

JULY 2014

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WORLDWIDE PARAGLIDING AND PARAMOTORING MAGAZINE. FOR FREE.



V-MAX

TESTING A PARAMOTOR WING

ITV'S SPORTY WING

With the arrival of their competitor's latest generation reflex wings, ITV have had to react and add to their range, a lively, sporty paramotor wing, placed above the Boxer. Introducing the Vmax, a paraglider with a classic profile, but which includes some of the advantages of a reflex wing...

by Sylvain Dupuis

Translation: Ruth Jessop

The first thing you see is the bag. A little bag which weighs next to nothing. You could even mistake it for an 18m² Awak, but no, actually it's the small 22m² Vmax. The material is made by Skytex Porcher 40 g/m², typical for this type of wing, known for its durability. On the other hand, it's the lines that are surprising! You really wonder if they have forgotten to add half of them, the bundle seems so thin in your hand! But today, thin lines are in fashion, and it is thanks to them, amongst other things, that progress has been made in speed and glide.

Everything seems to have been done to reduce the drag coefficient which ruins our performance; thin lines, low profile wings, small cell openings, as well as the traditional ITV risers, very compact with four branches. The brakes are attached with strong magnets. For many pilots this is a big advantage compared to poppers, which are often difficult to attach. The risers have a double loop to compensate for the torque of the motor. The trimmers have a very generous amount of travel for a wing with a non reflex profile, which suggests that the top speed will be about right. Incidentally, the speed bar gives about 2 cm less travel compared with the trimmers, so you will theoretically go faster untrimmed than on full bar. At the leading edge, the mylar has totally disappeared and been replaced with plastic leading edge rods.

OFF WE GO!

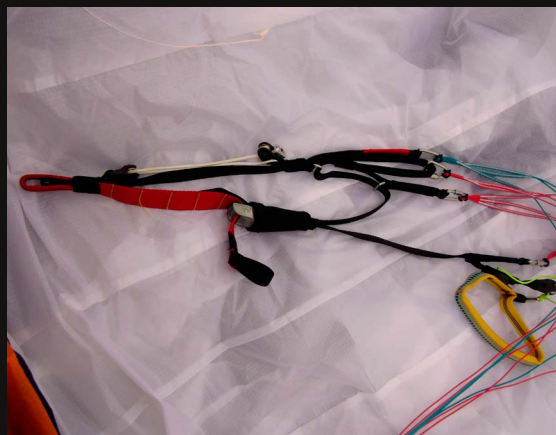
All trimmed, and with a gentle breeze, inflating is, as always with ITV wings, a formality helped by its small surface and the lightness of its 22m². It comes up straight, quickly and effortlessly. It does,

nonetheless, like to be braked a little, once above your head; in general, you mustn't let it over fly with its momentum. If this happens the consequence is immediate and the Vmax collapses: It isn't a reflex wing! A squeeze on the throttle of my Thor 200 and in a few steps I leave the ground. The handling is exceptional! Here too, you see that it isn't a reflex wing; even if a lot of progress has been made over the last two years with reflex profile wings, they still don't have the same handling as wings with a classic profile.

IN FLIGHT

I'm in the air! First positive point: The wing doesn't seem bothered by the torque from the 30 HP that I have on my back; it turns a lot less than many wings that I have tried! I need to reduce the gas because I am going up faster than I am going forward! The profile seems very efficient in terms of lift and so I go back to cruising: The power needed is ridiculously small for a 22 m² wing with my 110 kg all up weight. Yet I travel relatively fast at 38km/h with hands up and a touch of gas. Within a few seconds I am up at 500m. Time for a bit of action to see what it can do. I release the trimmers completely. The wing pitches slightly, accelerates, then the gentle summer evening breeze that I feel on my face clearly starts to blow harder: 52 km/h by simply detrimming! That's really important, because I know a lot of paramotorists who are only interested in the maximum detrimmed speed, and don't use the speed bar, which is too physical to hold on during long flights. This speed of 52 km/h was confirmed by overtaking another wing known to do 51km/h when flown in the same way. It's a strong point: great handling coupled with a good detrimmed speed.

The travel on the trimmers is very long for a wing of this type!



Thin risers have become standard on ITV wings



With the speed bar you can go faster than 60 km/h, but ITV don't recommend using the two systems simultaneously on the Vmax, even though it doesn't seem to cause problems, at least in calm air.

The accelerator is thus principally there for when paragliding with trimmers at low speed, or with at most a few centimetres released. It should be noted that the brakes are still usable whilst the wing is detrimmed, in contrast to certain reflex wings (especially older ones), where you mustn't touch the brakes in this configuration.

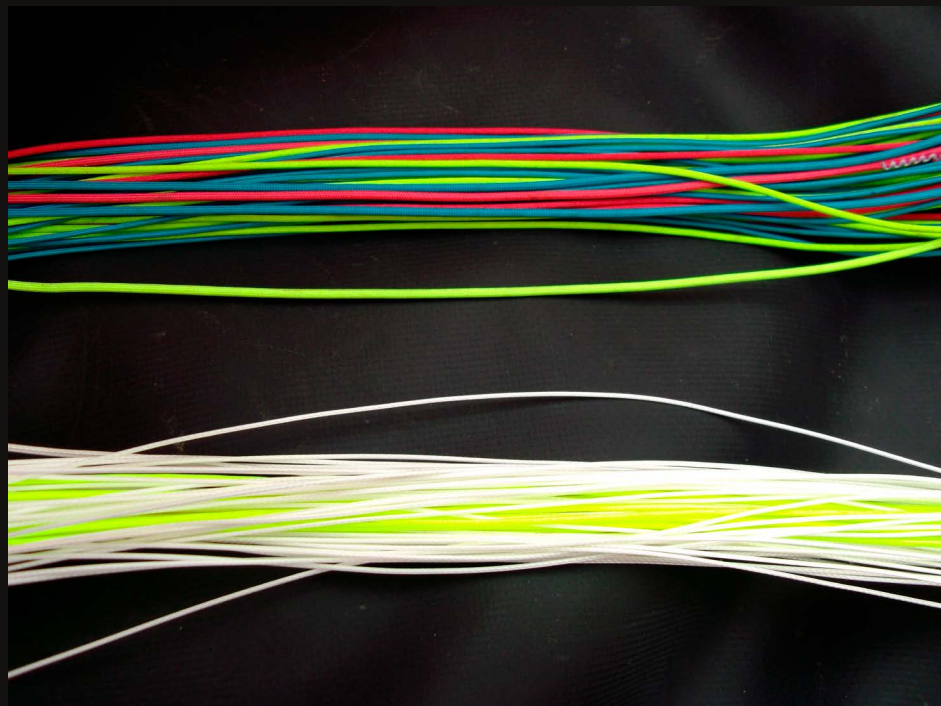
The motor is barely needed to cruise at the same level! This confirms my thoughts: a thin profile, a correct aspect ratio of 5.5, thin sparse lines, this wing could perhaps be an excellent all purpose wing, having the advantages of a paraglider (very low consumption) without the disadvantages (rather slow maximum speed). We'll come back to that, but first...

...LETS PLAY!

The fashion today is to have a manoeuvrable wing. Who still flies a wing where you need 5 seconds to do a full turn...? Let's look at the manoeuvrability of the Vmax. It really turns very well, and obeys your every command...

Without having to be frightening, a few centimetres of brake is enough to initiate a small turn. The controls are as light as a feather, rather reminiscent of Gradient's style. It is very easy and fast to put into a spiral. If you want to do more, a SAT for example, the outside leading edge compresses along the chord and the Vmax ends up collapsing. So acro isn't its thing, but in any case, that isn't what we want it to do. On the other hand the wingovers are absolutely amazing and can be enormous, if the piloting is up to it. Because here, you should forget the 'I pull left, I pull right, I pull left...' that you see more and more of with reflex wings.

Here the wingover requires delicate piloting in the roll, the pitch, the turn and the braking, and it all needs to be timed perfectly. They are more difficult, but so much more aesthetic and controlled, and above all of a size that reflex wings have problems reaching because they can't build up enough energy.



Incidentally, I quickly notice that the Vmax pitches a lot: A tendency to pitch backwards as it comes out of a turn and thus surges as a consequence afterwards. This is not ideal for playing at ground level going around a pylon course, but on the other hand, it turns out to be useful for thermal flying.

Above, the lines of a Paramania GTR.
Below, the lines of the Vmax, a lot thinner!

Coming in to land, I arrive with hands up and fast because there is no wind. Progressive braking, made easy by the lightness of the controls, a little flare and I touch the ground with almost no speed! This wing is a real gem, its 22 m² goes really well and isn't a handicap at all. In short, it is neither an acro wing nor a lightning fast reflex wing but it is still very manoeuvrable, fast, consumes very little fuel and pitches well. Something tells me that testing it in a sky full of thermals could be interesting and show its potential as a good thermalling wing.

THE FORCES OF NATURE

A few weeks later, my window of opportunity finally opens. A light breeze with little cumulus clouds are forecast for the end of the day. It is 6 o'clock when the sky finally opens up. The conditions get going, but stay weak, making an excellent playground in which to play in the little thermals. That's where you can judge the potential of a wing.

Some storks haven't waited for me, turning in their endless merry-go-round of warm air. I take off and then head up to 300m, a height which I consider to be a good base to take advantage of the air mass. The air moves about a bit, the Vmax likes to point it out, as if to say 'look, watch! The thermal is just here!' Far from being an expert in the discipline, I nevertheless know the basics, and I straightaway head into wind, under a friendly looking cloud. The wing twitches for a few seconds as we approach it, before the left of the wing seriously pitches backwards. I turn left to go into this air mass, and find myself going up. I cut the motor. Up, up and up we go, slowly but surely. At times I feel the right hand side of the wing drops a little, so I recentre myself by tightening on the left, by giving some good, very short, pulls on the brakes, to recentre the wing just by yawing. Still going up! I am surprised by how easy it is to use this little bit of kit! In general, with a GTR for example, I quite quickly lose the thermals because it doesn't give much feedback.

Losing ten thermals is a bit tiresome, so you end up by not even trying to turn in them. Here it's different; the feeling in a thermal is really excellent, and for me it's a game and fantastic training just to search for the core, on this little Vmax.

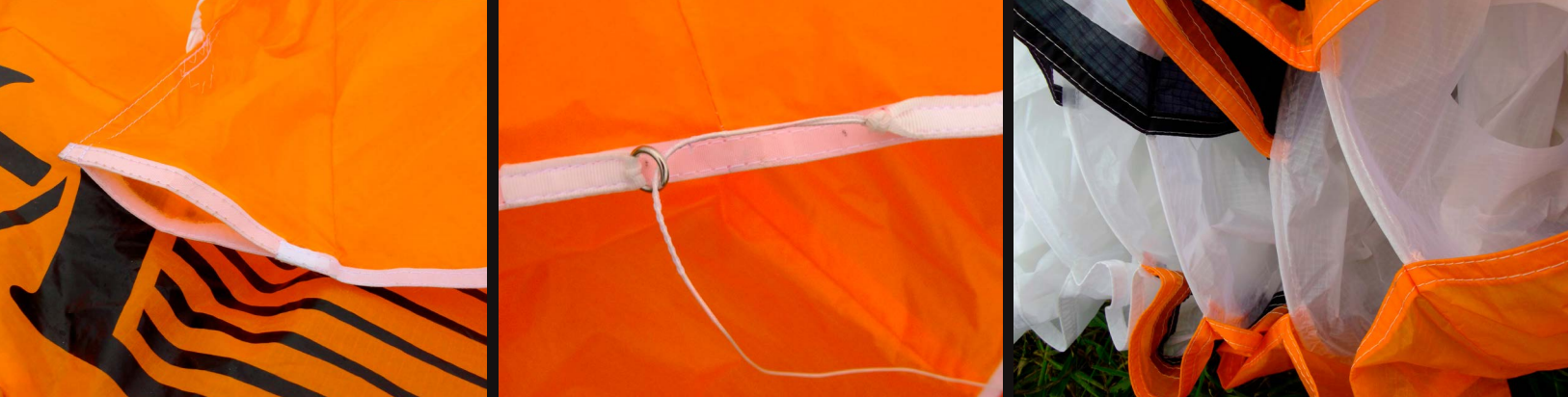


Rods at the leading edge, small air intakes, thin lines, no doubt about it, we are definitely looking at a latest generation wing.

You end up imagining the shape of the thermals. After a few turns I have reached the ceiling, at about 900 m, at cloud base. Excellent for a little 22 m²! Time to start the engine. There's an opening and I find myself above the clouds. I release the trimmers and return at high speed above the fluffy clouds. What a beautiful day!

When playing, the maneuverability of this little ITV wing is its third asset!





Finished off with a few nice details: Openings for emptying debris out of the wing tip, the tightening of the trailing edge by the brakes, leading edge rods.

CONCLUSION

For me, the main interest of the Vmax is; its flexibility due to its high speed, low fuel consumption and great manoeuvrability. I know several pilots who are bored of visiting the same places, bored of always seeing the same countryside where they fly, and who want to put a bit of spice into their flying without taking up acro.

For these pilots, I would advise them to try a thermic flight because that can become a fantastic strategic game which is never the same! Take a light paramotor, like a Miniplane or an Air Conception, a stop-watch and a Vmax, get a few friends to do the same and, set a challenge to see who can go the furthest and the fastest with 2 litres of fuel for example!

Set the challenge of going from point A to point B with only 1 litre and going with the wind, it's cool! Coming back into wind, at high speed so that you don't miss out on the beers is even better! Far from being a competition wing, the Vmax is nonetheless aimed at experienced pilots. Its 52 km/h detrimmed makes it faster than lots of others even without touching the speed bar.

Its great manoeuvrability will allow you to just as easily core a thermal as play around trees or friend's windsocks with the trimmers off. Finally, its biggest advantage is its extremely low fuel consumption, which allows you to go far with a minimum amount of fuel and with a small motor.

Whilst soaring, it is also nice to be able to take advantage of even very small thermals thanks to its very low sink rate.

Wishing you all great flying under the cumulus clouds on a beautiful spring afternoon! ■

<http://www.itv-parapentes.com>

TECHNICAL INFORMATION FROM THE MANUFACTURER.

Size	S	M	L
Paragliding	Uncertified	Uncertified	Uncertified
Paramotoring	Oui	Oui	Oui
Cells	57	57	57
Flat area	19,1 m ²	22m ²	25 m ²
Wing span	10,2 m	11 m	11,7 m
Aspect ratio	5.5	5,5	5,5
Chord	2,3 m	2,47 m	2.63 m
Minimum in-flight weight	50 kg	65 kg	80 kg
Maximum in-flight weight	65 kg	85 kg	105 kg
Extended flying weight	100 kg	130 kg	150 kg
Glider weight	5,1 kg	5,4 kg	5,6 kg
Trim speed	42 km/h	42 km/h	42 km/h
Maximum speed	62 km/h	62 km/h	62 km/h
Upper surface cloth	Skytex Porcher	Skytex Porcher	Skytex Porcher
Upper surface cloth weight	40 g/m ²	40 g/m ²	40 g/m ²
Lower surface cloth	Skytex Porcher	Skytex Porcher	Skytex Porcher
Lower surface cloth weight	40 g/m ²	40 g/m ²	40 g/m ²
Upper lines	Aramide 1,3mm 130 daN	Aramide 1,3mm 130 daN	Aramide 1,3mm 130 daN
Lower lines	Aramide 1,8mm 192 daN	Aramide 1,8mm 192 daN	Aramide 1,8mm 130 daN
Certification	EN 926-1 (structure)	EN 926-1 (structure)	EN 926-1 (structure)
Price in Euros	3250	3250	3250

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