

SKYWALK EMOTIONS MAGALOG 2014



PURE PASSION FOR FLYING

+++ Reports +++ News +++ Tips & Tricks +++ Product Info +++ Technology +++

MASALA2 TEQUILA4 X-ALPS2013

Relaxation

When I began flying 25 years ago, the world was a little bit different. Mobile phones were a rarity and the internet was still in its infancy. The world wasn't as transparent and »connected« as it is now. Somehow there was more »space«. There was no online contest, no Facebook and also no forum in which you could post your heroic deeds. We exchanged ideas and experiences directly with our fellow pilots on the mountain and the discussions of our successful and not so successful flights often lasted until late in the evening. It feels like time advanced more slowly back then.

Today everything happens faster and our daily routines sometimes feel overloaded. The workplace demands reachability, high flexibility, responsibility, motivation and active thinking. We are controlled more by outside influences and it feels like we are responsible for taking care of a lot more things. Our time off is becoming shorter and our perceived stress often comes from within because our own brains are not used to just »not« thinking sometimes and switching into relaxation mode. The danger is that we only react and have forgotten how to act consciously.

Paragliding gives us the chance to break out of this »reaction routine« and to change our focus and tank up on energy – at least for a certain amount of time. When we fly, we can and must learn to »feel« again. It is incredibly enriching to switch our attention to the here and now and to completely enjoy the age into which we were born – the age in which it is possible to fly like a bird with just a sheet of nylon over our heads. And we do so with equipment that weighs less than ten kilos!

I find it highly fulfilling that we at skywalk are privileged to be involved with this fascinating flying sport, and that we can develop products with the goal of letting you fully concentrate on feeling the moment. And if you manage to experience a moment of »mental standstill« during your flights, then I can only say: Bingo! Mission accomplished!

Yours sincerely,
Arne Wehrlin





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Tel.: +49-8641-69484-0
Mail: info@skywalk.info

Editorial Staff

Stephan Bock, Christoph Kirsch, Rolf Rinklin,

English Translation

David Humphrey

Image Editing

Stephan Bock, Rolf Rinklin

Photos

Tristan Shu, Wolfgang Ehn, Alex Höllwarth, Red Bull Contentpool, Martin Bühler, skywalk

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Only this moment

The workday is over. Time to switch off. Two hours hike through the cool autumn air. Pause for a moment. As Paul Guschlbauer reaches the launch site, the houses 1000m below him have long since turned their lights on. He won't find any more thermals. But there is still a special moment left to enjoy in the air.

For a taste of our new lightweight dream team MASALA2
and reversible harness FLEX, scan this QR code.



Location: Zillertaler Höhenstraße | Pilot: Paul Guschlbauer | Gear: MASALA2 + FLEX.

The RANGE AIR is coming

Good things come to those who wait. In 2014, skywalk will expand the proven RANGE series of pod harnesses by an ultra light version. The RANGE AIR is derived directly from the harness that Paul Guschlbauer subjected to an endurance test during the 2013 Red Bull X-Alps. Weighing from just 1790g, it will be available in three sizes and will likely have EN and LTF certification. A full-fledged airbag protector offers optimal protection. The rear section, which has been aerodynamically optimized and tested in a wind tunnel, also covers your back.

The seat shell was optimized with complex 3D shaping and the seating position can be adjusted at any time in flight. That guarantees long-distance comfort on long and challenging XC flights without any compromises due to the lightweight design.



More information: www.skywalk.info

CK [»Senior«] on the Road to Success



Having flown the largest FAI triangle ever flown from Brauneck (Germany), skywalk team pilot Christoph Kirsch Senior is back in the spotlight. With his CHILI3, he flew to St. Anton am Arlberg (Austria), and then to the Inn Valley where he had to land a short distance past Wattens.

With an official distance of 209,8 km, this was not exactly an everyday flight. We congratulate Christoph and look forward to further record flights in the CHILI3 »Hall of Fame«...

CK [»Junior«] on the Ortler ...



Christoph Kirsch (»junior« and co-editor of the MAGALOG) tested the Alpine fitness of the TONIC16 on August 31, 2013. Decampment at 5 AM in Trafoi. Landing just in time for lunch in front of Gustav Thöni's Hotel Bella Vista

after a 2400 m climb up the highest mountain in the Eastern Alps, incl. soaring session.

Conclusion: »Absolutely fit for the job!«

E-WALK - skywalk goes electric - Current Status

The idea: flying from the mountains, completely independent, quietly, environmentally and socially compatible, whenever time and weather make it possible!

The idea of »E-WALK« was born!

The hurdle: Although the authorities in the meantime have created the legal framework for e-launches from authorized paragliding sites, there are still some unexpected hurdles to jump. So far, serial production hasn't been able to produce motors at reasonable prices. skywalk is a pioneer of the E-WALK initiative. Our goal remains unchanged: to introduce an extremely quiet, environmentally friendly, suitable for everyday use E-motor incl. battery and harness for under €9000. We have further optimized the power unit and are in discussions with several well-known electronics manufacturers about a high quality serial production. We will provide further information and updates as soon as we are certain that we can fulfill our promise 100%.

Stay tuned!



The Dosage Makes the Poison - POISON4

Since the first version, the POISON has been one of the best performing yet manageable serial high performance wings on the market. That means that expectations for the next generation are especially high. So it's no wonder that the skywalk development team led by Alex Höllwarth has been working night and day on a worthy fourth successor to our high-end glider. For »generation 4«, skywalk experimented with different concepts: 2,5- and 3-line technologies, with and without a shark nose, and many other experimental design

features were tested. In keeping with skywalk tradition, the POISON4 will be an »honest« glider and an easy transition from the POISON3. Because in our opinion, even the experienced pilot needs to feel comfortable under his glider to take advantage its high performance. This was always the case with the POISON3 and it will remain so. The official launch date will be announced as soon as all the points in our technical specification have been meticulously checked off. We anticipate the results in the course of 2014. Things certainly remain exciting!

Important Dates in 2014

- > February 22
Thermik Fair, Sindelfingen, Germany
- > March 7 – 9
Stubai Cup, Neustift, Austria
- > May 29 – June 1
Super Paragliding Festival, Kössen, Austria
- > September 18 – 21
Coupe Icare, St. Hilaire, France

Tattoo you!

To show how much he loves his glider, CAYENNE4 pilot Wolfgang had his »pride and joy« tattooed on his leg! Is there room on the other leg for the C5? ;-))



SKYTEX® 32 THE NEW GENERATION OF HYBRID FABRICS*



**THERE ARE THOSE
WHO FLY WITH
SKYTEX® 32
AND THOSE
WHO DON'T...**

New SKYTEX®32 from Porcher Sport is the result of intensive testings with paragliding partner brands. This patented innovation by Porcher sport is possible through the weaving of 2 yarns showing different characteristics and properties. This hybrid breakthrough makes your wing lighter without any compromise on the safety and the durability you are expecting.

www.porcher-sport.com

*result of combination between two different yarns



porcher SPORT
CONFIDENCE MAKES THE DIFFERENCE

La Rua Martens

Luck is not a Gift

In November 2013, as winter crept into the northern hemisphere, Burkhard Martens traveled for five weeks with his green CHILI3 to South America to explore new flying sites and cultures. Flying in Brazil's XC El Dorado Quixadá, Burki managed some epic flights. His GPS recorded 320 km, 335 km and 397 km – a unique triple play that no pilot has ever achieved with an intermediate wing.



Chasing Records in Brazil

Story: Burkhard Martens

Photos: Martin Bühler

Background

Quixadá – a place with a magical attraction for paragliders. The region in Brazil's northeast is considered one of the finest XC arenas in the world. Extremely reliable weather and impressive landscapes speak for themselves. For many years, Quixadá was the location of the legendary »X-Cereá« competition, but in 2007 when a Brazilian trio pushed the world free distance record there to 462 km, the news hit the XC scene like a bombshell. In no other region in the world

have so many 400 km flights been documented as here. It all sounds so simple. But when I traveled to Quixadá for the first time in 2010, I was greeted with: »Don't think that it's easy to fly 200 km here!« A remark that later proved to be true. Although I flew every day, after two weeks I managed only three flights of more than 100 km. That wasn't even close to my expectation of hitting at least 200 km. And to be honest: my personal goal was the »300 «km mark.

But after bombing out for the fifth time in Algua Deus, about 35 km downrange, I was the laughing stock of my flying buddies. They even named a street after me – »Rua Martens« is still well known today. That didn't keep me from trying again in 2011. This time I approached the whole thing with a completely different attitude: defensive and patient instead of fast and aggressive. It paid off. Suddenly I managed several flights of more than 200 km with my POISON3, including a new German record flight to goal of over 280 km – the furthest flight that year in the Brazilian XC camp of Andy Flühler and Michael Gebert (aka »fly with andy«).

The Record Day

»With today's comp wings, the old record should be easy to beat« - this is what I hear when I arrive back in Quixadá at the end of October. The Brazilian record holding team is also there and wants to go for a new record by beating the current mark of 502 km set in South Africa in 2008. Martin Bühler and Philipp Steinger, two of the best Swiss pilots are in Quixadá and a French team arrives later. 2013 just might be the year and on October 25, a week after my arrival, the day that I've been waiting for so long for finally comes. 320 km »open distance«, as well as a 335 km flight »open distance with three turning points« – a new German record and one of the most exciting flights of my long flying career.

I launch shortly before 8:00 am and manage to climb to 1300 m in 15 minutes – unusually high for that time of day. The cloud development looks really good and I fly the first hour with an average speed of about 50 km/h. Then some clouds move in and I struggle for a long

time between 900 and 1500 m, trying not to bomb out. At the 100 km mark I reach a high plateau. From just 1700 m I head toward Monsenor Tabosa. At the end of the high plateau I reach 2000 m, which I promptly lose in an area of sinking air. My goal is Piripiri at the 320 km mark.

Piripiri is located on a due west heading, but a growing southern component in the wind makes it increasingly difficult to maintain my bearing. I am fortunate enough to find a reliable thermal and can remain high. When I reach the next high plateau at the 200 km mark, the southerly wind is too strong and I have to abandon my original goal. Instead, I take a new direction that is easily recognizable as a sharp bend in the GPS track. The territory I am now overflying is huge with just a few scattered houses...

Back in the Game

As I sink lower and lower I imagine the faces of the retrieval team that receives a signal with my coordinates from my SPOT Messenger every ten minutes. At 200 m over the ground I panic briefly in a weak thermal and hear them saying, »If Burki bombs out here, he's going to need two days on foot to get out of here«. Fortunately, the CHILI3 climbs so well, even in the weakest lift, that it's a joy to convert the tiniest bubbles into altitude.

I'm back in the game! Just don't fall out again! A short time later I'm back at the highest altitude of the day – 2800 m. From cloud base I can see the endlessly long paved road again, which I'm now able to follow to the west again now that

»Don't think that it's easy to fly 200 km here!«



>> With the next cloud within reach, it's time to smile and relax...

>> You can follow Burki's tracks in the internet
at www.xc.dhv.de / 25.10.2013 and 7.11.2013

.Top photo: The flight route of the new German record

Bottom photo: The main routes from Quixadá

(Source: XC-Planner)

the south wind had died down. Yeah! No death marches and no endless hours on the back of a donkey! At 4:45 pm as I extract my feet from my pod harness over the road just outside of the city of Piracuruca, my GPS shows 320 km. Fred-erico, the head retriever, has already picked up my flying companion Philipp and at 2:00 am we reach the hotel. I'm elated!

New Game – New Luck

Unfortunately I can't enjoy for long the thrill of setting a new German record of more than 320 km »open distance« or 335 km »open distance with three turning points«. Just a week later, Andy Egger snatches my record. But that just motivates me to steal it back. I have ten days to do it. After six weak days, the seventh day looks promising. This time I launch late, but it works out all the better. A near bombing-out at 50 km reminds me to not make any more mistakes. At the end of the day I land 397 km down-range with my mild-mannered EN-B CHILI3. The German record for »open distance with three turning points« and also the record for »open distance« with 391 km are mine again. Because the journey back takes nine hours - just as long as the outbound flight – we spend the night here. A penalty that I gladly accept...

Flying in the Northeast of Brazil

The peak season is between October and the beginning of December. Sunrise is at 5:15 am and the thermals get going as early as 7:00 am, but the cloud base of 800 m is still quite low. Ground elevation is 200 m and launch is at 500 m. By 10:00 am the base has usually risen to 1500 m. The problem with record flights is the time. If you want to fly really far, you have to launch early. If you want to fly »only« 200 km, you can take your time.

Launches are often event-ful because the wind blows at 30 km/h most days. Four launch assistants hold your glider open in the wind. The launch window is during the short, dying wind phases. The decision is made by the launch master, who observes the trees and bushes prior to launch.

If they are still for a short time, he yells »Clear for launch!« You kite your wing quickly, taking three steps toward it to remove the pressure, turn around, and you're in the air. Most pilots step on the speed bar right away. If you don't have this sequence of movements down pat, you'll have a problem on windy days.

Once you're in the air, you soar until a good phase comes and you can start your XC. Most pilots fly about a kilometer in front of the mountain and try to find a thermal upwind. If that doesn't work, you can always fly back and soar up again. You keep playing this game un-



>> Wide-area cloud coverage threatened
to cut the flight short after an hour. This looks much better! ... ;)



til it works or until a strong and especially wide thermal that can be easily centered passes by the summit. Then you're off. From this point on, it's all flatlands flying. At first, you need to fly extremely defensively. Every little bit of lift is used; even zero lift thermals are welcome.

If the surface winds are strong, don't fly under any circumstances into the few existing mountains. Ideally, you should fly in a group in parallel, a few hundred meters apart. Thermals are often triggered by the unevenness of the ground and small hills. If you're flying in strongly sinking air, deviate to the side and fly out of the sink with a side wind. The thermals are often more skewed by the wind than in the mountains. You have to follow this slant as you turn. The best climb is almost always on the windward side of the thermal. If you lose the thermal, it's often worth it to fly against the wind and back into the windward side. If you continue on instead, you'll often end up standing on the ground a short time later. The keys to success here are adequate thermal flying experience and stamina.

Compared to the XC arenas in the Alps such as Speikboden in the Puster Valley, this is a high attrition rate. If 20 XC pilots attempt to fly a large triangle from Speikboden on a good day, 95 percent of them will achieve distances of 160 km to 220 km. Luck plays an absolutely subordinate role. In Brazil, luck plays a huge role at the beginning of your XC. That's why pilots who make it past the first 100 km usually fly until just before sunset. One thing is true of course -- the better the pilot, the less effect luck has on your flying. For me personally: I trained intensively here for several years and suddenly I had a lot more luck! 🇧🇷

>> Retriever Frederica, Burki and Philipp
celebrate their epic flights.



The reason why so many flights end after 10 to 100 km is the low cloud ceiling. But it's also possible to bomb out in the best thermals at 200 km faster than you think! In October and November you'll find on average 20 to 40 pilots at launch. Of those, only three or four will fly far even though the starting grid isn't exactly made up of beginners!



>> Reliable companion: The CHILI3 heads for the 400 km mark!

A Good Feeling

It's good to know that there's a glider that meets all your demands – whether you just fly for fun or want to be the highest in your house thermal, take on challenging XC flights, or if you're just beginning your

training. The TEQUILA series was always known for its high passive safety combined with lots of performance potential and absolutely uncomplicated handling. That's why skywalk didn't push the design of the

TEQUILA4 to the limit. The latest technologies such as mini ribs, 3D shaping, rigid foils and a reduced total line length turn this pure bred 3-liner into a high performance wing for its class. That's all it needs.

Location: Achensee | Pilots: Alex Höllwarth, Paul Guschlbauer | Gear: TEQUILA4 + CULT-C, RANGE2

You will find details, technical data and photos of our intermediate on our website, or simply by scanning the QR code with your smartphone.



12

12 Days of Ups and Downs

skywalk test pilot Paul Guschlbauer was the high-flyer of the Red Bull X-Alps 2011. In 2013, he started his second race optimally prepared and highly motivated – and experienced an emotional roller coaster.

To arrive in Monaco, to reach the sea, only with the help of the sun, the wind, and your own muscle power. Your only gear is a paraglider, so light and compact when packed that you can carry it every day over 100 kilometers through the mountains. To arrive – that's the goal of every athlete at the start of the Red Bull X-Alps in Salzburg. Theoretically, any participant in the »toughest adventure race in the world« will »make it« – sooner or later. If it weren't for all those rules set by the organizer Red Bull that greatly reduce the number of those who seek to reach the Mediterranean Sea.

Rule number one is as simple as it is uncompromising. Once the first athlete ar-

Red Bull X-Alps 2013

Story: Paul Guschlbauer

Photos: Red Bull Contentpool | Vitek Ludvik

rives in the city of the rich and famous, the remaining competitors have 48 hours to finish the race on the beach of Monaco. In 2013, this rule was changed by a significant point: the Red Bull X-Alps end 14 days at the earliest after the start of the race, regardless of the arrival time of the race leader. This change is not only good for marketing purposes; it also reduces the suffering of the participants. Because if one athletic stands out like three-time champion Chrigel Maurer, the whole race is over too soon and this puts

pressure on the others. Also, comparisons with past races become harder to make. In 2011, only those athletes who were close on the heels of Chrigel Maurer had a chance to complete the race. I was behind by seven kilometers as the crow flies...

The Subtle Difference

In 2013 I wanted to do everything better, and at the end I actually landed at the sea after 12 days. Viewed objectively, I was more successful than two years prior, but at the end I had mixed feel-

ings of joy and some disappointment. Why? Naturally I am more than satisfied to have completed safe and sound this almost inhuman stretch of more 1000 km straight through the Alps, but this felt like a reward that I hadn't earned. My personal ambition told me that I didn't squeeze everything out of me – that I didn't run a good race.

Compared with 2011, I was better prepared in all areas that are important in the X-Alps. I had more XC experience,



>> skywalk X-ALPS2013:
skywalk's super light comp wing, developed especially for X-Alps pilots,
is now generally available as a serial product..




>> In addition to good preparation, sound piloting skills, and the right choice of materials, good teamwork is an important factor for success at the X-Alps.

better flying technique, lighter equipment, better physical condition, greater knowledge of the route, and optimized team organization. Sponsors like Red Bull stood behind me and I was given professional training. skywalk gave me the green light to concentrate fully on the competition.

But next to all the points there is one that at the end of the day is decisive – the right attitude. Every pilot knows this, but Chrigel Maurer says it best: »You

only fly as far as you already are in your head«. What does it help if I can run five minutes faster to launch if I don't trust my own ability? Or if I can't deal with setbacks large and small? You can be

perfectly prepared, but if you can't rely on your own true skills, then you will always get into situations in which you are unsure and therefore can't give your best. In an extreme competition like the Red Bull X-Alps, that means the difference between victory and defeat, or between »arriving« and »arriving« .

The 2013 X-Alps were in no way a disappointment for me. They were the second greatest adventure of my life. There aren't too many other possibilities to learn so much about yourself in such a short time! 

Paul Guschlbauer, a skywalk top athlete, can tell you more about his X-Alps experience during one of his multimedia presentations.

Locations and dates:
www.paulguschlbauer.at

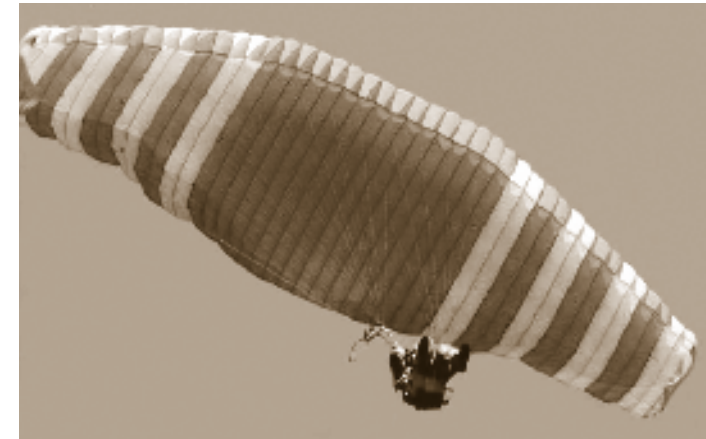


The Lightness of Being

Story: Manfred Kistler, Phtos: skywalk | Fotolia | Paradelta.it



The trend continues – more and more pilots are discovering the lighter side of paragliding. Hike & Fly is not just a temporary fad! The reason for this fascination is clear: each vertical meter that you climb makes the ensuing flight all the more intensive and the nature adventure more complete. And modern Hike & Fly gear is lighter than a race harness.



>> *Twenty years ago, achieving high performance was quite literally a »weighty« affair. Heavy fabric and lots of lines were needed to maintain the shape of the wing. Technical developments today make it easy to »slim down«.*

Mountain flying is celebrating a comeback. Some may have forgotten: this discipline is the cradle of paragliding and was the motivation 25 years ago for many mountain climbers to take up paragliding. Climbing mountains was pleasant and rewarding; descending mountains was not. Paragliding was the perfect solution!

Over the years, paragliding developed further. Hike & Fly was forgotten while pod harnesses and performance-optimized gliders led to pilots preferring to take the cable car. So it's no wonder that the magnificent comeback of hikers with gliders is thanks to the new generation of gear, some of which weighs just 5 kilograms and features a really small packing size. Newly developed fabrics with a basis weight of just 25-27 g/m² make possible extremely lightweight gliders, and harnesses and rescue chutes have also become lighter.

In terms of durability, fabric innovation has developed in a positive direction. A few years ago, fabric under 30 g/m² was

light, but also very sensitive. The porosity increased dramatically with intensive use, so lightweight gliders were only suited as a second wing. Together with Aeroix, a manufacturer of technical textiles, skywalk developed a shiny silver aluminum coating that effectively reflects UV radiation and drastically improves the fabric's durability. New lightweight fabrics, like 10D from Dominico or skytex classic2 from Porcher Marine, have undergone substantial development. They are still quite light, but their aging resistance has improved dramatically..

Reduce to the max

Another way to save weight and packing size appeared just recently on the paragliding scene: the »single skin«. Eliminated the lower surface of the wing creates a huge potential to save weight, but the concept offers only limited possibilities. As a manufacturing on the leading edge of innovation, skywalk has naturally

been conducting research in this area. But we are only willing to introduce such a concept when the speed envelope is large enough. That means that the single skin wing should be able to be accelerated. With the PEAK, our colleagues over at Flysurfer (skywalk's kite brand) have already realized the concept of an accelerate-able single skin. (more on Page 32). It's exciting to imagine just where the develop of paraglider technology is going to take us!



>> *Single Skin Kite
Flysurfer PEAK*

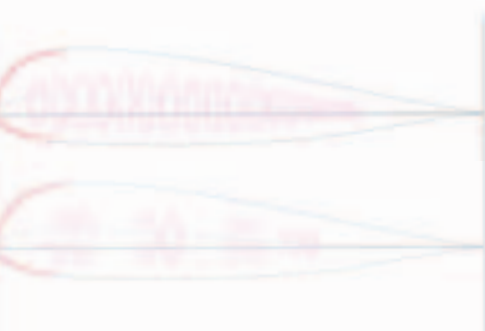
Diet without side effects

The previous way of slimming down the weight of a paraglider is much easier to

realize. As many materials as possible are replaced with lighter materials and ideally some smaller details are weight-optimized. Depending on the number of cells and the previously used material, weight savings of up to 1,5 kg are possible. To save even more weight, the wing's construction has to be simplified. Large crossports can save weight, but the load distribution on the ribs has to be considered. If a lighter and less stretch-resistant fabric is used for the ribs, then a lot of knowledge and experience is necessary for the dimensioning and placement of the crossports.

>> Substantial weight can be saved through the use of lighter fabric as the table below clearly shows..

	Top surface	Lower surface	Ribs
Area	26m²	24m²	24m²
»Normal fabric« weight 45g/m²	1170g	1080g	1080g
»Light fabric« weight 27g/m²	702g	648g	648g
Total weight »Normal fabric«	3330g		
Total weight »Light fabric«	1998g		



>> Weight can also be saved by using more crosspoints on the ribs, making possible a reduction of about 3 m². With a fabric weight of 27 g/m² the weight savings is 71 g (3m² x 27 g/m² = 71 g). It doesn't sound like much, but it contributes to the overall weight reduction.

Mylar reinforcements can be made out of thinner material and lines can be left unsheathed. The risers offer a lot of opportunities to save weight. On the MASALA2, the fully functional but lightweight risers weigh only 150 grams (1 pair incl. the brake handles). That's 410 g less than the risers on the MESCAL4! Uncompromising lightweight construction can also have some disadvantages. Thin, light fabric is by definition less robust and stretches more than conventional material. This can lead to a »soft« glider and a change in the way it feels when you fly. In addition to adjustments to the pre-tensioning, it may be necessary to optimize the brake-line geometry. Some lightweight fabrics contain a high level of silicon in the coating, so printing on them can be difficult or not possible at all.

Not to be forgotten is the fact that manufacturing processes for lightweight fabric are more expensive and additional steps in the development process are also necessary. That makes lightweight gliders more expensive than normal equipment in the same way the weight reductions to mountain bikes are factored into the price.

No compromises

For our new MASALA2 it was a balancing act: on the one hand we used every trick available to reduce its weight – in the smallest size, the glider weighs only 2,7 kg. On the other hand, we wanted the MASALA2 to be suit-

able for everyday use. That can work with the use of lightweight materials in areas that get less wear and tear, and more robust materials in specific areas like the leading edge of the top sail. The leading edge often has higher porosity values than the rest of the wing, so here we decided to use more age-resistant fabric. In this way, the pilot can enjoy the advantages of enormous weight savings without having to expect premature wear and tear of the material. Besides the obvious advantages, less weight also offers benefits when transporting the glider. As a result of the intelligent material mix, the MASALA2 has an extremely benign reaction to collapses. A lighter wing tends not to surge as far and collapses open faster.

Finally, this effect leads to a sensationally wide weight range. The XXS size ranges from 55 kg to 90 kg takeoff weight and the XS size from 55 kg to 95 kg! All sizes are certified with EN/LTF-A. For these two sizes in particular, we extended the weight range upwards because many pilots in the mountains like to hike with a smaller sized glider. That makes sense for several reasons: the weight is reduced even more, and the smaller glider size means a higher speed potential with more reserve for strong winds. Aside from that, smaller sizes are more fun to fly with their response handling.



In addition to their extremely smooth launch behavior (and here you can feel every gram of reduction), the compact packing size is a big plus. Rigorously designed lightweight gilders have less than half of the packing volume of a normal glider and so are perfectly suitable for long hikes.

The formula - weight x vertical meters = sore muscle² – is undermined by current lightweight gliders. The MASALA2 currently stands out with its wide weight ranges and high level of safety.

We're proud of it. Did you notice?

>> Lightweight a la skywalk:
the new MASALA2



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Go west!

▲: Jonathan, What brought you to paragliding?

I grew up next to the Point of the Mountain, a very famous ridge soaring site, which has been flown for a long time. So, I always knew about paragliding but thought it was unattainable, or just for crazy people. When I was going to University, I took a summer job in Alaska for a helicopter company. I always loved flying and being around helicopters was super fun. One slow day at work, my boss helicoptered his paragliding friend up to the top of a nearby mountain and dropped him off. I watched through binoculars as he flew back down. I was blown away, and at that moment had an epiphany. I realized that a paraglider could do more than just float around in front of a ridge in my hometown—but it could be used as a mode of transportation to fly off mountains! I found the paraglider pilot in town later and asked him where he learned to do that, and to my surprise, he said, »The Point of the Mountain in Draper, Utah.« That was my home town! I realized it was like living at the beach but never trying surfing... so upon completion of my summer employment

I returned home and learned to paraglide and became one of those crazy people too. That experience in Alaska was the straw that broke the camel's back. After that, I was the one getting dropped off to paraglide by the helicopters.

▲: What current challenges are you facing?

Our biggest challenge is losing our flying sites to land development, construction and mining operations. The Point of the Mountain is a perfectly shaped ridge that was formed by an ancient lake called Lake Bonneville. This ice age lake covered much of Utah about 14,000 years ago. As the lake receded it left behind some really great sand and gravel bars and shorelines that make good ridges for ridge soaring. Unfortunately, the ancient gravel bars also make really good material for building roads. So, mining companies are currently digging up some of our flying sites to make roads and concrete. Fortunately, our local club has been able to get the State of Utah involved to make one of our sites a State Park and it is safe from being mined away. Our other main site which is even larger, is threatened but we are hoping to find a solution that will make all parties involved happy. You can find more information by visiting our web site savesteepmountain.org. Please sign our online petition to let our legislators know that people from all around the world care about preserving this flying site! www.change.org/petitions/salt-lake-county-government-save-steep-mountain.

▲: What is so special about the North American market? We heard that paragliders are not allowed in cable cars?

In the United States paragliding is growing rapidly. Every year I see more and more people joining the sport. It has been seen as a fringe sport for years but I think that perception is changing and it is becoming more mainstream, much like how snowboarding started out. In the early years of snowboarding they were not allowed to go to the ski resorts, but now they are found at all but one of our 14 ski resorts in Utah. Americans have a really big liability complex, meaning that everyone is constantly afraid of being sued by someone, taken to court and losing lots of money. So for that reason I think ski resorts are afraid of allowing paragliding. Because if a paragliding pilot was to get hurt for some reason then the pilot could potentially sue the ski resort, and the ski resort could lose money. Quite backwards and silly I think. I like the European mentality better where pilots are welcome to take the cable cars and if they get hurt then it is their own fault. However, much like snowboarding, I think it is just a matter of time until we are more accepted and allowed to access the resorts via their cable cars.

▲: Europe is experiencing a big trend towards lightweight equipment. How is it in the U.S.?

I have more and more of my clients asking for lighter and lighter equipment. We are surrounded by many great mountains here in Utah that people love to hike up and fly from. That is what got me into the sport was the allure of hiking up a mountain but not having to hike back down. My first kit

weighed almost 20 kilograms but I carried it up every mountain I could. It is so nice now to grab my Flex, Pepper 2 Light and Tonic and hike with it. I don't even feel like I am carrying anything!

▲: The U.S. has a lot to offer. There are incredible diverse landscapes and very good flying spots. What are your favorite flying sites?

We do have a lot of great flying sites and records are being broken every year. Utah's current distance record is 321 kilometers. Also, new flying sites are being discovered all the time. One of my past students made a site guide of Utah with 57 locations: utahpg.com/en. Of course, I am based and love to fly here in my home state of Utah. In Southern Utah we have beautiful red rock country that looks like it is from another world. In Northern Utah we have mountains similar to the Alps, to the west there are big open valleys with mountain ranges waiting to be explored. One of my favorite cross country sites is right here in Salt Lake City. Mount Olympus is a prominent mountain that is made of huge orange-brown slabs of granite that are thrust up into the sky thousands of feet high. There is nothing like soaring high over that peak with the view of Salt Lake City, the Great Salt Lake below and the Wasatch Mountains behind. From this site it is really fun to venture up and down our local mountain range, and it is so close that people will get off work in the afternoon and go fly there on their way home. Pilots will often meet up with other pilots in the air that took

>> Ridges straight out of a picture book:

Utah offers a lot more than just great soaring!



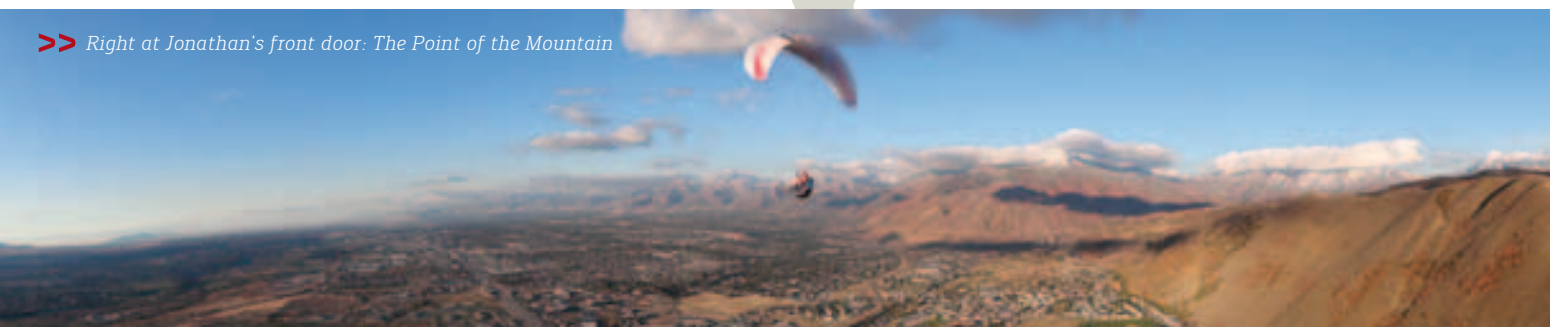
off from different sites and fly together. We have a great flying community here. Your question is a tough one; it's like asking me which of my children I like more... I'd have to say, all of our sites are my favorite, as long as the air is going up!

▲: What advice do you have for pilots who want to visit the U.S. for flying?

Bring lots of memory cards for your camera! And be prepared to drive really far. Places are far apart and so you need to rent a car and drive a lot. We have big wide open expanses with no people anywhere. It's really fun to travel through that kind of country; it's quite adventurous because sometimes you really need to think about where you are going to get gas next.

▲: Na dann, »los«...! ;)

>> Right at Jonathan's front door: The Point of the Mountain



The new A-Class

An uncommon comparison between high performance- and A-paragliders...

»A« wings lead an unfortunate existence, largely impaired by image themes.

»A« stands for »Amateur«, but still does not signify a wing that is »Absolutely suitable for daily use, provides »A«1 flying fun or likewise. Completely unjustified, as the new MESCAL4 now proves.

Story und Photos: Manfred Kistler

Technology from higher classifications has since long found its way into the A-level as well and helps gliders constructed for maximal safety to achieve very good performance. Regardless of whether it concerns RIGID FOILS, 3D SHAPING, C-WIRES or MINI RIBS, the good-natured and lower aspect ratio wings often have many state of the art construction methods. Needless to say, the same software and simulation tricks used for the sophisticated B-C-D paragliders are used in A-wings. But where do the state of the art wings of the A-class really stand these days? How much does modern construction with re-

gard to low aspect ratio paraglider models and comparably few cells really contribute? In order to find out more, the skywalk team compared the latest MESCAL4 (EN/LTF-A) in size M with a high-performance POISON1, also size M.

	MESCAL 4	POISON 1
Cells	34	66
Flat area in m²	28,7	27,4
Wingspan in m	11,74	12,77
Streckung ausgelegt	4,8	5,95
Fläche projiziert in m²	24,26	24,28
Spannweite projiziert in m	9,14	10,41
Streckung projiziert	3,44	4,46
Mittlere Leinenlänge in cm	697	810
Kappengewicht in kg	5,8	7
Leinenverbrauch	308	374
Max. Flügeltefe	304	255

The POISON1 celebrated its debut in 2005 as a purebred 2-3 high performance wing. Today it would certainly be placed within the EN/LTF D category.

Eight years of continuous development separates the two paraglider models. Looking at the information on both gliders, the difference are immediately apparent: Immediately conspicuous are the enormous differences in the number of cells and the aspect ratio. While the MESCAL4 has 34 cells, the POISON1 has over 66 cells and therefore naturally much less cell distance, thus less cell ballooning. On paper as well, the aspect ratio difference of 4,8 to 5,95



is huge. This is reflected 1:1 in the photos. The POISON is stretched out and long-lined, the MESCAL4 is compact and rather short-lined. A major advantage of the line meters of the MESCAL4: thanks to 3-line technology there are only 308m compared with 374m on the POISON. However, if you also take the diameter into account, there is a tie in some cases, since the POISON naturally has uncovered lines with a small diameter too.

Now to the decisive question

How much can modern construction methods and materials compensate for these apparent advantages in wing geometry? There are many design details in the MESCAL4 that make the CHILI3 and CAYENNE4 equally successful with hobby- and competitive pilots: MINI RIBS provide for an aerodynamically clean wing on the trailing edge, the proven nylon lines (rigid foil) stiff-

en the nose, instead of the heavy Dacron fabric. The A-wing, designed for safety, even has C-wires for less deformation of the trailing edge. In addition, 3D SHAPING creates a drag-poor leading edge and the proven JET FLAPS provide for a very wide-ranged limit and long brake travel.

Before we compare the actual performance of these unequal paragliders, let us take a look at the manoeuvres and flying behaviour. The POISON1 is a purebred high performance wing with short brake travel, requiring pilots who know when to lift up their arms! The profile has been optimised for performance and not for steering travel. Naturally, the considerably smaller wing chord of the POISON also contributes in comparison with the MESCAL4. The stability of the POISON1 is good. However, an active flying style is



still an unconditional prerequisite in order to avoid disturbances. Collapses of over 50% are rare, but the glider reactions require an experienced pilot with sensitivity for counter braking to keep the glider on course. Larger collapses demand immediate action or altitude loss or rotation speed will be too great. Especially with large collapses, steering travel is short when counter braking and demands immediate reaction along with sensitivity when counter braking in order to avoid a stall. In strong thermals and turbulence, the elongated canopy provides stronger feedback of conditions.

From another star

Flown directly afterwards, the MESCAL4 seems like it is from another star. It cannot be distracted from its calm flight behaviour and even strong turbulence is absorbed by the canopy; the pilot notices that conditions are turbulent but does not get the feeling that the wing could collapse. Even with inactive pilots there is a lot of room to play. The available brake path of the MESCAL4 is almost double as long as the POISON, but still the impression remains that handling is better, as the MESCAL4 reacts directly with little input. To provoke a stall, the pilot has to take a wrap and pull down really far, but even in this case there is extreme travel to stall. The conditions have to be very, very bumpy for the MESCAL4 to actually collapse, and even then the reaction is very moderate and damped. In many cases, the pilot looks above and the collapse has already reopened. Rotation is gentle as well and altitude loss is minimal. First and foremost: a well-trimmed A-wing

will immediately fly again even without pilot reaction, the pilot does not even have to react quickly and correctly to bring the wing back on course. Astonishingly, the MESCAL4 can easily keep up with the POISON when cranking it up. One reason is surely the somewhat larger surface area and another is the significantly easier-to-handle flight behaviour. Whereas the POISON pilot has to work constantly and core with body weightshift, the M4 just moves silently on its way. Clear result when thermalling: the winner is: MESCAL4.

The difference is less than expected when it comes to a glider comparison. With identical harnesses and pilot weight, the result is a comprehensible glide ratio difference of approx. 0,3 to 0,4 points in calm air conditions. A barely noticeable advantage of the POISON during short »cruises«, hardly worth discussing, as long as you are not flying endless valley crossing. Amazingly, the more turbulent the air conditions, the less glide ratio difference. We can trace this back to the positive influence of the C-Wires in the MESCAL4. These dampen the trailing edge of the wing, thus the glider uses less energy. The trim speeds are quite close, a maximal of 0,5 km/h difference, this is also insignificant. Looking at the pictures, it is difficult to believe that the differences in performance are so small with such a huge difference in wing concept.


A lot has happened

Over 8 years of development, new materials and new construction methods have almost completely compensated for the huge

>> Direct comparison of the cell ballooning
of MESCAL4 and POISON1



difference in concepts! After these comparison flights we are certain: in the same conditions, a less experienced pilot will fly considerably farther with an A-wing and at the same time have more fun and be safer, which is the crucial point. An experienced pilot could certainly fly at least as far with an A-wing and would be able to concentrate much more on the route, and afterwards report back on a relaxed experience.

Naturally, this article should not be a pladoyer against high performance gliders, many developments have occurred within this sector in the last few years as well. Flyability with simultaneous increased performance has improved considerably, as wings like the CAYENNE 4 impressively demonstrate. Rather, the comparison should serve to illustrate what today's A-wings can really do! For reasons that are not understandable, these wings are often not taken into consideration when pilots are seeking a new wing. At the same time there are a lot of advantages: safe flying behaviour with a lot of room to play for relaxed flying style, pleasing handling with excellent climb performance, high stability for long flights even in bumpy conditions, and last but not least: A level of performance only available to high performance wings up until a couple of years ago! 

A short video sequence of the glide comparison can be found at www.skywalk.info - or directly by scan of the QR Code aside.



Flysurfer Peak


Light but durable aluminum fabric, for-giving JETFLAPS – skywalk has always emphasized innovation. Flysurfer kiteboarding, skywalk's kite brand, is often a leading edge partner for development. With the PEAK, skywalk was able to successfully implement for the first time single-skin technology in a serial product.

The lighter a kite's canopy, the sooner it flies. That's the idea of the design behind the new PEAK from Flysurfer Kiteboarding.

By reducing the weight, we were able to set new standards. At the same time, thanks to its design, the kite is exceptionally resilient. That's made possible by the concept of a de-powerable profile that consists of a layer of fabric.

The PEAK sets standards in terms of low-end, packing volume and weight, combined with super simple handling. The PEAK is unpacked and ready to fly in no time at all and can be launched and landed safely in any terrain.

The PEAK is available in the sizes 6.0m² and 9.0m² ready-to-fly – including mounted bar and lines. It's perfectly suitable for backcountry touring, free-ride snowkites, for use with kiteland boards or buggies, expeditions and naturally for training purposes. For urban street kiting you can also use shorter lines (for example 3m, 6m or 12m). As your compact vacation companion, it easily fits in your suitcase for your next flight.

... lift your game! 



ULTRALIGHT SINGLE-SKIN DEPOWER CONCEPT
UNBELIEVABLE LOW-END PERFORMANCE
TRAINING, FREERIDE, EXPEDITIONS AND MORE ...

PEAK 6.0 m²

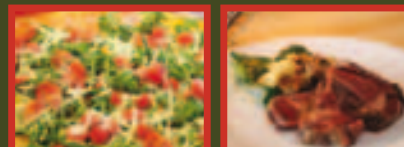
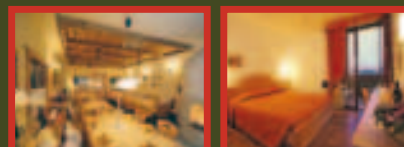
PEAK 9.0 m²

Photo: Pascal Boulgakoff


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Thermalling and XC Tips for Flatland Flying

On the following pages, flatlands ace and skywalk veteran Armin Harich shares his practical tips for those who are working on their thermalling technique or who would like to extend their own XC flights. And not just in the flatlands.

Twenty years ago, Armin set the record of 166 km in the German flatlands.

In 2013 he returned to XC flying and, with our CHILI3 (EN-B), left many comp wings in the dust to secure second place in the German Flatlands.



>> Not unusual in flatlands flying:

No lift on the ridge, but further out a thermal is just waiting to propel you higher...

General Tips

> Stay cool while flying and always keep landing sites in mind, but otherwise release yourself completely from disabling anxieties like how you're going to get back to your car.

> Search for thermals 360 degrees around you and free yourself from the tunnel vision of launch and landing zones. You will only fly far if you consciously risk bombing out.

> If the cloud cover is less than 2/8, sharp-edged cloud shadows can trigger thermals and cause them to rise straight up over the edge of the shadow. This works best if the wind is light

> If the cloud cover is more than 6/8, the most reliable thermal sources are the sunny patches on the ground..

> If you want to fly far, you have to launch early. Try to fly high at the beginning, end, and at key places. Only try to fly »fast« if it really looks good. It's important to recognize problem areas early in case you need to fly around them.

> Your flight isn't over under both feet are back on the ground. Low saves are the rule and not the exception on long flights. Tell yourself, »There is always a solution – I just have to find it.« That will help you concentrate on the search and greatly increase your chances.

> Never forego any lift unless you see lift elsewhere that is clearly better and more reliable.

> If you can't find a stationary thermal source, let yourself drift with the wind and try to feel the direction you need to turn to center the thermal.

> If you fly into strongly sinking air, reconsider whether this is your preferred route.

> Recognize your mistakes as quickly as possible and make consequent decisions based on the current situation.

> Your first thought is usually the right one because it comes from your intuition. Practice this.

> If you're gliding at less than best glide, apply the speed bar to fly out of the sinking air as fast as possible. Otherwise you'll soon be on the ground.

> Observe the clouds along your extend flight route to recognize dead zones early and to plan a way around them. The better route is the one that lets you fly farther and faster.

> When flying in the upper third of your altitude range, orient yourself on the clouds, but don't forget to look for connections between the ground and the clouds.

> When flying in the lower third of your altitude range, look for thermal triggers from pockets of warm air and wind shifts.

> Prepare yourself for the flight. Air space, terrain, route and »sky tracks« are all available at XCplanner.appspot.com. Use the filter XC.DHV.de to find out details about XC flights from your launch site. Talk to locals about weather in the direction you intend to fly.

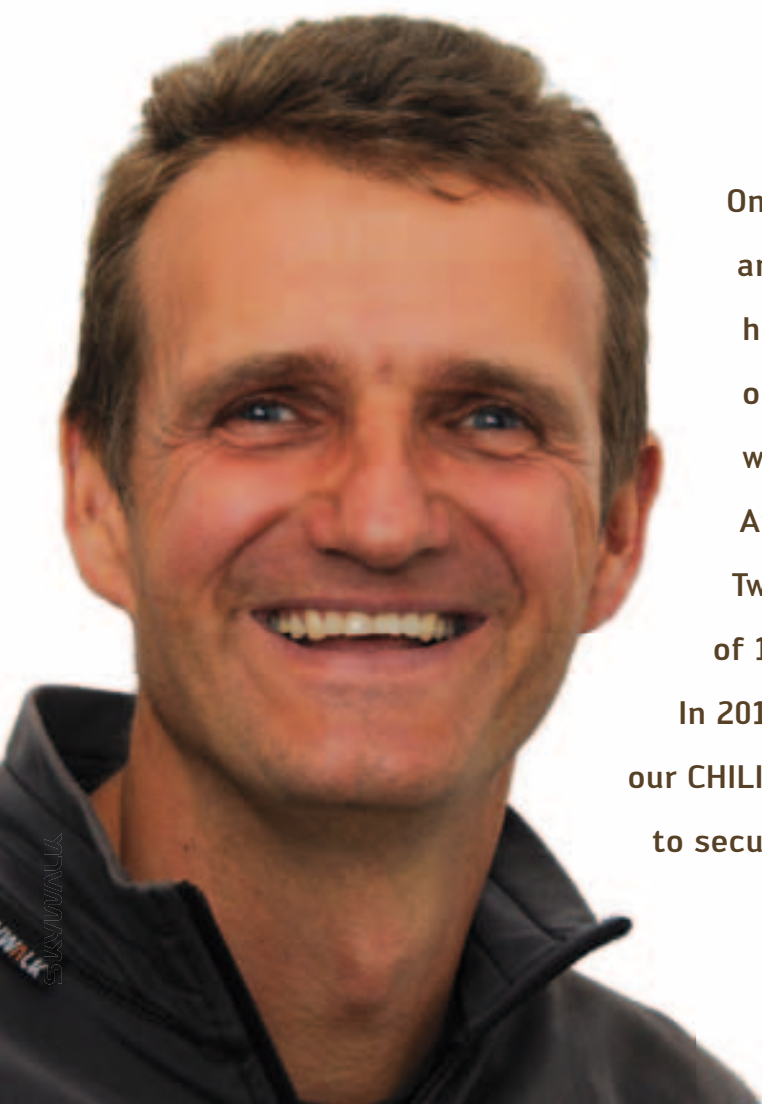
> If you're low, look for good thermal sources like combine harvesters and vortices on farmers' fields.

> Butterflies and straw indicate the center of a thermal. Circle around them.

> Inversions try to push you out of the thermal. Fly toward the gusts to get back into the core.

> Look for clouds of pollen from forests that are carried aloft by thermals.

> Smoke or flags drawn in the same direction are signs of a convergence, meaning lift.



>> Learn to »read« the terrain:

Looking downwind, the line between a forest and a large expanse of farmland is almost guaranteed to trigger a thermal. Together with observing the clouds, over time you will develop an understanding for these relationships and will begin to fly more purposefully.



> Always fly on the windward side of thermals. With increasing altitude wind, you can feel the headwind while you leave the thermal on the windward side. Use this information and don't fly more than a third on the dynamic windward side to optimize your climb and to re-gauge your position.

> Thermals and cloud go hand in hand and are separated by a distance of about 2.5 times the height of the thermal (as measured from the ground to the top of the clouds or the inversion). Imaging this can help you to guess where you might find downdrafts between the thermals.

> If you are low, feel the air around you and concentrate only on looking for thermals sources on the ground. At this point, the only that counts is staying airborne.

> If you are climbing, first maximize your climb rate in the thermal. Once you've found the core you can return to observing the clouds and planning your ensuing route.

> Use the »time lapse effect« by checking the cloud situation only every minute or two.

> If you're high and you find the thermal getting weaker, use the time to reconsider your tactics. You won't have time for this the next time you are low.

> If the wind is stronger in the upper third of your altitude range and sun is positioned right, fantastic cloud streets can form even without influence from the terrain. Use them along your route, especially if you want to fly against the wind. You'll still have to circle sometimes, especially on the leeward end of the cloud street.

> Near the ground, the wind will turn in the direction of the cloud street. You can use this as a clue to choose the right time to launch.

> In the flatlands, the optimal wing loading is in the middle of the weight range due to the weak thermals. In the Alps, it's better to fly near the high end of the weight range.

>> Not to be scoffed at:

Don't forget to feed the body, mind and spirit.
For the bladder problem there are great urinal condoms. Ever since I started using them I fly a lot more relaxed and can fly longer than 4 hours – cheers!



Tips for Winch Launches

> The optimal launch time has arrived when the sun has had the chance to heat up the ground for at least 10 minutes with little wind.

> If there is less wind where you are launch from than at the winch, then there is a good chance of a thermal over the takeoff run.

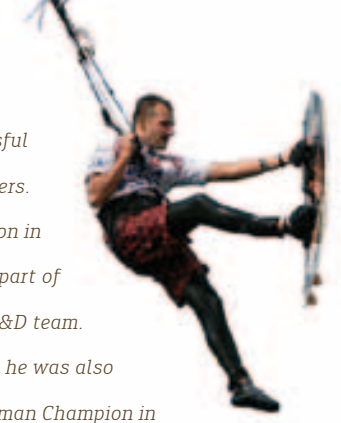
> Be conscious of the climb during the tow. Learn to differentiate between the tug of the cable and lift from thermals. If you have adequate thermals, then you should release and continue thermalling, especially in the last third of the tow. Otherwise, avoid the sinking air you flew through during the tow and look for other sources of lift.

>> Armin isn't just successful hanging underneath paragliders.

He was German Champion in kite surfing and is part of the FLYSURFER R&D team.

And in his youth, he was also


German Champion in whitewater canoeing.



Tips for Hill Launches

(when conditions are soarable)

> Gain altitude over the launch site first. When you reach the top of the ridge, the center of the dynamic wind will drift out and away from the slope.

> As you approach potential thermal sources (cloud shadows, clouds, etc), choose the time to start your glide so that you fly into the thermal on the windward side of the dynamic lift and maximize the additive effect of thermals and ridge lift. 

Tips for Hill Launches

(when conditions are not soarable)

> If the wind feels warm or gets stronger, or your variometer starts beeping, consider launching immediately.

> The sink tone from your variometer indicates a cold downwind. By raising or lowering your variometer slightly you can recognize better lower or higher pressures above you.

> Swallows and swifts fly through emerging upwinds. Try following them. If they congregate in one place, that's the center of the lift. They'll quickly disperse, but by then you know where the center of the thermal is.

> If you are high enough in a thermal and let yourself drift, your thermal could tap into a pocket of warm air from a sunny, wind-protected slope.

> Observe thermal sources like clouds and shade and launch so that you can enter the thermals with maximum altitude.

For additional tips and information, visit Armin at one of his lectures and seminars or join him on an exclusive skywalk paragliding trip, such as South Africa. More information is available at: www.skywalk.info/flachlandfliegen.

Armin posted a great video in YouTube in which he narrates his 116 km FAI triangle and explains a lot of his tips.



skywalk video competition 2014

How does air really feel?
What does it smell like?
What's so special about flying
around in the air like a bird?
Because moving pictures can
best capture these moments,
skywalk started the annual skywalk
Video Competition in 2010.

skywalk would like to offer fans of the
brand a platform for their self-made vaca-
tion, FUN and acro videos. During the eva-
luation each year we are always surprised
by how much passion you show when you
let us take a peek at your personal world
of paragliding.

skywalk is once again putting on the Video
Competition in 2014. The best videos will be
awarded with great prizes. We look forward
to seeing your films and hope you have a
lot of FUN making them.

The eligibility requirements are simple.
You can find out here how it works and
what the rules are:
skywalk.info/skywalk/video-competition.

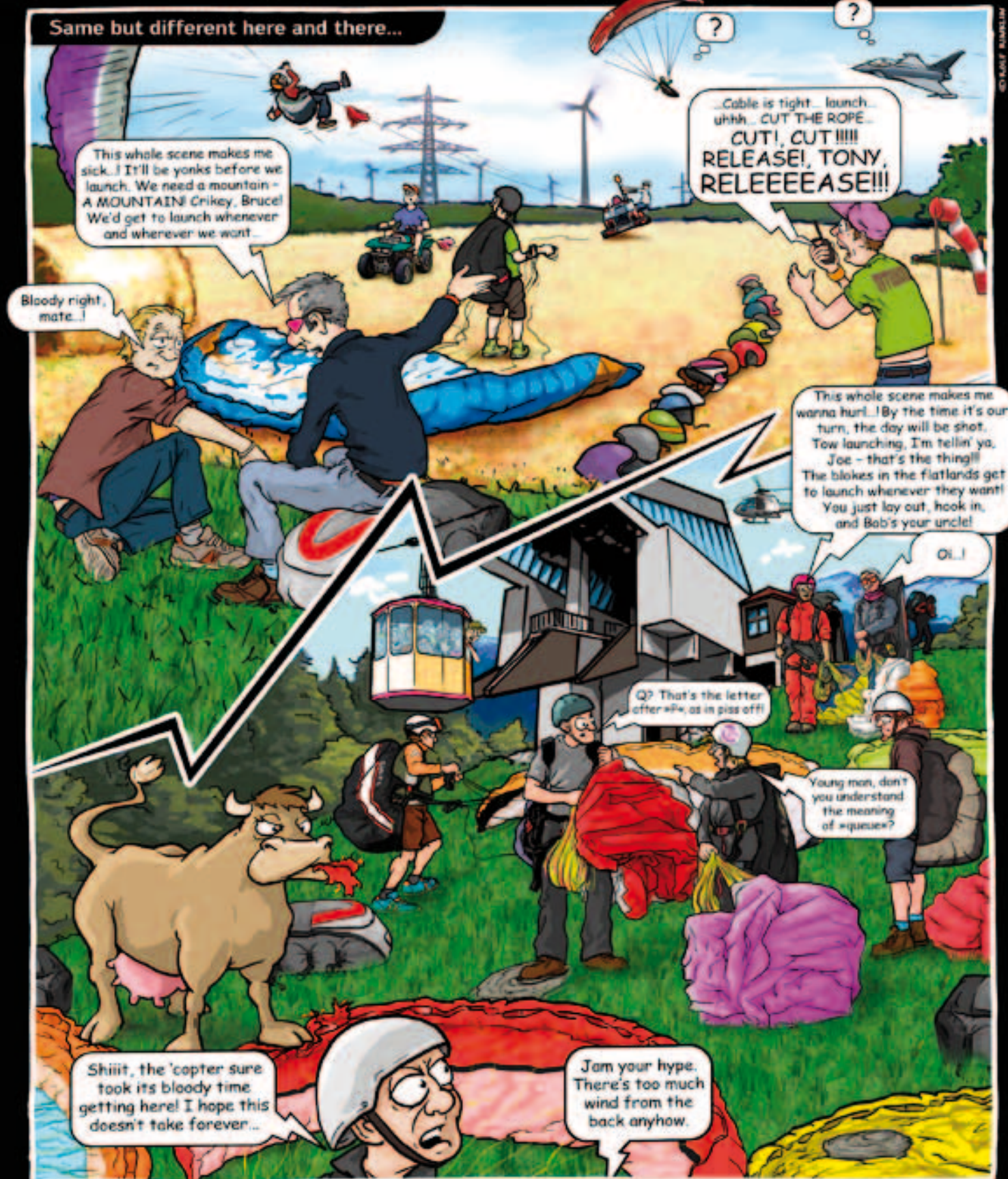


Scan in the QR code
to be taken directly to the
Video Competition site.

THE SKYWALKERS

... almost like
in real life

Same but different here and there...



The Directors Cut

A paraglider that weights only 2.7kg and a 1000 meter south face – this is what the dreams of para-alpinists are made of. At the Dachstein we found the ideal location to put skywalk's new lightweight glider MASALA2 through its paces.



Story: Christoph Kirsch

Photos: Screenshots MASALA2-Video | WOOProductions, I-Stock

»Grüezi. How can I help you?« The greeting came from a friendly voice with a Swiss accent on the other end of the line. Phil Woodtli, head of WOOProductions, is in a good mood. But the caller is in a hurry today. Sitting at his desk in skywalk's headquarters in the Chiemgau region, Stephan Bock gets right to the point. »Do you remember the two video shoots we did last year? We'd like to do another film like that with you in the autumn. There's only one small problem: We can only do it on one particular weekend at the end of October. Does that work for you?«

WOOProductions, a young company based in Freiburg in Switzerland, has made a name for itself in recent years filming commercials for outdoor marketing. The company has worked closely with skywalk for some time on product videos. Last year we traveled with them for a week through Switzerland, and then shot a casual film about the philosophy of skywalkers at Lake Chiemsee. So it was clear that the team again should be involved in the shooting for the new MASALA2. The plan is to make a film that captures the fascination of Hike & Fly. Intense experiences with friends; begin-

ning the hike in the morning sun; the joy of reaching the summit; launching into the soft thermals of a warm autumn day – and naturally the crowning glory: gliding past the fascinating panorama of a mountain range, gently turning in light thermals, and tracing a few easygoing wingovers in the sky.

The Dachstein is easily one of the most fascinating ranges of the eastern Alps. Vertical limestone cliffs on the south side, ice-covered flanks, glaciers and karstic no-man's-land on the north side. The range has had a magical attraction

on alpinists for over 100 years. The Red Bull X-Alps has included the Dachstein on its route for the past ten years and this has made it well known among paraglider pilots.

It's not difficult to get Phil enthusiastic about the idea. He agrees under one condition: due to the short notice, he won't take any responsibility for the final result... In Switzerland the first visual images are forming, ideas are collected, the storyboard is written, and on a Wednesday afternoon we set off for the Dachstein.


>> Impressive shots for an impressive product. The MASALA2 is the perfect companion for hike & fly the way we think it should be: lightweight, safe, uncomplicated flying characteristics but with appealing performance potential. With its simple and exact handling, the MASALA2 is the right fit for the safety-conscious novice as well as for the experienced alpinist. For the perfect Hike & Fly experience, we recommend our very lightweight reversible airbag harness skywalk FLEX (page 65).



The weather forecast is predicting at least one good day for shooting, and on the second day conditions should improve in the afternoon. But for an alpine film, less than perfect conditions could create just the mood we are looking for. At the parking lot of the Dachstein cable car, WOOPers Phil and Fipi meet skywalkers Benny Bölli, Peter Müller and Paul Guschlbauer. Whether or not we can fly isn't clear yet, but just the autumnal panorama and cloud formations have made it worth it. Before the Dachstein shows us its alpine face and then hides it in a thick layer of fog, we manage over several hours to film some impressive slow-motion shots of the clouds and some launches. When the fog dissipates, the thermals return. Peter, Paul and Benny are able to soar in front of the Dachstein's south face while Phil and Fipi use the time to try out lots of different settings. Our remote control drones deliver some impressive pictures and the crew is more than satisfied.

It's nice that even in the digital age, the weather report can be deceptive. On the second day the weather is much better than predicted. We use the drones to get



a bird's eye view of climbing scenes on the Dachstein ridge. It's really fascinating what's possible with these little helpers. Just a few years ago we would have needed a helicopter for a few hours to get these shots. Dynamic shots results from the tandem perspective. Peter and Paul know exactly what the cinematographer needs! They position themselves perfectly in front of the camera and show before the backdrop of the Dachstein panorama that this lightweight EN-A wing has not just an alpine-, but also a freestyle soul. Hard to believe: after just two days all of the planned shots are in the can. Whoever watches the film can actually feel how effortless the shooting was. And after a successful mountain trek, does it really matter how much preparation and hard work went into it? 

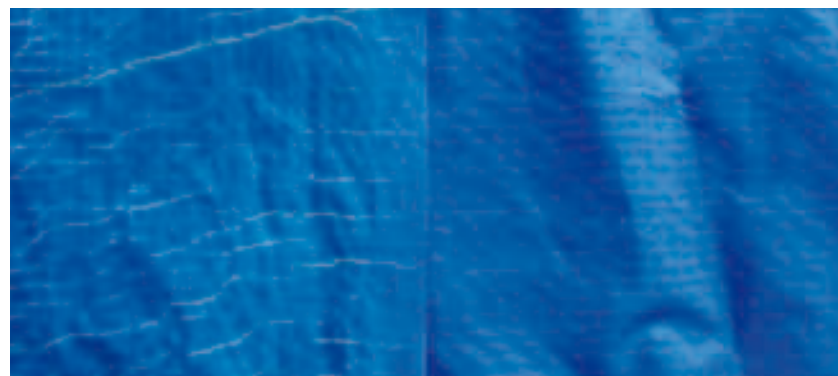
Did we peak your interest?
That's justifiable!
Scanning the QR code will
take you directly the Vimeo
URL of the video.



The stuff dreams are made of

What feathers are for birds, wing fabric is for paragliders. Contrary to many predictions, development in this critical area has made a lot of progress.

Story und Photos: Manred Kistler



>> Comparison of an aged material sample (left) next to a new sample (right).

>> Collapse on a CHILI3.



The French company Porcher Marine had a near monopoly around 2007/08, but now the Korean company Dominico-Tex has emerged as a second global player. When you have intense competition, you sometimes box without gloves, and naturally with lobbying. So it's time for skywalk to take a closer look at this topic, considering that we have over ten years of experience and have even co-developed some new materials and tested countless others.

Testing of new materials always goes according to a predetermined scheme. After the initial contact and visual inspection of the new material and its technical data, we test its most important characteristics in our skywalk workshop. We use the well-known porosimeter to measure the material's airtightness and the so-called bettsometer to test its tear resistance. Special equipment allows skywalk to achieve even more extensive tests: To test the dynamic load bearing capacity of fabrics, we developed our own drop tower. When dropped from the tower from a

defined height, a test weight can load a material sample with a predetermined impulse. The resulting loads are then recorded. In real life, the dynamic load of materials is important, for example, when a glider reopens impulsively after a collapse. We also examine the material's stretch. For this purpose, skywalk Paragliders has a special fixture that allows us to stretch fabric strips of any width. Depending on the purpose, the fiber orientation is set at 0 – 90 or 45 degrees. The material strips are then stretched and parameters like elongation and the corresponding load are recorded. Material strips are usually cut to a width of 10 cm with a test length of 1,5 mm to ensure the transferability of the test results. The data plots in the chart below provide a quick and clear overview of the range of stretch values at various loads. The retraction is also very important because some materials remain

deformed if the load was too high. Naturally we also monitor the weight of the material with a highly sensitive precision scale because some suppliers tend to be overall optimistic.

When the laboratory tests have been completed to our satisfaction, the test samples are then weathered. The material samples are placed together with a reference sample in a mounting bracket and exposed to the whole spectrum of wind and weather. The reason for this is that the values given by the material suppliers, for example the UV resistance or the flutter test, are often the results of isolated tests. That means



>> The JDC porosimeter measure the porosity of the fixed fabric.



>> The bettsometer determines the tear resistance.

that the material is first aged mechanically in a flutter machine, then the sun is simulated with a UV lamp with the goal of achieving at the end an exact replication of a realistic usage situation.


The fact is that skywalk often achieves very different results when the environmental tests are conducted in parallel rather than one after the other. This makes a lot more sense to us because that is exactly what happens in real life. When we fly, we have both the effect of the sun and mechanical loads caused by fluttering. Sometimes we also have the additional influences of

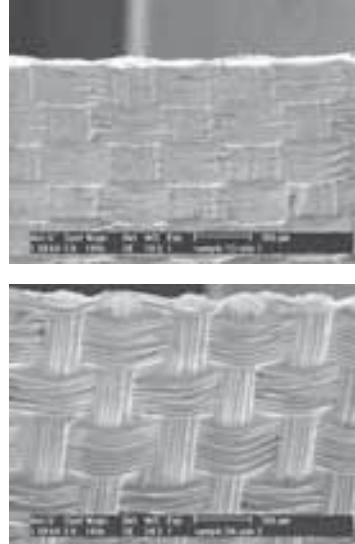
moisture from wet fields or rain. The material tests end with the microscope inspection that looks for defects in the surface coating. We did this, for example, during the development of the various AEROFABRIC silver-coated materials used, among others, on the lightweight ARRIBA2 glider. Once the outdoor tests have been completed to our satisfaction (always relative to a reference), the next step is to build a prototype with the tested material. The most important factor here is whether the new material has an influence on flying characteristics or whether any special behavior becomes apparent. In nearly every case, any changes to the flying characteristics are minimum, especially if the material hasn't aged yet.

So far, skywalk has been unable to detect any measureable influences on performance! In general, we keep an eye naturally on the actual aging of the glider's material during our tough tests. Once we have completed all of these

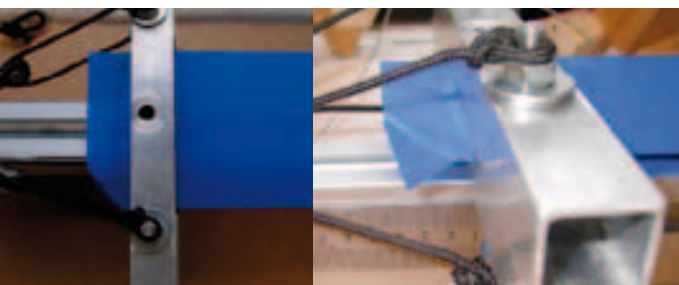
steps, we consider further criteria: delivery, quality management of the supplier, colors price, conditions of delivery...

In any case: there is no such thing as perfect material and you can't expect perfect product quality over thousands of meters. To be sure, every material varies in quality, regardless of whether it is produced in Asia or Europe. Several years ago we had the bitter experience that even European made material can have large fluctuations in quality. In this case, the fabric showed stretch values after intensive use that were many times more than normal and were therefore unsuitable for serial production. The Dominico or Porcher materials that we currently use are generally good, although both do show variations. However, noticeable differences in glide ratio or material distortion due to favoring one side while thermalling are in our view unimaginable. Now more than ever it is the job of the serious designer and manufacturer to select the right materials for the right job from the abundance of options available on the market.

skywalk's philosophy is to develop durable gliders of the highest quality. In the future we will continue to use only those materials that score the highest in our own internal tests. 

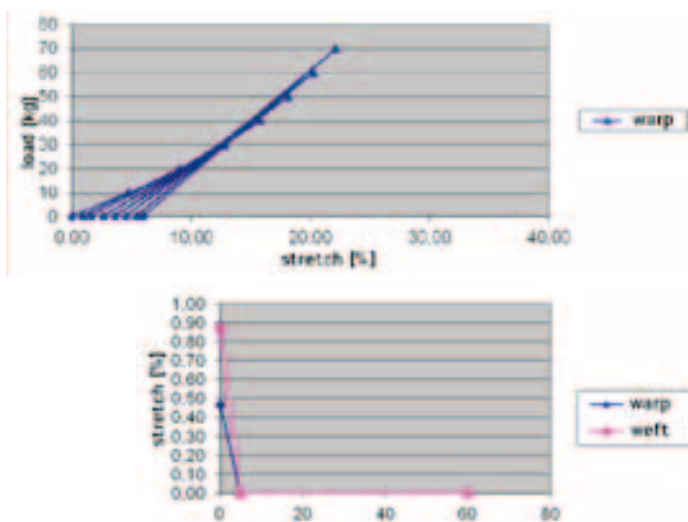


>> Top view and view of cross-section from an electron microscope.



>> Above, the fabric sample is held in place for the stretch measurement in the top and cross-section views.

Below, the test protocol for stretching with permanent deformation after a peak load of 70 kg...



... and stretch with retraction to zero after a load of 10 kg on a 10 cm wide material strip.

X-GLOO² The Inflatable Event Igloo



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Modular
Functional
High Quality
Exclusive

Specialist
in Lightweight Tent
Design and Service



Creative Event Equipment

Skywalk GmbH & Co. KG
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info@skywalk.org - www.skywalk.org

Eye in the Sky - How to Film while Flying

Tips and Photos: Armin Harich



Preserving your own sports adventures on film for future generations – this trends has become more and more popular in recent years, and not just in the paragliding scene. Thanks to the unique perspectives and overwhelming views of nature, our sport is predestined to deliver exciting pictures. The newest generation of small, lightweight, powerful, and yet affordable action cameras opens up endless new possibilities for enthusiastic hobby filmmakers.

In this article, I would like to share with you some tips that have proven useful in my career as an amateur film director.

The Camera

Today's market for action cameras is vast with a huge choice of products that differ in terms of size, weight and picture quality. The clear market leader is GoPro with its HERO models, now in the third generation. I've been using the products of this American manufacturer for some time now. While looking for a first-class alternative, I came across the German manufacturer of the Actionpro X7. Now that I've had the chance to use this camera extensively, I can recommend it as a suitable alternative.

The Mount

A cool camera position is one of the most important factors in producing an exciting film. Before you fly, think about the camera angle you want to use. The standard position is to mount the camera on the top of your helmet. This »first person« perspective is what I use most of the time. Mounting is easy thanks to the bracket supplied. The camera is easily reachable during flight so starting and stopping it is no problem. In addition, this position gives your audience the pilot's perspective. But there are also a few other great positions that are worth trying out.

What fascinates me in particular is the so-called night flight camera. This mounting method has already been testing in SIV trainings. The camera is mounted no higher than your own position in the harness, thus eliminating the chance of it getting tangled in the lines.

The attachment line should be thick and soft to dampen turbulence and to allow the chase camera to hang far behind you. I recommend the Observer from Maier Components. It can be disassembled easily and packed small, and works with all types of cameras.

Mounting the camera up in the canopy makes for an especially interesting perspective. From here you get a bird's eye view of the pilot and the ground below him. Naturally, the camera shouldn't wobble or fall in the lines in the event of a collapse. The magazine Thermik offers a solution for use with the GoPro, but you can also make your own using magnets. And don't forget the safety line. On Ebay you can find telescopic poles that allow you to hold the camera away from you as you fly. Foot mounts are also simple and effective alternatives. Let your imagination run wild. A touch of handcraft and inventiveness always helps!

The more perspectives you use in your film, the more interesting it will be for your audience. If you fly in a group, take advantage of that fact and have a second person film you. The quality of the camera built into your mobile phone is probably adequate, and this camera will probably have the same resolution and frame rate as your action camera. That will avoid unevenness when you edit the raw footage together later.

The Camera Housing

A frame/shell structure for the camera saves weight and is optional for helmet mounting. If you can't protect the camera

>> *Filming from angles in front of and behind the pilot can provide your audience with some really interesting and wonderfully convincing impressions. Don't forget to smile...;-)*

from dirt, then the lens should always be protected. It doesn't have to be waterproof as this tends to block most of the sound.

The Battery

The battery in most conventional action cameras lasts for about two hours. That should be adequate for the majority of your needs when paragliding. I recharge my X7 via the USB cable from my cockpit if necessary. That saves having to juggle batteries while in the air and keeps your helmet from sagging to one side due to the weight of reserve batteries.

The Remote Control

I used several different remotes for the GoPro. Every one of them failed after a few months due to defective batteries. The alternative solution, using the smartphone app in the air with gloves, can only be partly recommended. Practical experience has demonstrated that it's best to turn the camera on and off by hand, or to just let it run. You can select the best scenes for your film later when you edit it.

The Microphone

The microphone records the wind, variometer beeps and your own utterings during your flights. Usually the wind noise dominates. To reduce the unwanted noise substantially, you can place some foam padding in front of the mic. Later, you can crossfade the audio track between the original sound (speech, vario) and music. If you want to provide a live commentary of the flight, it's worth it to use an external mic. That way you can clearly document your strategic decisions for others. Position the mic out of the wind, under your

jacket and near your mouth. You could also do a voice-over when you edit the film, but that doesn't sound as authentic and emotional as your enthusiasm during the flight.

The Story

If you don't want your film to get lost in the sea of half-baked videos on YouTube & co, you have to have a good story behind it. The story should run like a thread

through the whole film. Think of your own viewing habits. Which films do you watch from start to finish without fast-forwarding? What captures your interest? Which films do you show to your buddies? What tricks do others use that you can try? A good story needs a lot of consideration and takes time. But no matter what, there is simply nothing better than a good story!



>> The market for action cams has become quite large.

Cams are now available in every style, size, weight and imagine

quality imaginable. A first-class alternative to

the "Hero" models of the market leader GoPro is the X7

from the German manufacturer Actionpro, which I

personally like very much.

For the chase-cam angle, I recommend the Observer

from Maier-Components.de. On the left you can see the

individual components as well as the complete set-up.



even able to improvise a bit and edit a film in 3D using two cameras running in parallel. The limiting factor is the one sitting in front of the keyboard. What fascinates you about other films? Which ideas could you use for your own projects? In general, it's better to use a less complex editing program with features that you know how to use. Start with an easier program and don't upgrade to more complex software until it becomes intuitive enough for you to use.

The Photos

I generate my photos simply as screen-shots from the video. This gives me 30 pictures per second and the chance to always pick just the right moment. The video quality of most action cameras has become so incredibly good that it's no problem if you use a high enough data rate.

The limiting factor for the image quality is primarily the quality of the camera and the lens, and not the number of megapixels. A higher pixel count is often only better if you want to zoom in really far. Independent of that, it helps to employ color correction to squeeze the last bit of brilliance out of your pictures.

The Memory

I sort my raw footage and then load it onto an external hard drive. The data flow is immense. With high quality, you can expect 10 gigabytes per hour!

The Frame Rate

The setting 30 frames per second/NTSC is half the scan rate of computer monitors and results in smooth playback. This is my standard recommendation that I always use. 25 frames per second/PAL is only interesting if you're making DVDs that work with the typical PAL frequency of 50 Herz »interlaced«. 60 frames per second doubles the data rate and also the memory usage. This setting is primarily used for capturing slow motion and is optimal for very fast shots.

The Resolution

Full HD (1080p) is the resolution that current action cameras best record at in my experience. Short test videos from the same subject (panning and still pictures) will show you which resolution is best for your camera. That might not necessarily be the highest resolution! The most popular picture format today is 16:9 as this is the format used by most playback equipment.

Have fun filming! 

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Do you want to save yourself some effort? Then keep your shots short when you edit the film. Less than 20 seconds is good, otherwise the film becomes too long and uninteresting for the audience.

The Edit

Using standard, free software like Apple's iMovie or Microsoft's Movie Maker, editing your own film has never been easier. I was

Spoiled for Choice or the greatest freedom

Training, thermals, cross country, Hike & Fly, freestyle, motorglider or hybrid?
The most important criterion when buying a glider is your personal ambition. Once you know what you want to do, the model to chose quickly can be identified. Here are a few points that you should consider in your purchase decision.

Certification

A common theme throughout this brochure: the paraglider is a highly specialized piece of sports equipment. Nothing else has so many degrees of freedom and nothing else demands such careful purchase advice. Once you have decided how you expect to use your glider, the certification levels provide the most important orientation during purchase. These levels are assigned to glider models after an extensive certification process,

Just like with many other products, a non-compulsory European Norm (»EN«) provides the customer with a rough overview of the glider's safety features.

EN 926 divides paragliders into these four categories:

- EN-A for beginners
- EN-B for occasional pilots
- EN-C for experienced pilots
- EN-D for competition pilots

These same classifications are used in Germany's prescribed LTF, the so-called »airworthiness requirements«.

Differences in the certification process are negligible. Most manufacturers offer gliders in all four EN/LTF categories: a »low level« glider is a wing that doesn't max out a category's limits. During the flight tests, many extreme maneuvers receive a grade in the lower categories. A »high level« glider is one that exhausts the limits of the certification category – with a clear tendency toward the next higher category.

Folding lines are additional lines attached to certain types of wing to help soften its collapse behavior. The attainable certification categories during relevant maneuvers such as side and front collapses are lower with the use of folding lines. In this case, the pilot can be fooled about the true safe behavior of the glider. Folding lines have never been used in the certification of skywalk gliders.

To make the purchase of a paraglider as transparent as possible, pictograms of every glider are included that highlight and explain the specific characteristics.

Technology

skywalk paragliders are full of clever technologies – from material with the aluminum coating »AEROFABRIX« to »mini-ribs«. The pictograms on the following pages provide information about innovations in each wing. You can read an explanation for each pictogram in the column on the far right side of the page. There is one thing that nearly all skywalk gliders have in common: our patented »JET FLAP« system that extends your speed range as you approach the stall point and improves climb performance!

You can find out more about our technologies at www.skywalk.info. We are happy to answer any further question by mail or telephone.

Did you know?

All current skywalk paragliders were tested and certified without folding lines.

The table below presents our complete glider palette, with models divided by their suitability for certain pilot groups. This will help you decide which glider is the most appropriate for you.

Safety	Fun	Sport	Performance
Classic Paragliders			
MESCAL ⁴	TEQUILA ⁴	CHILI ³	CAVENNE ⁴
			POISON ³
Lightweight Paragliders			
MASALA ²	ARRIBA ²		X-ALPS ²⁰¹³
Miniwings			
	TONIC		TONKA
Tandem			
	JOINT ³		
Hybrid Paragliders			
	MOJITO.HY ⁺		SCOTCH.HY

Despite all the norms and recommendations, a healthy and honest self-assessment is and remains the basis for safety and fun while flying. False vanity and exaggerated ambition often leads to unpleasant flying experiences that can permanently spoil the fun of flying. Only those who can cope with their glider will be happy in the element of air.

Pictogram Index:

- 2+2** **2 Plus 2:** The skywalk 2+2 guarantee covers material flaws or manufacturing errors and is valid for all certified (LTF or EN), privately used gliders. 2+2 is an extension of the legal 2-year guarantee.
- JET FLAP** **JET FLAP:** Enormous reserves as your speed approaches the stall point means better climb performance, especially in tight, strong thermals. The longer brake line travel extends your »green« range while flying.
- AL** **AEROFABRIX AL32:** Lightweight material with an aluminum coating: UV-resistant, light, high porosity values, exceedingly durable.
- HY** **Hybrid Lines:** Mix out of Aramid and Dyneema lines: high durability and marginal stretch, lighter, lower wind resistance.
- C** **Rigid Foils:** Nylon reinforcements in the leading edge: lower total weight, maintains the wing's shape, ensures constant ram air pressure, better launch and more docile extreme flight behavior.
- T** **C-Wires:** Nylon reinforcement over the C suspension point in the upper sail instead of lines: less resistance, more performance.
- R** **Mini Ribs:** Doubling of the cell in the area of the trailing edge: increased shape stability, less resistance, more performance.
- 3D** **3D-Shaping:** Fitting of an additional band: precisely shaped wing, less resistance, more performance.
- 3** **3 Line Levels:** 3 line levels without branching: reduces wind resistance and improves glide.
- 2X** **Double-splice Technology:** Special process for higher load capacity at the line attachment points.
- 2** **2 Main Lines:** 2A, 2B, 2C lines per side and line level: fewer lines, less resistance, easier line sorting, more performance.
- />>** **Race Lines:** Unsheathed Aramid lines: kink and stretch resistant, lower wind resistance.
- Box** **Especially Robust Materials:** Use of special, long-life materials that maintain their characteristics even in hard use.
- Hand** **Narrow Risers:** Use of narrow material for risers: less weight and wind resistance for more performance, but with somewhat more demanding handling.
- Checklist** **Convenient Risers:** Colored markings on risers: 5-point check and big ear flags make the preflight check easier and avoid confusion during the flight.
- Person** **Suitable for training:** Especially suitable for training and novice pilots: LTF/EN A or B certification, especially easy to launch, highest safety standard.
- Feather** **For Lightweights:** Glider sizes for light pilots from about 40 kg body weight: small area, lower weight with the same safety and performance.
- Stabilo** **Automatic De-sanding System:** Sewn-in holes in the stabilo. Sand and dirt trickle out automatically: protects the material, increases safety when flying in dunes.
- Hook** **Loops & Hooks:** Loops in the upper sail with tabs: makes launching in steep or slippery terrain easier or at all possible.

What it Takes to Fly...

MESCAL4

JET FLAP fun cruiser – LTF09: A | EN: A



>> By the way: In 2013, Armin Harich flew a Mescal4 on the longest FAI triangle ever documented with an EN-A glider.

In a YouTube video he demonstrates the Mescal4 and its special features.



MESCAL4

Your reliable companion



skywalk manages to incorporate the latest technologies not only into high-end gliders, but also LTF-A/EN-A certified wings. Originally developed to increase performance in competition wings, nylon reinforcements in the leading edge and 3-line technology now making launching easier than ever. The nylon rods reduce the glider's weight, letting the glider rise more easily during inflation.

The 3-line system simplifies line sorting and increases performance enormously – making it easier to take off from even the flattest launch sites. Another safety plus is skywalk's patented JET FLAP technology. The Mescal4 can be flown extremely slowly if necessary. Stalling is nearly impossible – important, for example, during final approach. À propos safety: with the 5-point checklist printed right on the riser, you'll never again forget your preflight check. And finally: the Mescal4's robust material is ideal for the harsh environment of the practice slope.

>> Already a

skywalk tradition:

the 5-point checklist printed on the Mescal's riser.

Together with clear markings for left and right risers a clear safety

advantage for every novice.



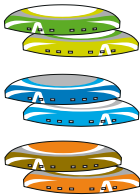
Pilot target group



Features



	XS	S	M	L
Cells	34	34	34	34
Area flat in m²	22,73	26,18	28,70	31,94
Wingspan flat in m	10,45	11,21	11,74	12,38
Aspect ratio flat	4,80	4,80	4,80	4,80
Glider weight in kg	4,9	5,4	5,8	6,1
Takeoff weight in kg from - to	55-75	70-95	85-110	100-130
Winch certified	yes	yes	yes	yes



TEQUILA4

JET FLAP freerider – LTF09: B | EN: B

TEQUILA4

The Classic Intermediate

It's good to know that there's a glider that meets all your demands – whether you just fly for fun or want to be the highest in your house thermal, make challenging XC flights, or if you're just beginning your training. With the new TEQUILA4, skywalk brings modern CHILI3 technology to the leisure class! The TEQUILA series was always known for its passive safety combined with lots of performance potential and absolutely uncomplicated handling. That's why skywalk didn't push the design of the TEQUILA4 to the limit. The latest technologies such as mini

ribs, 3D shaping, rigid foils and a reduced total line length turn this pure bred 3-liner into a high performance wing for its class - even as pilot demand remains manageable.

This all-round glider will thrill you with its very direct but light handling and super glide performance and a top speed that is high for its class. Thanks to its low weight and the use of rigid foils, launching the TEQUILA4 is child's play. And it's fun to fly! Whether you're a talented novice or an XC pilot: the EN-B certified TEQUILA was and is an excellent choice for many pilots.



Pilot target group



Features



	XS	S	M	L
Cells	45	45	45	45
Area flat in m²	22,17	25,54	28,30	30,32
Wingspan flat in m	10,74	11,52	12,13	12,56
Aspect ratio flat	5,20	5,20	5,20	5,20
Glider weight in kg	4,7	5,3	5,6	5,9
Takeoff weight in kg from - to	55-75	70-95	85-110	100-130
Winch certified	yes	yes	yes	yes

CHILI3

JET FLAP high end freerider – LTF09: B I EN: B



CHILI3

The Climbing King*

The first 100 or 200 kilometers of XC flying demand a special glider. And the first 200 FAI triangle even more so. What you need is excellent handling, great glider performance (including against the wind), a high top speed, maximum stability and excellent climb performance. On top of that, a modern XC wing has to give you a secure feeling so that even after a long day of flying you can still tackle the toughest thermals and have no qualms about pushing the speed bar. The EN-B certified CHILI3 boldly goes into new terrain previously reserved for EN-C wings. This is possible thanks to

*Thermik Magazine 1/2 2014

the use of the latest technologies such as C-wires, double 3D shaping, and a novel cell concept that allowed us to reduce total line length by 25%. Our pilots are showing what is possible with this glider. Armin Harich prevailed against many comp wings with a 164km FAI triangle in the flatlands to place second in the German Championship. At 233km, Oliver Teubert completed the largest FAI triangle in the standard class of the 2013 DHV XC competition. Burkhard Martens' crowning achievement was a new German open distance record - 391 km!

With the CHILI3, even the farthest goals are within your grasp. It's up to you.

Pilot target group

SAFETY FLB SPORT PERFORMANCE

Features

2+2 JET FLAP 3D HY 11.55 6.13 5.3 60-85 yes

	XXS	XS	S	M	L
Cells	51	51	51	51	51
Area flat in m²	21,85	24,71	26,89	28,87	31,83
Wingspan flat in m	10,99	11,68	12,19	12,63	13,26
Aspect ratio flat	5,52	5,52	5,52	5,52	5,52
Glider weight in kg	4,6	4,9	5,2	5,6	6,0
Takeoff weight in kg from - to	55-75	70-90	80-100	90-114	100-130
Winch certified	yes	yes	yes	yes	yes

CAYENNE4

At home on any podium

The results speak for themselves: never before has an EN-C glider stolen the show from so many comp wings! The reason? CAYENNE4 pilots can take advantage of 100% of the enormous performance potential of this purebred sport class wing. Contributing to this are the CAYENNE4's smooth speed system, high stability (also at high speeds), and astounding glide performance. The icing on the cake is its precise handling. Lots of pilots love the CAYENNE4 just for the wonderful wingovers you can fly with it...

Pilot target group

SAFETY FLB SPORT PERFORMANCE

Features

2+2 JET FLAP 3D HY 11.55 6.13 5.3 60-85 yes

	XS	S	M	L	XL
Cells	59	59	59	59	59
Area flat in m²	21,80	24,48	26,73	28,30	29,48
Wingspan flat in m	11,55	12,24	12,80	13,16	13,44
Aspect ratio flat	6,13	6,13	6,13	6,13	6,13
Glider weight in kg	5,3	5,7	6,1	6,3	6,6
Takeoff weight in kg from - to	60-85	75-100	90-110	100-120	110-130
Winch certified	yes	yes	yes	yes	yes

CAYENNE4

JET FLAP sportster – LTF09: C I EN: C

POISON3

Flyable High Performance

At its introduction in 2011, the POISON3 was one of the highest performing serial wings on the market. skywalk team pilot Marco Exenberger knows that this high-end glider still holds its own: »I think there are lots of pilots who like to fly EN-D gliders because they are so agile. The POISON3 is an »honest« EN-D 3-liner because I always know where I stand with it. In competition, I often experience conditions in which I need to know

how my wing will behave. For this reason I continue to trust my POISON3. This allows me to extract the best flying performance out of it – and that's reflected in my results.«



POISON3

JET FLAP race carver – LTF09: D I EN: D



>> The clever and sophisticated single-line attachments make flying with the speed bar incomparably stable.

Pilot target group

SAFETY FLB SPORT PERFORMANCE

Features

2+2 JET FLAP 3D HY 11.55 6.13 5.3 60-85 yes

	XS	S	M	L	XL
Cells	69	69	69	69	69
Area flat in m²	22,95	24,88	26,80	28,24	29,40
Wingspan flat in m	12,51	13,03	13,52	13,88	14,17
Aspect ratio flat	6,82	6,82	6,82	6,82	6,82
Glider weight in kg	5,1	5,5	6,0	6,3	6,6
Takeoff weight in kg from - to	70-90	80-100	90-110	100-120	110-130
Winch certified	yes	yes	yes	yes	yes



JET FLAP ultralight glider – LTF09: A | EN: A



MASALA2

Your Reliable Companion for Hike & Fly

With its simple yet exact handling, this EN-A certified all-rounder is as much fun for novices to fly as it is for the experienced alpinist. We did everything we could in construction and material selection to make a very lightweight glider with just 2.7kg and an extremely compact packing volume. Pilots looking for an all-round lightweight glider with a comforting safety margin will find the perfect companion in the MASALA2, one that's not just for the mountain.

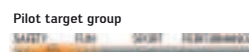
Noteworthy: In the smaller sizes, the MASALA2 has extremely wide weight ranges. That means that you can enjoy extended thermalling and long glides thanks to the wing's lift-optimized profile, even at the upper end of the weight range. The use of modern technologies, otherwise only available in higher classified wings, guarantees the required performance. The MASALA2 is certified EN/LTF A in all sizes.

For the perfect Hike & Fly experience, we recommend the skywalk FLEX, our very light reversible airbag harness (page 65).

	XXS	XS	S	M
Cells	34	34	34	34
Area flat in m²	20,01	22,73	26,18	28,70
Wingspan flat in m	9,80	10,45	11,21	11,74
Aspect ratio flat	4,80	4,80	4,80	4,80
Glider weight in kg	2,7	3,0	3,3	3,6
Takeoff weight in kg from - to	55-90	55-95	70-95	85-110
Winch certified	yes	yes	yes	yes



>> To stimulate your appetite,
check out the MASALA2 trailer.



ARRIBA 2

JET FLAP lightweight glider – LTF09: B | EN: B



ARRIBA2

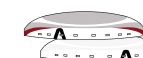
The dazzling lightness

The Hike & Fly philosophy has its origins in the high mountains. There is no other place where low weight, compact pack-

>> *New silver-coated material is also suitable for use on the practice slops.*

ing size, easy launch characteristics and a high safety margin count for so much. The ARRIBA2 demonstrates that performance and handling don't have to suffer under these conditions.

Oh yes, since 2013, the ARRIBA2 is also suitable for training. Now novices can also profit from the advantages of a true Hike & Fly glider.



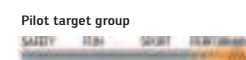
X-ALPS2013

Follow the footsteps of the X-Alps athletes

The time has come! skywalk Paragliders is offering this year's Red Bull X-Alps 2013 comp wing to ambitious XC pilots in unmodified form. Experience the glider flown by professionals! Paul Guschlbauer & co have shown us the way, now it's your turn! X-ALPS 2013 review: This wing offers a perfect balance

of performance and weight savings to climb the highest mountains with minimal load and then fly great distances. This performance wing is well suited for challenging Hike & Fly cross-country adventures or bivouac flying. Demanding pilots and mountain climbers will find their ideal minimum weight companion in the X-ALPS 2013 with no compromise in performance.

Cells	67
Area flat in m ²	23,00
Wingspan flat in m	12,4
Aspect ratio flat	6,7
Glider weight in kg	3,5
Takeoff weight in kg from - to	75-93
Winch certified	yes



X-ALPS 2013
ultralight racecarver – LTF09: DIEN: D



TONIC

A pity to just fly straight

Once you've test flown it, the TONIC will become your essential companion. The likelihood of getting airtime increases x-fold because this lightweight 16 square meter wing will always be with you - whether flying at your home site, for Hike & Fly, on vacation or at the soaring ridge. The huge speed range and high performance mean you can fly from practically every hill. And when the thermals kick in, be ready to climb. Fun ridge soaring or dynamic curves are easy to do with the brakes – the TONIC's roll damping offers the necessary safety margin for hobby pilots, too.



TONKA

Not only for competition

Careful: the TONKA can be addictive! This 15 square meter wing offers experienced pilots a whole new kind of flying fun. Its high wing loading opens up new dimensions in dynamics and agility. The TONKA converts control inputs precisely and without delay. Tight turns and wing-overs are fun and playful as the dynamics build up. The TONKA's low weight and compact size means that you'll always have it with you for Hike& Fly, soaring

in strong winds, or high up in the mountains. It's easy launch characteristics, good glide performance and huge speed range make it your first choice for competitions like the Dolomitenmann. If you have the experience, let the TONKA be your ticket!



>> »Upside down you're turning me...«
Diana Ross wouldn't trust her eyesight if she saw how literally the TONIC takes her lyrics. Especially impressive is the wing's stability. Beweideo bei
Scan des QR-Codes.



	S	M	L
Cells	26	26	26
Area projected in m²	14,24	16,12	18,11
Area flat in m²	16,79	19,00	21,35
Wingspan flat in m	8,37	8,91	9,44
Aspect ratio flat	4,18	4,18	4,18
Glider weight in kg	2,8	3,1	3,4
Takeoff weight in kg from - to	56-91	56-105	65-114
Winch certified	yes	yes	yes

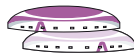
Pilot target group
SAFETY FUN SPORT PERFORMANCE

Features
2+2 JET FLAP HY HY HY HY HY HY HY HY HY HY



Pilot target group
SAFETY FUN SPORT PERFORMANCE

Features
2+2 JET FLAP HY HY HY HY HY HY HY HY HY HY



	15
Cells	44
Area flat in m²	17,5
Wingspan flat in m	9,63
Aspect ratio flat	5,30
Glider weight in kg	3,3
Takeoff weight in kg from - to	56 - 105
Winch certified	yes



JOIN'T 3

JET FLAP biplace – LTF09: B I EN: B



JOIN'T3

Enjoy responsibly! Enjoy together!

The new JOIN'T 3 offers a substantially expanded weight range of 100 kg–200 kg (S) and 130 kg–225 kg (M), ensuring unspoiled flying fun for lightweights and heavy combinations alike. Thanks to the super light canopy weight, the glider comes up effortlessly at launch, soothing the nerves of both pilot and passenger. Yet the construction still uses robust materials in critical places to guarantee a long life span in daily professional use. RIGID FOIL elements made out of indestructible plastic shape the leading edge while the

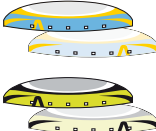
glider is still on the ground, always ensuring a quick and even inflation. After a surprisingly short takeoff run, you're airborne, and the direct handling becomes immediately apparent. A special brake line gathering system helps to lighten the control pressure and makes the JOIN'T3 the fun-to-fly glider among the tandems. In private use, the JOIN'T3 will also convince you with its clear line concept, well thought out details, and excellent thermalling characteristics. Its nice flaring behavior und low landing speed, thanks to skywalk's JET FLAP technology, round out the complete package.

Pilot target group

SAFETY FLIN SPORT PERFORMANCE

Features

2+2 JET FLAP HY



	S	M
Cells	49	49
Area flat in m²	37,50	41,20
Wingspan flat in m	14,20	14,87
Aspect ratio flat	5,37	5,37
Glider weight in kg	7,2	7,6
Takeoff weight in kg from - to	100-200	130-225
Winch certified	yes	yes


MOJITO HY+

Multitasking - the easy way

Stress-free flying. For hours and hours. With or without a motor. The MOJITO. HY+ is the ideal tool for all pilots who want just one glider for motorized and free flying, launching from a mountain or from the winch. The large safety margin makes the MOJITO.HY+ especially interested for those new to motorized flying. The MOJITO.HY+ is certified for a wide range of motors. A new design with two new colors for 2013 make it even more attractive.



>> The risers of our hybrid glider feature trimmers and two harness connection points for motor or free flying.



Pilot target group

SAFETY FLIN SPORT PERFORMANCE

Features

2+2 JET FLAP

	S	M	L	XL
Cells	39	39	39	39
Area flat in m²	26,08	28,04	30,40	32,13
Wingspan flat in m	11,19	11,68	12,09	12,42
Aspect ratio flat	4,8	4,8	4,8	4,8
Glider weight in kg	5,6	6,2	6,5	6,9
Takeoff weight w/o motor LTF in kg from - to	75-95	90-110	105-125	115-140
Takeoff weight w/motor DULV in kg from - to	75-120	90-140	105-160	115-180
Winch certified	yes	yes	yes	yes
LTF - with closed trimmers	1 (95kg)	1 (110kg)	1 (125kg)	1 (140kg)



MOJITO.HY+

JET FLAP motor & mountain-glider – LTF03: 1 I DULV



SCOTCH.HY

JET FLAP motor & mountain-glider – LTF03: 1-2 I DULV

SCOTCH HY

The freerider among motorgliders


The SCOTCH.HY is a fun machine. With its agile handling, this hybrid glider can be flown extremely precisely in the mountains or in the flats with a motor. Like the MOJITO.HY+, the SCOTCH. HY is certified with a wide range of motors, giving the pilot an enormous selection from which to choose. The icing on the cake: fresh color schemes.

Pilot target group

SAFETY FLIN SPORT PERFORMANCE

Features

2+2 JET FLAP



	M	L
Cells	51	51
Area flat in m²	27,50	30,40
Wingspan flat in m	12,01	12,57
Aspect ratio flat	5,2	5,2
Glider weight in kg	6,4	6,9
Takeoff weight w/o motor LTF in kg from - to	90-110	105-130
Takeoff weight w/motor DULV in kg from - to	90-130	105-150
Winch certified	yes	yes
LTF - with closed trimmers	1-2 (110kg)	1-2 (130kg)

CULT3

The all-rounder with the safety bonus

The all-round harness CULT3 offers a 17 cm foam protector and optional side protectors for enhanced safety. In the case of a rescue toss, the CULT3 is equipped with an automate separation system for the leg stirrup that separates the speed system from the harness by means of a coupling. In size M, the CULT3 weighs just 4,6 kg. It is suitable for novices to beginning acro and XC pilots.



>> The Automatic Speed Separation system prevents the rescue chute from getting tangle with the leg stirrup.

- Included with your harness
- Harness incl. carabiners, standard speedbar, V-line
- Optional
- Ml side protectors, front container (2nd rescue), AS speed system



CULT3 17 cm foam protector
Optional side protectors
Automatic Speed System separation
cross over harness – LTF09 | max 120 kg

	XS	S	M	L	XL
Height min in cm	–	150	160	170	180
Height max in cm	165	165	175	185	195
Seatboard - width x length in cm	34x30	36x32	38x34	40x36	42x38
Weight in kg	4,4	4,5	4,6	4,7	4,8

>> In the opened position, the Rigidfoil offers additional protection in the back.

CULT-C

Light and safe - From the very beginning

The CULT-Compact has been certified to the highest safety standard LTF09. It offers 100 % protection even during the launch phase. This is made possible by its new pro-

jector, an innovative mix of foam, air and Rigid Foil. The T-bar system on the leg straps offer additional protection to keep the pilot from falling out of the harness. Thanks to the use of lightweight materials, the CULT-C is suitable for all those who want less weight without sacrificing safety. At 3,6 kg in size M and with a space-saving, compact size, the CULT-C fits into any small rucksack.

	XS	S	M	L
Included with your harness	–	150	160	170
Harness incl. carabiners, standard speedbar, V-line	165-	175	185	185+
Seatboard - width x length in cm	34x34	36x34	38x36	40x36
Optional front container (2nd rescue)	3,2	3,4	3,6	3,9

FLEX

Hike & Fly. Comfort & Safety.



The FLEX cuts an exceptionally good figure – with or without the detachable protector.

FLEX
Reversible Lightweight Harness – LTF09 | max 120 kg



The FLEX is a very lightweight airbag-reversible harness with EN/LTF certification that scores points in many ways. The weight of the M size is only 1,8 kg (without carabiners)! The ram-air protector boasts with a sensational deceleration value of 19 g in load tests. And for purists, for whom every gram counts, it is also

detachable. The FLEX's seating comfort is so amazing that you can fly extremely long flights free of fatigue. Developed in cooperation with Kortel, the FLEX is comfortable to carry on your back, making it the ideal companion for tours or to take on vacation. Together with the MASALA2, TONIC or ARRIBA2, we offer a combina-

tion that is very compact, lightweight, unbelievably versatile and suitable for Hike & Fly. The FLEX is available in sizes, S, M and L and can be ordered with an optional front container and bridle for your rescue chute. It comes with suitable lightweight carabiners.

- Included with your harness
- Harness incl. carabiners,

	S	M	L
Height max in cm	170	184	195
Weight in kg	1,8	1,9	2,0

>> OPTIONAL ACCESSORIES FLEX

Because the FLEX is often flown in the minimal version in other countries, we offer all accessories as options.

AIRBAG / RUCKSACK



FRONT CONTAINER



V-LINE RESCUE



SPEEDBAR LIGHT



Nice and useful things for skywalk pilots.
More information and further items here:
www.skywalk.info

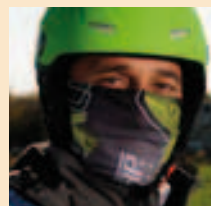
COFFEE2GO Cup

Made of high quality porcelain with an anti-skid bottom and a closeable lid. Perfect for car or desk. Available in blue and beige.



BANDANA

A highly elastic, multifunctional scarf with lots of uses. As a balaclava, scarf, headband or scrunchy...



TEAM-Shirt

Show your colors with a skywalk TEAM shirt! Classic design meets fresh new colors. Wearing comfort is guaranteed – on cross-country flights or while enjoying an after-flight beer.



COCKPIT

With an angle-adjustable flight deck, securing straps, generous storage space for cameras and a padded exterior to protect your instruments during transport, the skywalk COCKPIT is compatible with nearly every harness.



HIP BAG

This useful companion offers room for all small but important things that you can't leave home without. Thanks to its flexible material it's also easy to stow.



Riser PROTECTOR

Use this sleeve to pack and protect your risers. Protects your wing material, too. Fits all risers.



FRONT CONTAINER

Fits all customary rescue chutes and harnesses. Can be used for a second rescue chute.



ALPINE-Shirt

Sporty design, high quality material, elaborate design. Our brand-new ALPINE shirt is a fashion statement – for non-pilots, too..



PACLITE Jacket

At 440 g, the skywalk PACLITE jacket is exceptionally lightweight, so it's always close by as an additional layer to add warmth or protect you from wind and rain. The hood can be folded into the collar. Sizes XS – XXL.



STORAGE BAG plus

With mesh vents, store your glider in this bag when you don't need it for a while. Saves space and protects the material.



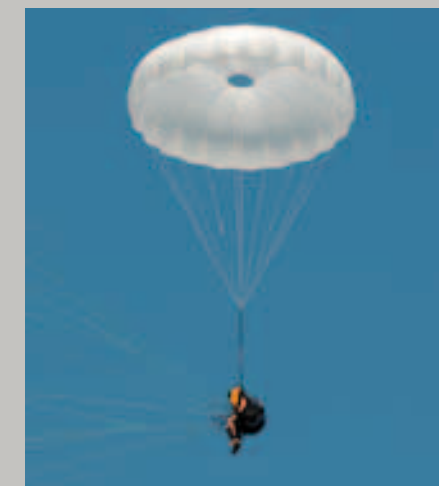
Rescue Chute PEPPER2 light

When everything goes wrong, the rescue chute is the pilot's second chance. The PEPPER2 light features exceptionally low weight and fast de-

ployment time. Its low sink rate of only 5 m/s (size M) and a high pendular stability are a result of about 30% more area versus other round parachutes.



	S	M	L
Area flat in m²	26,90	34,20	40,00
Weight with deployment container in kg	1,3	1,6	1,9
Number of panels	20	20	20
Sink rate at certified load in m/s	5,07	5,03	5,13
EN certified maximum load in kg	80	100	120
EN certification	yes	yes	yes



SOFTBAG

Cell on cell, pack your glider fast and efficiently. Our light and practical SOFTBAG helps you pack cell on cell and offers your wing additional protection. One size fits all.



Backpack CLASSIC

High quality YKK zippers, robust ripstop material and a waist belt that provides outstanding support – the skywalk Backpack CLASSIC combines wearable comfort with quality materials. Tension straps reduce the volume once your gear is packed and the ergonomic design works whether you're packing large or small. Lots of useful side pockets complete this versatile rucksack and make it the perfect choice for daily use.



Sizes: S: 1,3 kg/90 l, M: 1,5 kg/130 l, L: 1,7 kg/190 l

Backpack HIKE

Unbeatable in packing size, weight and wearing comfort, our rucksack HIKE offers adequate room for a lightweight glider like the MASALA2 and a lightweight harness. With a weight of just 480 g, there is nothing standing in the way of extended Hike & Fly adventures.



Size: 0,5 kg, 55 l

ACTIONPRO X7



The X7 combines extreme compactness with an unprecedented high-definition video and photo quality.

- 1080p Full HD, up to 60fps
- 12 megapixel photo resolution
- super slow motion, up to 240fps
- WiFi for smart phone control
- optional WiFi remote control
- integrated LCD screen

279€ incl. 19% VAT
(recommended retail price)

For more information,
please visit us on
www.actionpro.de



www.actionpro.de

Photo: screenshot from an original X7 video