

Why Birdmen Sing

Words: Farhan Hasan

The world of hand-gliding has been dealt a serious blow. Turns out, hanging on to something isn't necessary anymore. Adrenalin junkie and entrepreneur Jari Kuosma talks about how his wingsuit has turned the sport of skydiving on its head, into what is fittingly called, 'skyflying.'

Hospital ER's are often graced with would-be stuntmen preadolescents with broken limbs. These 'Birdmen' in the making manage to leap off roofs and tall trees. And why not, a range of methods are available. Parachutes are easily substituted with balloons and bed sheets. Sometimes, a simple cape will suffice; Superman costumes are probably responsible for the bulk of such calamities (to the extent that some manufacturers print "do not attempt to fly" warnings on the packaging). Childhood shenanigans aside, history shows that grown men, having taken more scientific approaches to the same endeavor, have fared worse. The result for the bulk of these adventurers; *death by gravity*. Having stood on the shoulders of such audacious giants, Jari Kuosma has prevailed, through his company *Birdman Inc.*, in making it possible for us to experience flight in its purest form yet.

The wingsuit is an outfit that resembles the anatomy of a flying squirrel. The space between the arms and legs is webbed with parachute-like fabric acting as your 'wings.' The wings inflate in such a way that the skyflier's body becomes an aerodynamically streamlined shape; the entire back of the suit becomes curved, and the front (facing down) remains flat. Conventional science tells us that this shape accounts for higher air pressure below the suit, giving it upward lift, working in much the same manner as the wing of an airplane. Most of us are under the assumption that the closest man will ever come to the fantasy of unaided flight is plummeting from a plane with the finesse of a sack of potatoes. The majority are content with strategizing ways to reclaim the armrest inside a metal tube. Flying without the help of a mechanical medium for humans will always be in some way a manipulation of falling. To clarify what all this wingsuit fuss is about, Jari explains what it accomplishes. "Normally a skydiver falls basically straight down, falling at speeds of 200 - nearly 400 km/h and for maybe 40 - 60 seconds. Now when a person wears a wingsuit, and has gotten the hang of it, he can soar horizontally easily for many kilometers (record being up to 20 kilometers) traveling forward at speeds of 160 km/h and falling down maybe 50 - 60 km/h. What is evident is that freefall time can be prolonged to more than three times to that of a normal skydive."

Since this sounds like, for short bursts, what Superman must experience, what does it feel like? "My first time using the wingsuit, I was very aware that I could die. But it flew, right away, and all the wait and anticipation, all the dreams, wishes and fears transferred into something that I can only describe as the happiest moment in my life. The smile on my face must have been stupidly wide and I screamed for joy. I was not just falling anymore, I was translating gravity into flight, controlling it, turning, banking and driving forward with amazing speed. I could see myself moving against the ground. I found myself looking at my altimeter several times in amazement; it didn't seem to come down at all. The freefall seemed to last forever. I was in love with life, air and flying." Incidentally, air is also on our top ten list of the best stuff in the world, right behind marmite.

The price of these suits range from about 2500 to 4500 Dirhams, hardly a lofty price to pay for the experience. If you aren't an avid skydiver however, the price can incorporate a long-term investment as 200 normal jumps are needed to become eligible to try the suit in tandem (500 to ditch the instructor). It is essential to be comfortable in the air before one tries the wingsuit. Out of the 6000 or so experienced skydivers who own wingsuits, about 20 have had fatal accidents. Statistically speaking that's a 1 in 300 risk of death, and to be honest, better odds than you'd get riding a moped down Sheikh Zayed road on a rainy day. Jari himself has used his reserve parachute 5 times out of the 4500 jumps he has made. One particular close call was during a BASE jump where his chute did not open properly as he hurtled toward a rock face. "I had less than a second to impact and I was absolutely sure that that would be it. Just when I thought it was over, the chute caught air and I was saved."

So what accounts for the fatalities? "In most cases people simply could not control their wings, they could not open the chute or when they did they went into an uncontrolled spin and thus got entangled with their parachute. It still happens, but very rarely. This is why our suit has safety mechanisms that allow a jumper to free his arms." The wingsuits come with cut-away systems for the wings in case of emergencies, as well as zippers to open the wing between the legs for landing after the parachute has opened. He maintains that a large part of all accidents are down to human error. "We have seen some casualties over the years which could have been avoided by correct training. Another danger is when the pilot loses his sense of time and altitude. This can be fairly common and has happened to us all, luckily we usually notice in time but some have flown all the way to the ground, thinking that they can fly for the rest of their lives... well, they kind of did." Jari has also written manuals and instructor programs which are required training and the basis of techniques used today by professionals, essentially making it possible for the average person to safely get involved in the sport. "Wingsuit flying used to be considered as one of the most dangerous acts of man and one that only the elite of daredevil's would do. There was a good reason for that. Over 90% of the pioneers died while developing the sport (including 72 of the 75 people that tested wingsuits between 1930 and 1960). It was only after the introduction of the BIRDMAN suit (that was the first wingsuit introduced for the market) that the sports started to evolve into the levels we are seeing today."

Now let's take it one step further. What about the possibility of ditching the parachute altogether? "There have been a few cases when a jumper survived the fall when their chute either didn't open or they didn't have a chute at all, but they were all very lucky. So, that tells that it is possible to survive an impact. Landing a wingsuit therefore, in theory, is possible. It is not safe to attempt it with the current suit however." Despite the fact the wingsuit may reduce the force of impact with the ground, the forward speed while landing still makes it nearly impossible to hit the ground running. What if Jari had the kind of massive wings Batman has in *Dark Knight*? In all likelihood, the wind-force on wings those size would tear his arms clean off. But in any case, it still begs the question.

"In some respect it has been and can be done, you have to consider things like: Is there a market for that sort of thing? How safe would it be? How big are the plane and its door? (Wouldn't want to smash into any propellers) How many people could potentially fly this big of a wing?" We were thinking just you, but it probably isn't the best idea. What if the landing spot was a big sand dune, or bouncy castle? "Haha, yes, for sure, anything big and soft enough would do." In all seriousness, the wingsuit does actually improve the landing, further distancing the experience from simply hurtling downward. "The first time I tried a wingsuit, the chute opened beautifully, even better than normally! And it was due to the lower free fall speed."

Jari Kuosma has a curious trait to him. In every one of his photos, he has an ear reaching grin and looks as though he is having the absolute time of his life. The man has managed to attain that elusive combination of enjoyment, passion, and making ends meet. Then again who wouldn't want to... fly around for a living? Hugh Hefner and Jeremy Clarkson suddenly have competition in the 'most envied job' department. Jari had been skydiving since 1991, but worked full-time for an IT company. In 1997 he became an Accelerated Free Fall (AFF) Instructor, and in 1998 set out to pursue his love for skydiving. "I had a good thing going on but I was about to turn 30 and I guess I thought I was missing something. My dreams were elsewhere. I quit my job and career, sold all things I could not carry in two bags (which was not very much since the other bag was for my parachute) and bought a one-way ticket to Florida. I wanted to start my own business doing something in skydiving but I didn't know what it was." It was around then that Jari met Stane Kranj and Robert Pecnik. The three came across stories of Patrick De Gayardon, the last true 'birdman' who developed a nearly ideal blueprint for the suits used today. His suit lacked the emergency cutaway systems for the wings, which sadly is the reason he died during a jump. Jari had also found a book in an antique shop written by Leo Valentin, the first man to have flown, in which he shared the basic secrets of making a wingsuit. It was entitled '*Birdman*.' Valentin had also died in 1956 after he broke one of his wooden wings when leaping out of a plane.

Kranj was a parachute manufacturer and Pecnik and Jari were seasoned skydivers. Between them they had knowledge of aerodynamics, research, and the resources to build a working model. All they had to do now was test it. "Many people at the drop zone thought I was crazy, they reminded me that even the best of the best had died doing it and I was really 'nobody.' I had over 1000 regular parachute jumps and I was a professional skydiving instructor, so they had let me try it. There was no law against it in Florida. By the winter of 1999 I had jumped all sorts of different prototypes, changing and tweaking the design, learning the new tricks and writing a manual how to fly with one. I started the company in Helsinki, May 1999." Jari later had a stint in Dubai, learning about design and fashion, working with Julian Alibhai, a businessman in the fashion industry. "I liked it there so I stayed for half a year. I returned to Dubai later to take part in a Finnish skydiving record for the biggest freefall formation." A couple of guys BASE jumped off the Burj Tower recently, do you think that's a stunt that could be enjoyed with the wingsuit? "I had many dreams of jumping Burj myself when I was there. I think Burj Tower is every BASE jumper's wet dream. Making the jump would have been illegal and I really didn't have any time to get into trouble, I have been enough in my life already." Astute fellow; as you can guess those two were promptly packed away by the police. Jari best summed up his infatuation with flying by basically letting on that it is totally indescribable, which isn't hard to believe. It seems as though anyone privileged with this particular thrill would be singing the same tune. "So what does the wingsuit mean for a skydiver? Well, it means that he is literally flying; he has that omnipotent feeling that man has been only dreaming of for thousands of years. It is really a feeling that is very hard to describe, it must be experienced by oneself, but I can give you a small hint by telling you about the incredible sensation of freedom, sensation of being one with yourself and the world, being able to 'understand why birds sing'... it's a cliché but it is basically true."

For information on the company and wingsuit products visit: www.bird-man.com

To skydive in Dubai, Jari Kuosma recommends Um Al Quwain Aero club: "They have a

friendly and professional staff, with some stunning scenery on offer.”
They operate daily and tandem jumps start from 1000 dhs.
To find out more information visit <http://www.uaqaeroclub.com/>
Or call (00) 971-6-7681447.

BIRDMAN OBITUARIES (I have pictures of these guys off google, so im not sure about how to acquire the rights)

Leonardo Da Vinci proposed several designs for flying contraptions, and even flopped around in one unsuccessfully before giving up. There were other men, less refined yet far bolder, who were the predecessors to bird-like flight, and became birdman martyrs in its pursuit.

Al-Djawhari (A.D.1000)

The first recorded account of attempted flight is of a scholar from Turkistan. He climbed to the top of a mosque with two long wooden planks tied to his arms. After a loud proclamation to several onlookers, fell immediately to his death.

João Torto (1540)

At 5pm on June 20, this Portuguese Renaissance man leaped off the top of a cathedral in St. Mateus Square, falling into a next-door chapel and sustaining fatal injuries. He was wearing wings made from cloth, and an eagle shaped helmet which slipped and masked his vision (if only he had seen the ground before he crashed into it, he might have lived).

Franz Reichelt (1912)

Known as the 'flying tailor,' the Austrian jumped off the first floor of the Eiffel Tower in what seemed to be a modified overcoat, and was killed instantly. A huge crowd was present including members of the press. There is a video of the jump on Youtube.

Leo Valentin (1956)

He is widely considered the father of modern skydiving and the original "birdman." After initial success with his wooden wingsuit, Valentin died attempting it again at an air show in Liverpool. His wing was damaged when it struck the plane as he jumped, and his parachute then wrapped around the broken bit, causing him to plummet to his death.

Patrick De Gayardon (1998)

This Frenchman was the inspiration behind the modern wingsuit and a skydiving legend. One of his successful flights was televised, creating quite a stir amongst extreme sportsmen like Jari. He died in Hawaii due to a malfunction in his parachute and flaw in his wingsuit.