets you act on the Bs at the same time as the Cs.

Stefan Stiegler shows the new configuration tool: even on a mobile you can very easily configure the colours of your wing...



RISE 3

HERSTELLERANGABEN

MANUFACTURER	AIR DESIGN Web: https://www.ad-gliders.com/en/				
DATE	2017				
SIZE	XXS	XS	S	M	L
CELLS	49				
FLAT SURFACE AREA [m²]	18.77	21.34	23.83	25.91	28.09
FLAT WINGSPAN [m²]	10.57	11.27	11.91	12.42	12.93
FLAT ASPECT RATIO	5.95				
ALL UP WEIGHT [kg]	55-65-75	60-78	72-92	85-105	100-125
WEIGHT OF THE WING [kg]	3.07	3.49	3.9	4.24	4.60
CERTIFICATION	B				
CERTIFICATION LABS	EAPR	EAPR	EAPR	EAPR	EAPR
MATERIALS	Extrados: DOMINICO - DOKDO-20DMF(WR) Suspentes Hautes: EDELRID 8000/U-070, 090 Intrados: Porcher Skytex 27 classic II Suspentes Intermédiaires: EDELRID 8000/U-130, 190 Cloisons: MJ32 Suspentes Basses: EDELRID 8000/U-190, 230, 280 Élevateurs: Liros 13mm Aramid/Polyester Mallons: 4,3mm J00-TECH/Korea ou AirDesing Softlinks/Liros DC300				

GIN



GIN GENIE RACE 4

The aerodynamic rear fairing of the new Race 4 doesn't inflate by the sides but via an opening in front of the pilot's feet.

Unusual: the inflation of the aerodynamic fairing is done by an opening at the end of the cocoon and passes through a tube.



WHO'S WHO?

GIN SEOK SONG, hang glider pilot since 1976 and paraglider pilot since the beginning of paragliding became a designer for manufacturers like Airman, UP and Edel back in 1987. He set up Gin in 1998 and designed the Boomerang 1, being a top level competition pilot himself.

MICHAEL SIGEL is part of the GIN team, being a top level competitor, test pilot, developer and responsible for administration.



Photo: Jérôme Matpoint



Photo: Jérôme Maupoint

15 years later: The Gangster is back!

GIN

NANO 4 AND GANGSTER 2

The Nano 4 is GIN's new 'bench mark' speed riding wing. In the biggest size, 13.5, it is also designed for beginners.

Fifteen years after the first version, the Gangster 2 will be the freestyle wing capable of all the basic manoeuvres, but also adapted to soaring and playing on dunes.

GIN is also working on new wings in the more classic sectors, which will come out in 2018: the Yeti 5, the EN B Atlas 2, the EN C Bonanza 2 and the EN D GTO 3.

The Nano 4, the first prototype models, shown here last spring.





Photo: Sascha Burkhardt

The new Atom 80.

As a reminder, the Moster in its luxury version, the Factory, can't take the electric starter, but only weighs 12.5 kg and is equipped with a clutch (black disc).

VITTORAZI

VITTORAZI ATOM 80

A new 78 cc motor, announced with a big fanfare at the Coupe Icare. It is, above all, designed for short and medium length flights, for beginners and inexperienced pilots. It gives 16-17 HP at 9 500 RPM and a thrust of 55 kg. The engine, equipped with a clutch, only weighs 10.5 kg. Its launch, which was expected in December, has been slightly delayed.

VITTORAZI MOSTER PLUS STARTER

Remember that since last summer, the Moster185 Plus and Moster185 Silent have been available with both an electric and cord starter. Great flexibility at the cost of a slight increase in weight.

<http://www.vittorazi.com> 

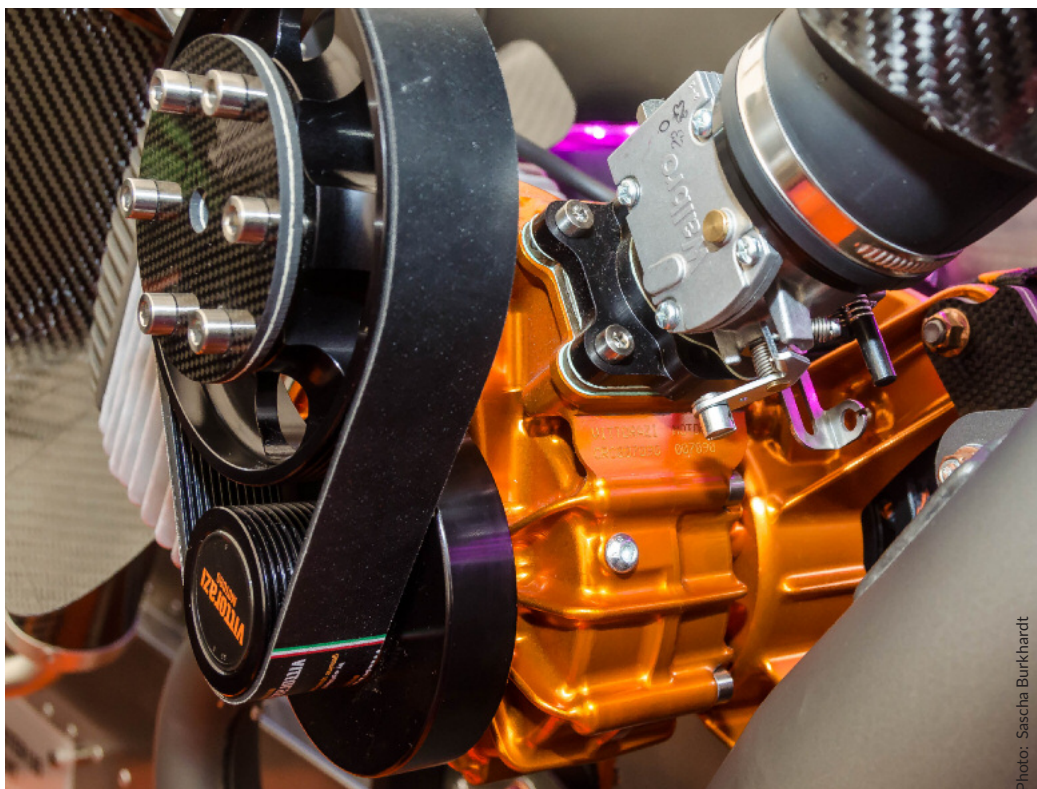


Photo: Sascha Burkhardt

ADVENTURE

ADVENTURE : PRIMUS & PLUMA

The Primus is the new entry level chassis. Some parts, such as the foot, are identical to that on the Pluma, but other parts are in steel or stainless steel (the swing arms). Available with three different engines. The Primus can be upgraded to a Pluma at any time..

<http://www.paramoteur.com/en/> 

The new Primus: a move towards the Pluma. Price: from 4990 €. It weighs 2kg less than the old chassis with mobile swing arms.



CARBONE PARTOUT, LÉGÈRETÉ & ROBUSTESSE...
ADVENTURE
PLUMA

Reread our first article about the Pluma.
<http://www.free.aero/en/contentsHTML/light2017e/?page=20>

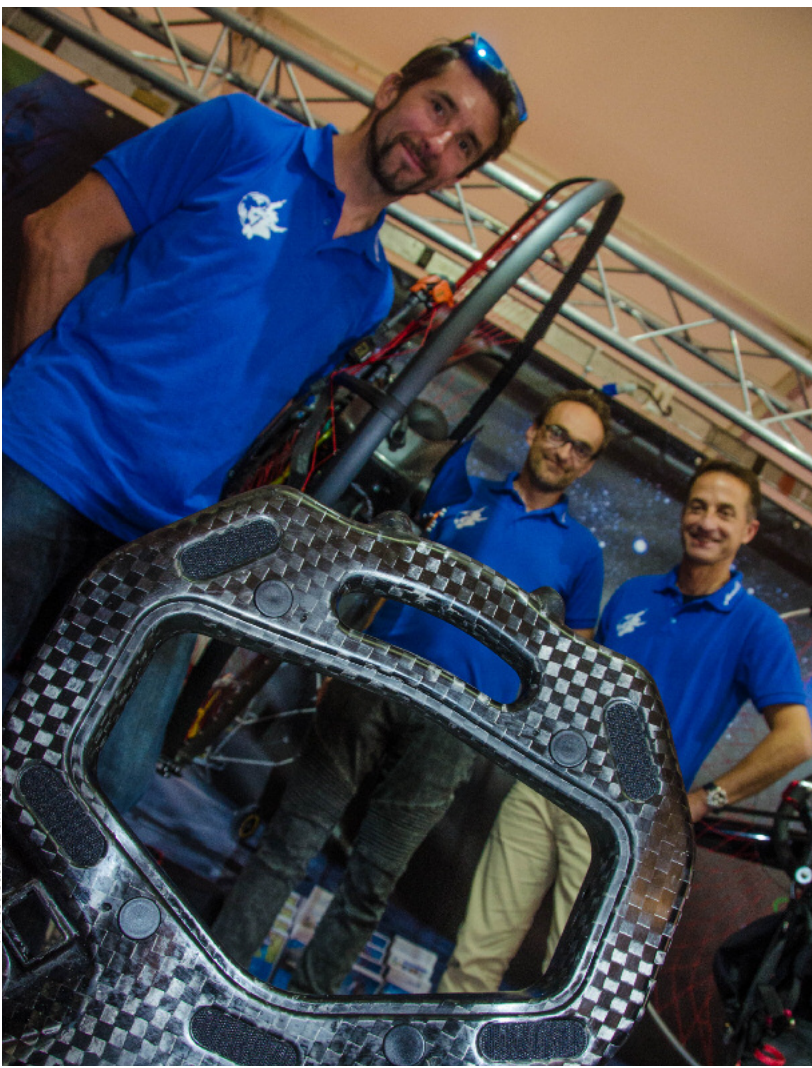
Carbon on the Pluma: a noble material, light and flexible. The use of pre-impregnated fabric allows, amongst other things, a very precise fabrication of the details.



WHO'S WHO?


From left to right:
PASCAL VALLÉE, paramotorist since 2005, World Champion in 2012, co-owner of Adventure since 2015.
EMMANUEL LAYAN, test pilot and developer with Adventure since 1993(!), also joint owner since 2015.
ANDREA TESTONI, aeronautical engineer with ETH in Zürich, paramotor pilot and CEO of Adventure since 2015.

Photo: Sascha Burkhardt



RAZEEBUSS

RAZEEBUSS: THE FREEDOM OF ELECTRIC

Contrary to what some may think, the Razeebuss project continues to be developed. In collaboration with Supair, the Radicall equipped with a HPD 12 motor has 68 kg of thrust, when the 130 cm propeller is unfolded. Then in thermals, it folds up behind the pilot. Weight of the system: 17 kg. Reserve included. 25 minutes of battery power in level flight. 

www.razeebuss.com



Flying, that's all.



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WWW.KANGOOK.CA 



Accessories

POLINI

POLINI GOES FOR TITANIUM

Polini have reduced the weight of their exhaust which is an option for the Thor 190/200/250. It is made from 31 titanium cones welded by hand. The reduction in weight of 1.5 kg is significant.

<http://www.polini.com/en/>



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PLAY!

THIS IS SERIOUS!

The analysis of accidents and incidents shows that pilots often lack exactly the type of skill that you can get in total safety on the ground, by playing in the wind and bringing the wing to its stall point for example. The ideal place to play is 'The Dune', but cleared, gently sloping fields, perhaps even with a few bales of hay, can do just nicely.

Exceptional pilots such as Mike Küng or Charlie Piccolo, for example, repeat endlessly: 'in three days on The Dune (de Pyla) you can take off three hundred times, and learn more than in three years of normal flying.'

Reread our articles about The Dune as well as the advice about playing seriously...(be aware that there may be changes to the rules at The Dune). 



By playing regularly at ground level, Mike Küng has gained incredible fluidity. And even he, an acro pilot since paragliding began, never gets bored if he has to remain just a few metres above the ground...

Every hop is a new take off...

Here he's climbing a bunker in front of the Dune de Lokken in Denmark.



PLAYING LIGHT

The trend for increasingly lightweight material has another positive aspect: it is a lot nicer when playing on the ground. For example, with a minimalist harness like this GIN Yeti Xtrem 2: it only weighs 260g and doesn't limit any of the pilot's movements.

In addition, moving from the upright to the sitting position is easy, as we saw.



EUROPE IS ON THE UP

THE LABS ARE TALKING TO EACH OTHER
For the first time in years, the main testing laboratories DHV, EAPR and Air Turquoise have had a meeting to discuss closer collaboration. Sadly, the French laboratory Aérotest wasn't present.

They discussed a possible simplification of the accreditation for LTF laboratories. To sign off an LTF certification, even if it is identical to an EN one, they have to be DaKKs accredited. All three are, but the audits and paperwork to continue doing this are expensive. They also proposed mutual recognition, between the laboratories, of partially completed tests to finish certification. More fluid communication would certainly be preferable especially as, in the past, we journalists sometimes noticed a certain distrust between the laboratories.

For the pilots, one of the most interesting measures is the possible creation of a common public database, with all the certification reports.

WHO'S WHO?

Around the table at the PMA in Bregenz in Autriche on the 5th of December 2017. From left to right: Laurent Chiabaut (Supair & Vice President of the PMA), Pascal Purin, (Director of the EAPR laboratory), Guido Reusch (Secretary of the PMA), Günther Wörl, (Swing & Financial director of the PMA) Hannes Weiniger (DHV Technical representative), Hannes Papesh, (Phi & President of the PMA), Alain Zoller (Air Turquoise), Robin Frieß (DHV).

An observation by the PMA: in almost all European countries, there is no legal obligation for paraglider certification.

Only in Germany do you need an LTF stamp. In Austria, it has to conform with 'State of the Art'.

For the manufacturers, the ideal situation would be, without a doubt, clear recognition of the EN certification in Germany.



PURE PRECISION
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www.sky-cz.com


THE DHV GETS YOUNGER

Since March 2017, the DHV has had a new director. This large federation includes 37,000 pilots, 325 clubs and 115 schools. It has a lot of power in Germany, a country with very strict aeronautical rules. Robin Frieß has been flying since 2001 and has been a paragliding instructor since 2006. He was head of a big free flying school before applying for a post with the DHV to replace Klaus Tänzler who was retiring.

Amongst his responsibilities, apart from safety, are the maintenance of airspace and keeping sites open. Other areas of work: digital communication in relation to school working tools, for example, for theory exams for diplomas (obligatory in Germany).

In a discussion with our editor, Robin explained his wish to make relations with other European Federations closer. We hope that this will lead to a simpler system of recognition of other certificates.

It's worth noting that a foreign pilot can't fly tandem in Germany or Austria, no matter what their foreign qualification or certificate. It's a limitation which comes from the German aeronautical rules which don't distinguish between professional and leisure tandem pilots. To change this law, it is necessary to go through the ministry..

www.dhv.de 

WHO'S WHO?

The new director of the DHV, 30 years old...
ROBIN FRIESS
Photo: Ewa Korneluk



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www.nova.eu/mentor-5-light






Manoeuvres are a big part of Alain Zoller's life.

Photo: Sascha Burkhardt

ALAIN ZOLLER

ALAIN ZOLLER : CONTINUOUS TRAINING FOR PILOTS.

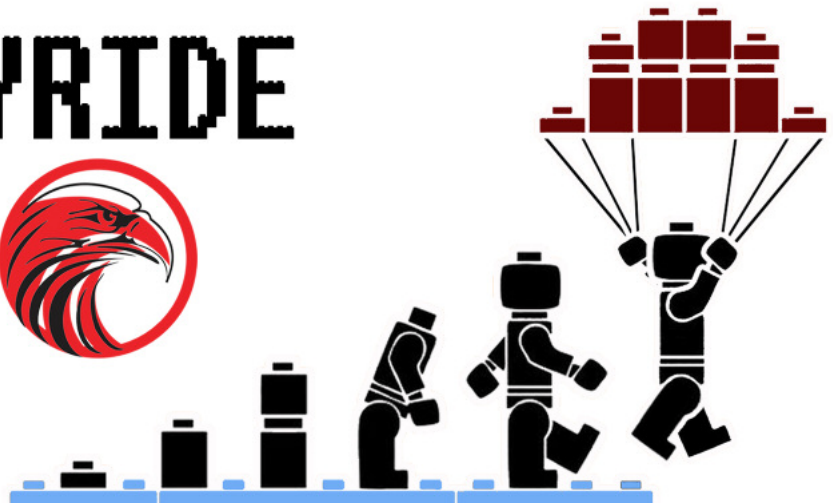
For Alain Zoller, head of the Air Turquoise test laboratory, there is a clear trend taking shape: wings of all categories are becoming safer and more stable. They allow pilots to go further and higher, confidently. Too much confidence. They have become so accessible that they sometimes take pilots, who don't have enough experience, to places they shouldn't yet go.

For Alain, one of the levers which should perhaps be used, would be more advanced, continuous training for pilots. A trend he warns against: the exaggerated reduction in weight of equipment which can 'go too far and reach the limit of what is reasonable' 

WHO'S WHO?

ALAIN ZOLLER, owner and tester at Air Turquoise
 1986 Tester for the manufacturer Proselyte Parallel
 1989 Tester for the Swiss Free Flying Federation.
 1990 Responsible for the FSVL tests
 1995 Founded Air Turquoise, collaboration with DHV Testing
 2006 Air Turquoise adapted to EN norms, split with the DHV
 2015 Air Turquoise was DAkkS accredited (German accreditation).
 As a test pilot, he carries out at least three hundred flights every year, and has done for the last twenty three years.

SYRIDE



TEST : TOUCH AND SNOW



Take off and interminable touch-and-goes on the soft snow, filmed by Christian Reuter from Kangook. <https://youtu.be/bbmZ9fDqWk8>

Fitting skis on the trike open up new perspectives in winter: large surfaces made smooth by the snow provide a take-off which is easy to play on if you equip your trike with skis.

UNUSUAL

In principle, using them is simple and easy no matter which manufacturer you choose: you put the wheels in the bindings and strap them in. In the air, the bungee cords attached to the ends of the skis keep the tips up, ready for the eventual landing.

Pilots can make skis themselves, with old snowboards for example. The ready to use solutions are fairly expensive, around 700 € minimum.

The Kangook skis that we've just tested, for example, are apparently made from skis for snow scooters. They are sturdy which at least partially justifies the price.





TECHNIQUE

Before the initial take off, it's best to do a tour of the piste on the ground. Note: the lateral road holding is obviously less than with wheels, the rear can skid (without consequence), especially on hard compact snow. A thin layer of powder is ideal. The ski at the front of the Kangook is equipped with a metal rail on the sole, which lets you steer more precisely.

In any case, for directional stability, the wing quickly takes over, and you steer as normal. A take off on skis is even a bit easier than on wheels: if there is sideways movement, there isn't any risk of the trike going over, but it shifts slightly to the side. For landing, it's the same; it's more forgiving.

Games of touch-and-go are therefore even more fun on a smooth, soft, snowy surface than on earth and grass. For those who don't want to invest in skis, you can have a surprising amount of fun simply with tyres on snow too. As long as the layer isn't more than 10-15 cm, otherwise piles of snow will form in front of the tyres slowing them down too much to take off.

A Canadian trike, it is used to the snow... A Kangook KX1 Komfort equipped with skis and sold by the manufacturer from across the Atlantic. It can be used like this solo and tandem <http://www.kangook.ca>





Photo: Sascha Burkhardt

On the market since 2011: skis for Nirvana trikes. Price: 730€.
<https://www.nirvana.cz/index-en>



Photo: Sascha Burkhardt

These skis are shorter and not as wide as those from Kangook.



Photo: Lucian Wiesner

Homemade: skis for taking off on the Flyke trike.



Photo: Fresh Breeze

Taking off without skis: can create a snowstorm, but remains possible up to a certain depth...



Soufflez, Inspirez

ADVENTURE



WITHOUT COMPROMISE
www.skytraxx.eu info@skytraxx.eu

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WINDSRIDERS

WINDSRIDERS : PRIMALOFT WIND

New at Windsriders: the Primaloft Wind jacket for paragliding. It is more robust than the Thermik Light, but also better adapted for interseason use, as it isn't as thick. The insulation is synthetic, without feathers. Due to its volume, it is very nice to wear.

<http://windsriders.fr/en/>



The new lightweight Parapente Primaloft Windjacket.



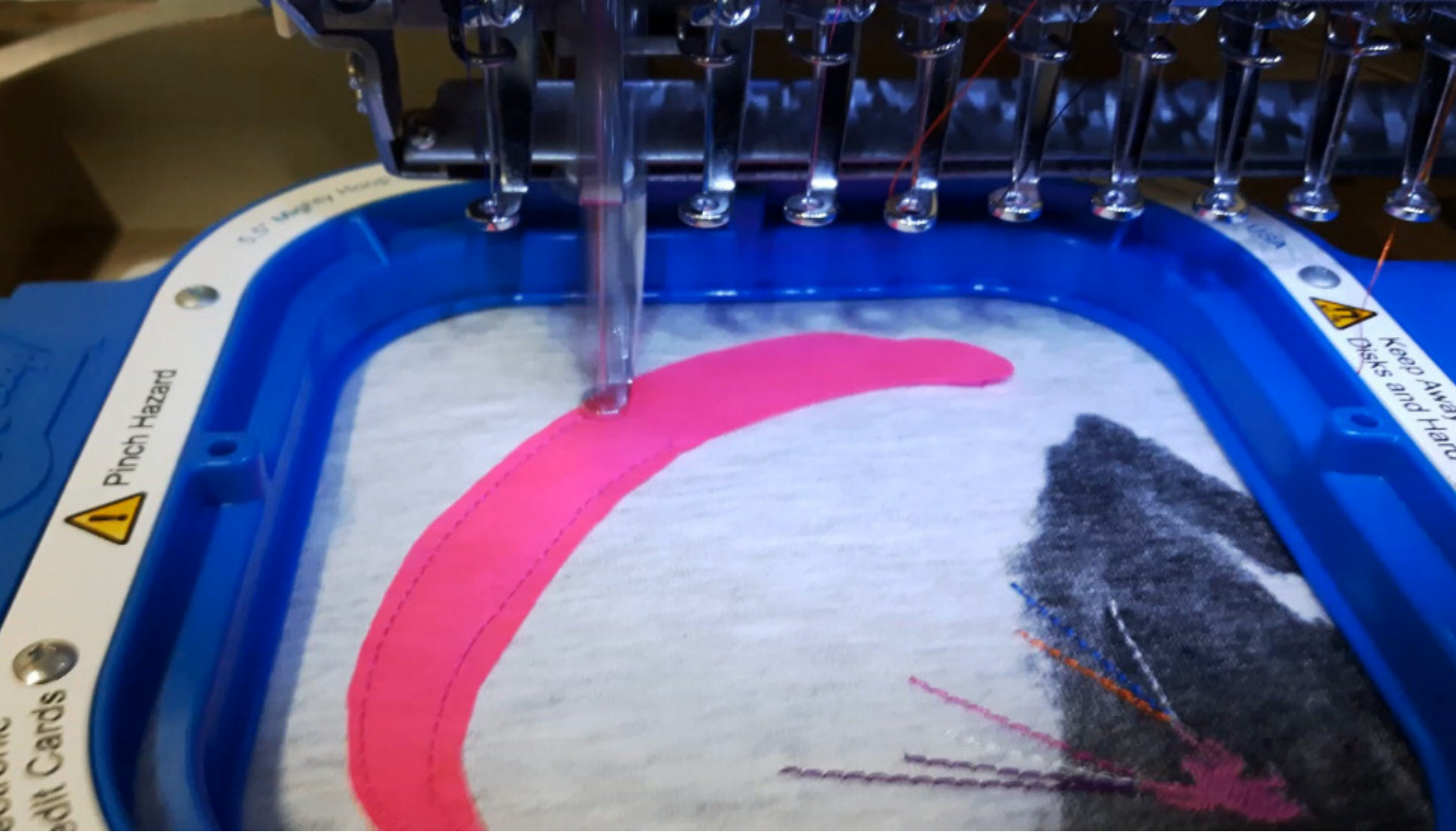
WHO'S WHO?

PHILIPPE LAMI has been flying hang gliders since 1981, then paragliders since their debut. He did the first ACPULS certification flights for Custom Sails in 1987. He is joint manager of the school www.aerogliss.com and also tests wings for Free.aero. With his wife Nathalie, he set up the company Windsriders, manufacturing specialist clothes for pilots. All the manufacturing is done in Nepal in a region where Windsriders also support charitable projects.

Photo: Sascha Burkhardt



The very light and warm Thermik Light down jackets are still on sale...



TURBULENCE

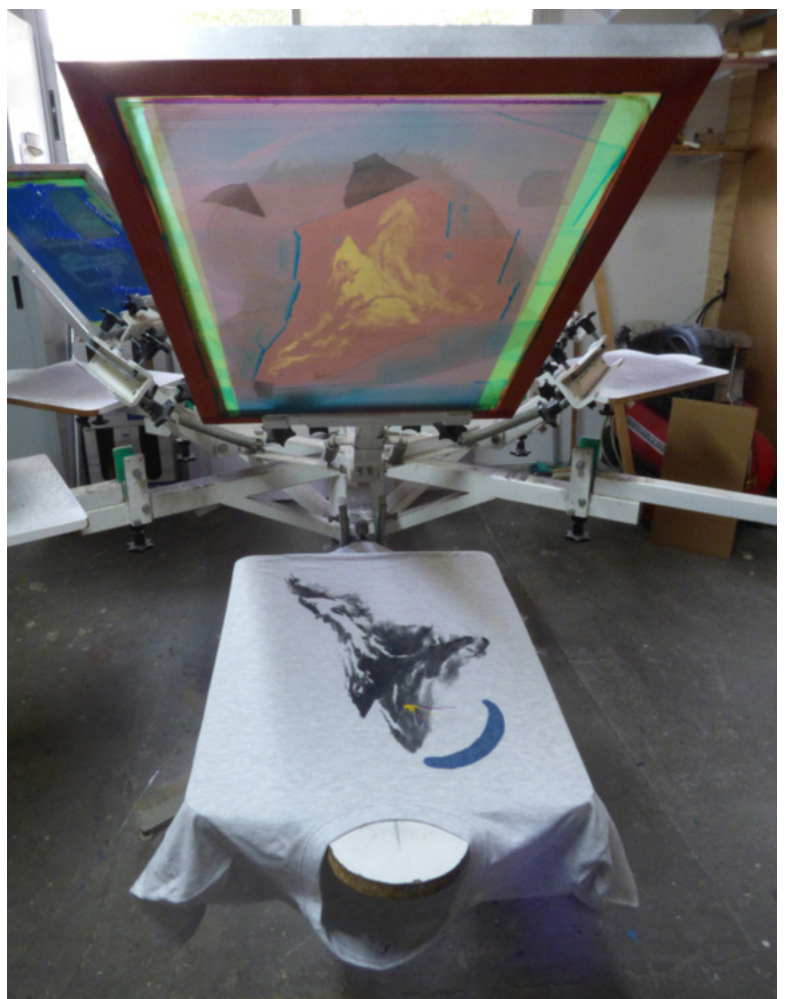
TURBULENCES: SILK-SCREEN PRINT T-SHIRT

The clothing creator has on sale a new, very original t-shirt: the silkscreen paraglider wing is sewn onto the fabric and made from a piece of revamped paraglider fabric...

As always, it's pretty and well made from quality fabric.

Recycl' t-shirt: 19.90 €

www.turbulence-shop.fr/index-en.html



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INSTRUMENTS

INSTRUMENT TRENDS

The instrument market has developed a lot. Here, we're just going to mention the trends, the new products will be tested in detail in 2018.

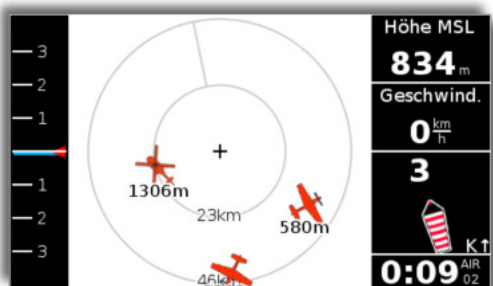
SKYTRAXX FANET&FLARM

Instruments communicate more and more: the FANET system, which was a Skytraxx initiative, is operational and expanding. Instruments thus equipped can communicate directly amongst themselves in a peer to peer relationship (via an integrated 868 MHz transceiver) but also with relays on the ground, linked to weather stations, and which transmit messages over large distances. In addition, they send the information (pilots' positions) on to the OGN (Open Glider Network, wiki.glidernet.org) network server which also tracks all the aircraft equipped with FLARM. A large FLARM/FANET network has therefore been built where the paragliders, gliders and other aircraft are constantly aware of those approaching them in the air...

Since December 2017, the Skytraxx 2.0+ and 3.0 can be equipped for 99 € with FANET transceivers (and a 'passive' FLARM transmitter). Other manufacturers will follow. <https://www.skytraxx.eu/>

Follow me, follow you: pilots can mutually send messages, even in the absence of a GSM network, and know their positions. They are also visible on all FLARM instruments.

If they are integrated into the FANET/OGN network, pilots can see FLARM instruments with their symbols.



FLYMASTER COMMUNICATE

There is also more communication at Flymaster: since the end of November the little 'Tracker' will also transmit to the live-tracking server a pilot's heart rate, if they are wearing the belt. Before, it was only possible with the Flymaster Live instruments.

dnl.flymaster.net/trackerheartg.pdf

New at Flymaster and even more useful: the Buddies function which lets pilots see on the screen of their Flymaster instrument, the other pilots equipped with a similar Flymaster, as long as they are mutually accepted as friends (Buddies). Communication is done via the GSM network and the Flymaster server and not live as with FANET.

dnl.flymaster.net/manual_buddies.pdf

AHRS: STODEUS GPSBIP

The AHRS system, which takes into account all inertia sensors to improve the reactivity of the varios, has finally been incorporated in the solar and vocal GPSBip from Stodeus. The necessary sensors were present before, but the development of the algorithm took a long time.

<https://www.lebipbip.com/fr/>



THE GPS-BIP
 Since this summer, its vario has been equipped with AHRS algorithms to give greater precision.
 220 €
www.lebipbip.com



XCTRACER
 The precursor of AHRS: the XCTracer; version 2 is shown here. www.xctracer.com



The Buddies function has been available since the end of October on Flymaster instruments equipped with a SIM card. You can see each other on the screen. Here, pilot NU86 has landed and pilot CR861 is flying.

WHO'S WHO?

TIMOTHÉE MANAUD, who qualified as an engineer at Grenoble Polytech in 2010, has made his passion for paragliding into a profession. He invented the Solar BipBip in 2011, a modern response to the famous Solario. He wanted an efficient mini-vario which could be universally used for XC, acro, tandem, hike&fly and vol bivouac. He was developing sound maps for industry, so was able to benefit from his know how to equip the GPSBip with a very high performance voice output. The web and computer graphic designer, **CLARISSE VALLET**, looks after, amongst other things, visual communication at Stodeus.

WHO'S WHO?

SWISS KONI SCHAFROTH, developer and owner of the brand XCTracer, is a top level pilot as well as paraglider designer. He works freelance on precise development tasks, for example for GIN. He is also working on a space program for the ESA, on drones to be precise, which have to return autonomously from an altitude of 32000 m. He is also a watchmaking developer. On his right, **LISA DE COSTA**, who works for XCTracer, in marketing, sales and prototype testing.



Photos: Sascha Burkhardt





The co-founder of Syride, Anthony Créteur, with one of their team pilots, Antoine Girard, and the new Sys'Evolution.

Classement des pilotes

Identifiez les meilleurs pilotes en sélectionnant une zone géographique sur la carte et une temporalité :

Classement affiché: Monde, depuis: 1 an

Distance	Plafond	Temps de vol
362 km julienirilli Inde Quétala	6201 m Harti Inde Marti	10:49:51s Dorian Copt Suisse Fisch
298 km Savs Australie Mt.Sorath - Marita	6091 m amirucefi Sri Lanka Gardane Ratak	10:02:26s Ben.outters France Gourdon
267 km skykid France Pierrefix	5994 m antoineg Népal Gardang Gompas	10:01:16s fzmok73 France Chamvet

Classement complet

The Syride server is taking off. Lots of interesting flights have been declared on it. There is also the 4th of November flight by Julien Irilli and Katia Lafaille, a new tandem world record (to a declared goal). They flew more than 340 km in 9 hours and 30 minutes on a Niviuk Bi-Ikuma.

SYRIDE SYS'EVOLUTION

The Sys'Evolution is an instrument designed and made from scratch for free flying. Therefore it isn't a tablet which has just been adapted. The six inch eInk touch-sensitive screen, with 600 x 800 pixels and 16 shades of grey, is perfectly readable in all situations. It offers very advanced functions, including a cross-section view of the flight. The design and assembly in France clearly guarantees a very close link between users and the Syride team. If there is a problem (or the appearance of the inevitable bugs after the introduction of a totally new product), the developers are able to react very quickly. We have an example that we are testing and will bring you the results as soon as possible. Price: 649 €.



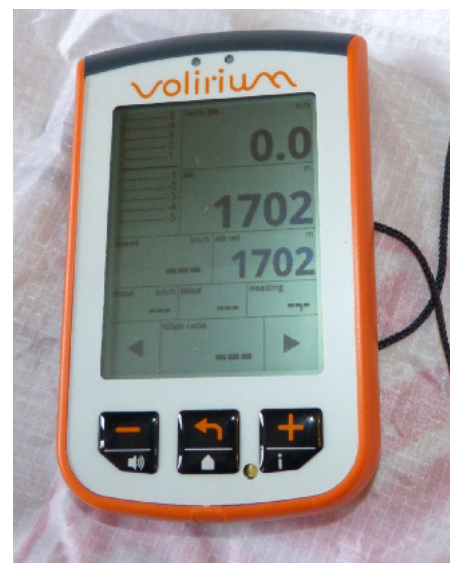
An initial observation: this very comprehensive flying computer is a lot lighter (<300 g) and less bulky than its rivals such as the C-Pilot Pro by Compass, for example. On the other hand, the latter also includes a slot for a SIM card. The Sys'Evolution communicates via the pilot's telephone.

Syride offer their own server for flight declarations: there are already more than 250,000 tracklogs on it. New from November onwards: a news thread so that you can easily find all the flights of the pilots you're following. www.syride.com

NAVITER AND VOLIRIUM

It's already a year since Naviter bought Flytec. The Oudie 4 by Naviter is taking more and more ground from amongst the top of the range flying instruments (Oudie 4, Skytraxx 3, Sys'Evolution, C-Pilot, Live SD). It costs 748 €, but is now available in a lightweight Oudie 4 Basic version for 598 € (without competition functions). www.naviter.com

The old Flytec team are trying to create a space for themselves under the name Volirium with an instrument anticipated as the follow up to the Flytec Connect. Price: 780 €. The Connect was the precursor to connected devices. www.volirium.com



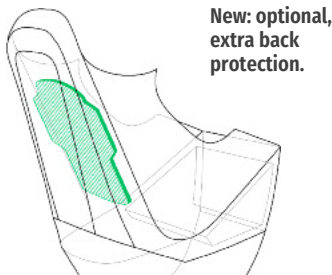
WOODY VALLEY

WOODY VALLEY WANI2

At the end of the autumn, WoodyValley brought out the reversible Wani harness. At first glance there isn't much of a difference, but there are lots of details which have been improved.
www.woodyvalley.eu

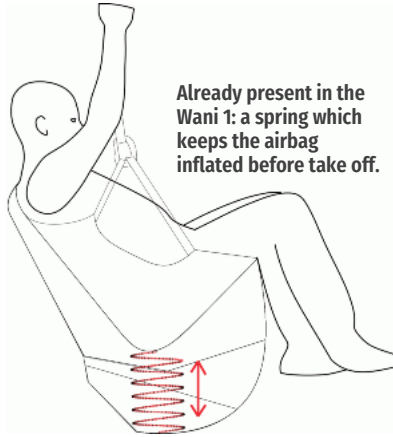


The Wani 2 came out in the autumn of 2017. Apparently, there is no Wani 2 light for the moment. The weight for the four sizes of the Wani 2: 3.82 kg/4.05 kg/4.28 kg/4.42 kg
 Price: 950 € approx.



New: optional, extra back protection.

New: the adjustment buckles have a choice of two modes of functioning: blocked with no risk of adjustment (left), free movement for quick adjustment (right).



Already present in the Wani 1: a spring which keeps the airbag inflated before take off.



Loops and carabiners in different colours

Visible in this WoodyValley publicity clip and a trend with all the manufacturers: different left/right colours so that pilots take the correct brake quickly at take off, no matter which way round they are inflating.



TEST WOODY VALLEY WANI/WANI LIGHT

Avec la Wani, Woody Valley avait déjà sorti une selle réversible très légère et polyvalente: 4,2 kg sur notre balance. Dorénavant, sa petite sœur "Wani light" bat des records pour une selle réversible aussi complète : 2,7 kg...

Reread our test of the Wani 1/Wani 1 light from 2015.
http://en.free.aero/contentsHTML/Harness_free_aero_150dpi_epure/index.html?page=76



Photo: Véro Burkhardt

The Apollo Bi: inside an XC tandem.

SKY PARAGLIDERS

APOLLO BI

In 2017 Sky Paragliders brought out a tandem version of the EN B Apollo. The tandem got an EN C. Although the B could have been 'forced', Sky didn't try to do so: it's a tandem designed to do distance in the hands of an experienced pilot, and above all, it isn't a B for doing 'Bus trips', because the passenger will clearly feel the air movement. We briefly tested size 39, there'll be more information about it in the next issue.

Two sizes:
 39 - (110-200 kg)
 41 - (125-220 kg)
 Weight of the wing: 7.15 kg-7.6 kg
<https://sky-cz.com/en/apollo-bi>



Back protection is now available for the lightweight Crux harness. It's an important factor which we felt was missing in this very successful harness which we tested in our previous issue: <http://www.free.aero/en/contentsHTML/light2017e/?page=92>



NIRVANA

NIRVANA GO LIGHTWEIGHT

The Czech manufacturer has finally gone lightweight. The model on show at the Coupe Icare probably wasn't the definitive version - it weighed 16.5 kg...

The system for going from standing to sitting has been particularly well thought out.

www.nirvana.cz



Paragliding Map

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www.paraglidingmap.com
http://

20-23 SEPTEMBER 2018

NEXT COUPE ICARE



Photo: Alain Douce

THE ICARES OF THE CINEMA

At the end of September, the Coupe Icare at Saint Hilaire was, as always, a stunning end to the 2017 season. It is a world-famous event, to the point where a Chinese delegation from the Qingdao region have negotiated permission to organise their own version in China in mid 2018. Once again, we bring you some beautiful memories of the last event.



Photo: Bruno Lavit



Photo: Johan Chemin





Photo: Johan Chemin





Photo: Johan Chemin



The Icares of the Cinema: here the public discover premiers of works of art, for example, Jean Baptiste Chandelier's famous clip...

THE ICARES OF THE CINEMA

The Icares of the Cinema invite us each year on a voyage of discovery and encounters. They move and touch young and old alike and make them dream, whether they are free flyers or not.

by Jérôme Bressoulaly

At the 35th edition of the Icares of the Cinema, more than seventy films were entered. At a time of economic and political chaos, it was good to see that people fulfil their dreams, tempting, travelling, encouraging and continuing to make us dream!

The Icares of the Cinema 2017 was a vintage year, due to its diversity of films shot in every location and season around our wonderful planet, witness to shared passions, by novices and adepts alike, all sprinkled with laughter and emotion.

THE WINNERS OF THE 35TH EVENT:

- SPECIAL MENTION FROM THE JURY: **Lili dans les nuages** by Toma LEROUX <https://vimeo.com/233012742>
- ICARE WALL OF SOUND **The Mount Rebei project** by Vladimir CELLIER <https://youtu.be/7kw7h6txBwQ>
- ICARE VERTIGE **Oteman** by Rodolphe CASSAN <http://www.airshovent.com/videos/84-medias/100-otemanu-borabora-wingsuit-escalade-premiere>
- ICARE DISCOVERY: **Search project** by Benoit DELFOSSE <https://vimeo.com/232483254>
- ICARE EMOTION **Entre ciel et cimes** by J.CHENAL-N.HAIRON-J.IRILLI (<https://vimeo.com/203416990>)
- ICARE JURY PRIZE **Aziz**, l'histoire d'un parapentiste marocain de Stéphanie BLUCHE <https://vimeo.com/232145248>
- ICARE GOLD **Envol vers les 8000** by Antoine GIRARD <https://vimeo.com/233114632>
- ICARE MATINALES DU OFF **AIR TOUR 2016** by Manu PAQUET
- CARE FULL LENGTH FEATURE FILM **J'irai atterrir chez vous** by Antoine BOISSELIER
- ICARE KIDS FROM LUMBIN AND SAINT-HILAIRE **Plan de vol** by Yann CHAPRON
- ICARE PRESS : **"FLY ON"** by Jean-Baptiste CHANDELIER (France)

LITTLE GEMS AND FAVOURITES

The Icare Press prize was awarded to 'Fly On', renamed 'Weighless', by Jean Baptiste Chandelier which we have reviewed in this issue. Here are the trailers for some of Jérôme Bressoulaly's other favourites. He represented Free.aero on the jury.

Moreover, the Coupe Icare gave the Ligues and Comités Départementaux de Vol Libre some of the prize winning films to show to their associations. For more information www.coupe-icare.org/le-festival-hors-les-murs.html

OTEMANU

Film by Rodolphe CASSAN (France)
 14' location: Tahiti - Bora Bora

TRAILER



The first ascent of the highest point on the island of Bora Bora with, as the cherry on the cake, jumping off the top in a wingsuit.

BROAD PEAK

By Antoine GIRARD (France) 41 '
location: Pakistan

TRAILER



Antoine Girard covered 1200 km by vol bivouac completely autonomously along the Himalayan chain. His objective was to fly over Broad Peak, 8157 m. An amazing adventure...

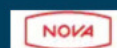
Paraglider database.
The history of our sport.
All the gliders since paragliding time began.
Technical information.
Test archives.

www.para2000.org

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Sponsors :



ENTRE CIEL ET CIMES

By Nicolas HAIRON, Jérémie CHENAL and Julien IRILLI (FRANCE) 25' location: FRANCE (Bauges, Aravis, Mont-Blanc)

TRAILER

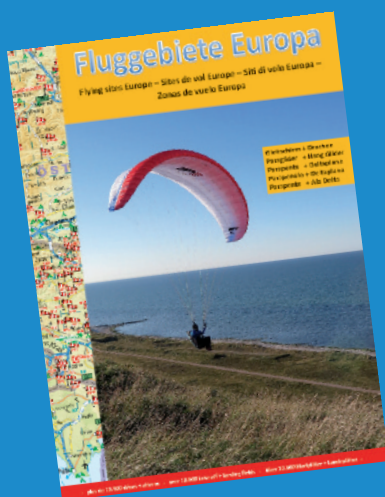


The latest technical developments in paragliding equipment have resulted in ultralight compact wings. It is now possible to climb mountains with these wings in the bottom of a bag...

neu! - new! - nouveau!
nuovo! - nuevo!

Wohin zum Fliegen?

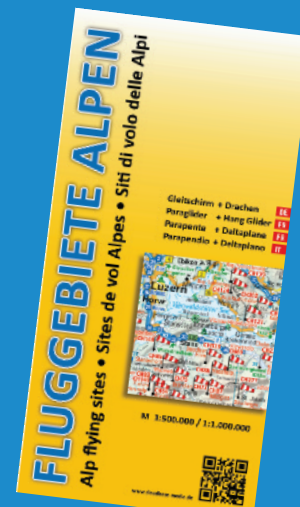
Where to fly? - OÙ voler ?
Dove volare? - Donde a volar?



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AZIZ, THE STORY OF A MOROCCAN PARAGLIDER PILOT

*Film by Stéphanie Bluche (France):
26' location: Morocco.*

TRAILER



The atmosphere reflects real daily life in this little village of fishermen, one of whom is a top level paraglider pilot.

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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