

Features

The Birdman of DeLand

Michael Abrams, 05.26.03

**Entrepreneur Jari Kuosma fulfilled his dream of making a radical new skydiving suit. Almost all of his clients have lived to marvel at its wonders.**

As the plane climbs through the sky above DeLand, Florida, we go over the plan one more time. The giant Belgian and I--we're strapped together--will jump first and hurl to earth at 120 miles per hour. After 30 seconds or so, our parachute will open and then we will look directly up to see Jari Kuosma flying in our direction. The flyby is made possible by Kuosma's odd garb: a strange white jumper with red webbing between the legs and triangular "wings" connecting the arms and the torso. "If I hit you on the way down," Kuosma cheerfully adds by way of ending the briefing, "you die."

Kuosma is president and owner of BirdMan Inc., the world's first and largest purveyor of "wingsuits." Anyone who's logged 200 jumps can buy one of these getups for \$618 and experience an entirely new kind of skydiving. According to Kuosma, wingsuiters can slow the downward speed of a free fall from 120 mph to 37 mph and fly horizontally through the clouds. This nearly triples their time in the air before pulling the rip cord. About 2,000 people have experienced the wingsuit since the company was founded in 1999. Only four have died.

At 13,500 feet the door opens and the earth rushes past us, a blur in the square door frame. I manage to make it to the edge and put myself in position: head up, arms back, thumbs behind my harness. The Belgian tightens the straps that bind us together, grabs my legs with his. The fact that Jari had been stuck outside the country and hasn't used his wingsuit for the past three-and-a-half months worries me for an instant. But it's a bit late to voice any concerns. The Belgian is counting down in my ear: Ready, set ...

Jari Kuosma is an expat Euro-sportsman, but you could easily mistake him for some Southern Californian surfer. His two-toned sandy-brown hair has a Tintin flip in the front that points straight towards the heavens. Around his neck he wears an Incan figurine on a black band, and on his right shoulder there's a tattoo of Da Vinci's "Vitruvian Man." Instead of a second pair of arms, however, the figure has a set of wings. "When the perfect man creates, he can fly," says Kuosma, explaining the drawing.

Kuosma grew up in Helsinki, Finland--he now speaks "Finglish," he says--the son of slightly less than adventurous parents. His mother was a secretary; his father ran a U.S. Army surplus store and was also an amateur pilot. As a child Kuosma remembers being in awe of the sky divers he saw at the airport. He took up martial arts in his teens and started jumping off roofs with his pals.

After his father died in 1990, Kuosma was set to take over the family business, until lawyers descended upon the estate. "They ended up stealing everything we had: all those nice army clothes, boots and everything. But I don't think I would be here right now if that didn't happen. So I thank those lawyers." With nothing else to do, he headed to the old airport and took up skydiving.

Thus began a ten-year spree of airborne shenanigans. In 1993 he was one of 57 people who broke the Finnish record for the largest free-falling formation. Later he learned a Russian technique for jumping at frighteningly low altitudes and was the first to try it in Finland, eventually leaping out of a plane at a mere 300 feet above the ground (2,500 feet is regarded as the safe minimum altitude).

In those days, he also used a dangerously small 135-square-foot chute. Eventually, says Kuosma, his own parachuting club passed rules banning certain kinds of landings just to rein him in.

Between these death-defying acts, Kuosma was pursuing a respectable career on the ground and landed a job in telecommunications. "It took me two weeks to realize that it wasn't for me."

In 1997, Kuosma was BASE jumping (Building Antenna Span Earth) at a 3,700-foot cliff in Arco, Italy, with his friend, jumpsuit manufacturer Robert Pecnik. There he got wind of a Frenchman named Patrick de Gayardon who was said to have devised a way to use webbing between the limbs to allow sky divers to fly. An Internet photo showed De Gayardon streaking across the sky. Kuosma had to try it.

The first more or less credible tale of man aping bird takes place shortly after the first millennium. Al-Djawhari, a brilliant lexicographer and scholar from Turkistan, announced from the top of a mosque that he was about to make history. He did. Wearing two giant wooden wings, he leapt into the air and fell immediately to his death.

Sometime in the 12th century, a Turk decided to jump from the top of a tower wearing a voluminous pleated white garment. The story became widely known in the western world thanks to Richard Knolles, a 17th-century historian. "In stead of mounting aloft," he wrote, "this foolish *Icarus* came tumbling downe headlong with such violence, that he brake his necke, his armes and legs, with almost all the bones of his bodie." These words set off a spate of European endeavors at human flight that would last for centuries. When an Austrian tailor named Franz Reichelt stepped off the Eiffel Tower in 1912--wearing something like an overcoat made for a rhinoceros--the era of canopy-free drops from stationary heights came to an end. It was in that same year that a U.S. Army captain named Albert Berry made the first jump from an airplane with a parachute. (Berry lived, Reichelt did not.)

The parachute and the plane took the high jinks to greater and greater heights. Between 1930 and 1961, something like 75 bird-men tried to fly after hopping from a plane. Something like 72 of them died. The majority were victims of the mortal "Roman candle"--an unopened parachute flapping above them like a flame as they rushed toward the ground.

Most of the early bird-men used a single layer of canvas stretched from hand to foot like a bat's wing. There wasn't much room for adjustment if things went awry. In those days even wing-free sky divers didn't know how to avoid being thrown into a random tumble.

The only one of these fledgling bird-men to have any real horizontal success was a French paratrooper named Léo Valentin. He revolutionized, if not created, the sport of skydiving when he figured out how to maintain a stable position during free fall. But this breakthrough was not enough for the Frenchman. "I dreamed of the perfect bird I must one day be," he wrote in his book *Bird Man*. On May 13, 1954, he stepped out of a DC-3 at 9,000 feet wearing a set of rigid wooden wings with a rounded front edge. He stopped an initial spiral and found that he was gliding.

In his book, Valentin claims to have covered at least three miles. "Yes, I had flown, in fact, I was the first man ever to have flown," he wrote in 1955. A year later Valentin tried the stunt again. When he stepped out of the plane the wind grabbed one of his wings and smashed it against the fuselage. He quickly pulled his rip cord, but when the parachute opened it wrapped itself around the broken wing. His reserve did the same.

Valentin's death cooled the talons of many a potential bird-man. But in the early '90s one Patrick de Gayardon invented a wingsuit that was neither flat nor rigid. Its wings had an upper and lower surface with an inlet for air, much like a modern parachute.

De Gayardon was a French aristocrat who'd been skydiving since he was 18. He'd invented sky-surfing, had jumped from 41,700 feet without using oxygen and had more than 11,000 jumps to his name. He was a god to sky divers everywhere, an absolute legend, and he flew his wingsuit like no bird-man could have dreamed. His most spectacular stunt may have been when he leapt out of a plane, cruised along next to it and then flew back inside. De Gayardon made more than 500 jumps with this wingsuit. But on April 13, 1998, a poorly rigged parachute didn't open. He tried to use his reserve but it failed as well.

It was only a few months after De Gayardon's death that Kuosma and Robert Pecnik saw the Internet photo of him in the wingsuit. They couldn't try De Gayardon's actual invention, but perhaps they could perfect the idea. Pecnik had already had some experience making jumpsuits for sky divers, and Kuosma had devised a plan to manufacture speedy parachutes. "We thought 'Hey, it's easy,' " says Kuosma. "We have wings and we can make suits, so why not put them together?" By the end of the year, Pecnik had made three wingsuits. Kuosma headed to DeLand to try them out.

The wingsuits were based on what they'd seen of De Gayardon's getup and their suits were essentially the same design and proportions. But neither Pecnik or Kuosma was an engineer. When the pair went to test their wings for the first time they gave themselves a 50-percent chance of surviving. "It was just such a big jump into the unknown," says Kuosma. "We were doing something that we knew some people had done before...but they were all dead."

Kuosma and his partner did not die. In fact, everything went as planned, except for one thing. "I could never have expected it to be so mind-blowing, so beautiful, so absolutely addicting. I came down and I was absolutely high." Armed with a business plan and a little money, they set up shop in Slovenia and made the first 80 wingsuits. In June of 1999 they packed the suits into a car and headed to Austria. (They were down to their last Finnish mark and had to smuggle the wingsuits across the border to avoid paying customs.) From there they set out to visit every drop zone they could find. Some of the airfields wouldn't allow Kuosma even to demonstrate his suit; the head of England's largest drop zone told them they would have to leave if they so much as mentioned the word "wingsuit." Where he could, Kuosma gave a seminar, flew his suit and then offered to pay for the flight of anyone daring enough to try it. Volunteers returned to earth converts, and word began to spread.

The experience, they said, was wholly different from an ordinary skydive. This is in part because the "wings" of the BirdMan suit fill with air as soon as a sky flyer spreads his limbs (not something he should ordinarily do right away, or he risks hitting the tail of the plane). They're made of "ripstop nylon," a fabric with "zero porosity," so the wings remain rigid in flight. The actual shape of the wing is made by the arms and shoulders of the person in the suit, and it takes a few flights to find the ideal position. (Cutaway cables enable the flier's arms to be freed in an instant, which reduces the danger.)

Watching Kuosma fly is breathtaking. At first he drops straight down like any free faller. But in a matter of seconds the wings catch the air and the fall curves forward in a graceful cycloid. If there's a plump cumulus in sight, Kuosma banks towards it, glissades around its edge or plunges right through. He can fly on his back, make figure-eights or soar along a highway, outrunning the cars below. "There are no speeding tickets up there," says Kuosma.

Three of the four deaths attributed to the BirdMan suit occurred on jumps from stationary heights like cliffs or bridges. It's hard to know to what degree the wingsuit can be implicated. The chief thrill in BASE jumping, after all, is the threat of death. "Officially we don't even recommend BASE jumping," says Kuosma. "We can't really recommend Russian roulette to anybody. Although it's fun." The other death occurred when an inexperienced sky diver tried to jump with a friend's wingsuit. No one knows exactly what happened, but he probably went into a spiral and hit the ground wrapped in his parachute.

The deaths give Kuosma pause--but a short one. "Accidents do happen a lot," he acknowledges. "It's always really hard, but you just start getting used to it. It's something you accept as the price for what you are doing."

That yawning door, opening into space, is like the very jaws of hell," wrote Valentin of his thoughts in the plane before a jump. "We're not birds, look at us, we're only men! So quick--let's get back to earth. To earth--at once!"

My thoughts exactly. Then the Belgian launches us into space. We flip out the back of the plane and suddenly the fear is gone. I am out there. A pinprick of consciousness punching through the atmosphere. The sun watches from the edge of a 360-degree horizon. The wind blasts against my eardrums and they pop and pop and pop. I eat clouds. Scream with pure joy. The planet spreads out below me, indifferent...and then a simple *foomp*.

The world changes from sensory overload to total peace, absolute silence. We're hovering, seemingly motionless. The Belgian taps me on the shoulder and points up to the left. I look up in time to see Kuosma pop out of a bank of puffy clouds, his canopy already open. He spirals around us, grinning. It's like meeting a long-lost friend in a dream. Before long the drop zone rises to our feet and we've landed.

"I'm in love again," says Kuosma. His eyes are wide and his face is flushed. He's overjoyed, despite the fact that he had to abandon our plan. "I was like a kid again. My heart was pounding in the plane." He had followed us till we went through the cloud. Rather than risk a collision, he changed course and found us after he'd opened his canopy. But it hardly matters. I'm just glad I'm no longer a whuffo (that's skydiving slang for a virgin of the air, and comes from remarks like "whuffo you wanna jump outta perfectly good plane?").

Soon the ale appears. War stories and life philosophies start spilling out as the sun goes down. "You feel smaller up there," says Kuosma. "But much bigger. Because you know how small you feel and the knowledge makes you feel bigger." More beer, please. A Yorkshireman named Steve Ashman is at the table with us. He too has had his first wingsuit flight in months and he's positively glowing. "I went through my first cloud today," he says with a grand, goofy grin. Steve learned to skydive just to fly the wingsuit. And once he'd flown, he tells us, he never looked at a bird or the sky the same way again. He pauses before quoting Da Vinci. "Once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been and there you will always long to return."