

The Tetra is Apco's latest wing aimed at the beginner pilot. It replaces the Fiesta 2, and sits between the Prima 2 school glider and the intermediate Presta model. The Tetra I flew has AFNOR Standard certification; a modified version intended for DHV 1 certification is in the pipeline, but at the time of writing had not completed testing.

Included with the wing is a large carry sack, speed system, spares kit, and inner stuff bag with closing belt. Mine did not come with a manual but I was able to download one from Apco's web site at [www.apcoaviation.com](http://www.apcoaviation.com).

### manufacture

Both top and bottom surfaces are made of Gelvenor, which is unusual (other manufacturers use Gelvenor on the top surface only). The internal ribs are of Porcher Marine, used for its strength and non-stretch qualities. The Tetra is the first beginner wing from Apco to have diagonal ribbing inside. This allows for fewer lines and, hopefully, better performance.

The wing has a four-riser system with split A-risers for easy big-ears. The brake handles are held on by magnetic keepers. If paramotoring is your thing, there is a special riser set available for the purpose. Superaramid Cousin lines complete the set-up.

Gelvenor has excellent resistance to UV and abrasion, which means that the wing should not deteriorate too much in its lifetime. Apco offer their usual 250 hour/three-year guarantee on the materials; good news to the beginner pilot who will probably give their first glider a fair amount of abuse while learning the art of ground handling.

The bag was easily big enough to fit the wing with my harness and 17cm foam back protection without me having to sit on it to force it shut. There is a separate pocket for your helmet, etc. It was comfortable enough for my six-foot-five frame, if not outstanding in this respect.

To make four sizes of wing Apco have added and removed cells to make the larger and smaller sizes, rather than "zoom" the dimensions up or down. This means is that the Large wing I flew has a different line layout, different aspect ratio, and quite possibly different handling from the other sizes in the range.

The Tetra that I flew had 40 cells with an unusual line layout, in that the centre rib is supported from both the left and right-hand upper cascades. This affects the handling somewhat, of which more later. The Medium model has an odd number of cells and thus a different style of line attachment.

I flew the large model (105 - 130kg) at 118kg all-up, right in the middle of the weight range, with an XXL Sup'Air Profeel harness and my own speed bar.

### in flight

The first chance I got to fly the Tetra was on a very light day, giving me a chance to try an alpine launch. A few practice runs revealed no problems and the launch was quite easy, one step forward stopping me in my tracks while the wing came over my head.

Taking off, first impressions were of rather heavy brakes and a surprisingly good sink rate. Although expecting to plunge straight to the bottom, I was in fact able to soar a bit before gravity did its inevitable thing. The wing is well-damped, a good thing for heavy-handed beginners.

The next chance to try out the wing was on days with very light thermals. Here the Tetra showed that its performance was well up to scratch. I had no trouble keeping up with others on more advanced wings. What it did show, too, was the lack of weight-shift assistance in turning. The lines meeting in the middle seem didn't allow my harness to weight shift properly.

Brake pressures, initially light, get heavier at minimum sink. Due to the lack of weight shift, thermalling had to be done mostly with the brakes. Nevertheless the Tetra turns very efficiently, with a slight tendency to roll out of the turn. Wake turbulence was hardly noticed, the wing absorbing most of the bumps. In lumpy turbulence the Tetra tends to just wallow, another trait that will be reassuring for beginners.

Reverse launching was quite easy, with no tendency to thrash around on the ground in high winds. A little pull on the A-risers was required to launch it. It has a tendency to overshoot slightly but this is easily countered. In stronger winds I was able to launch the Tetra easily when others were grounded.

This advantage is a good thing but requires good decision-making from the pilot to treat stronger winds with the respect they deserve. Landing in strong winds immediately reveals while so many learner pilots spend their days being dragged on landing. Like all beginner wings these days, the Tetra's brakes are set so that the wing cannot be killed with brakes alone unless one takes a wrap. I prefer to use the risers, and killing the wing with the D-risers, C-risers or both worked fine.

The speed bar was useful throughout its range, only losing significantly in sink rate at the top of its range. My set-up didn't allow full speed bar but got pretty close. I measured the trim speed at 38km/h, and 47km/h with the speed bar pushed as far as it would go. This is, unusually, better than the manufacturer's figures and is very respectable. Trying out emergency turns with a sudden application of the brake on one side showed no tendency to spin, indeed, pulling the brake beyond a certain point does not turn the wing any faster.



### getting out of shape

Finally, I put the Tetra through a mini-SIV course. Big-ears are easy to put in due to the split A-risers, and roll out slowly by themselves. B-line stalls are difficult to pull; there's a lot of weight on the B-risers but the glider was docile on both entry and exit.

Frontal tucks were reasonably well handled and of no real concern. Inducing asymmetric tucks and counter-steering is very easy, the wing losing hardly any height and turning about 20 or 30 degrees. I was reluctant to pull too much brake on the other side, but what I did pull was sufficient to keep the glider more or less on course. Inducing an asymmetric tuck while behaving like a sack of spuds (most beginners' natural reaction) immediately reveals why the Tetra has an AFNOR rating rather than a DHV one. Pulling down on the A-riser tends to pull in lots of wing and a initiate sharp turn. The glider then waits for an unnerving amount of time before beginning a slow roll out. The worst case was a 50-foot height loss and a 160 or 170-degree turn. While all this is well within the





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## specification

Model	X-Small	Small	Medium	Large
No of cells	34	36	38	40
Span (m)	8.33	8.88	9.54	10.19
Area (m <sup>2</sup> )	24.84	26.93	29.03	31.11
Aspect ratio	4.15:1	4.34:1	4.53:1	4.72:1
Max. chord (m)	3.18	3.2	3.2	3.2
Line diameter (mm)	1.1/1.2/1.8/2.0	1.1/1.2/1.8/2.0	1.1/1.2/1.8/2.0	1.1/1.2/1.8/2.0
Certificated all-up weight range (kg)	60 - 80	75 - 95	90 - 115	105 - 130
AFNOR certification	Standard	Standard	Standard	Standard
Guarantee	3 years/250 hours materials and workmanship			
Price	£1,850	£1,850	£1,895	£1,895

UK importer: Northern Paragliding, Dalefoot, Mallerstang, Kirkby Stephen, Cumbria CA17 4JT, tel: 0845 123 2555, e-mail: [info@northern-paragliding.com](mailto:info@northern-paragliding.com), website: [www.northern-paragliding.com](http://www.northern-paragliding.com).

AFNOR standard, most beginner wings open much faster. I tried quite a few of these, and while I quite enjoyed them at the time many beginners may not. Accelerated asymmetric collapses were not much worse with the speed bar half-engaged, but with the bar full on were rather exciting, getting a 270-degree turn, 50-foot height loss and no desire on my part to repeat the experience.

## summary

The Tetra has very good minimum sink and speed for a beginner wing. At no time did I feel held back by its performance. This is achieved somewhat at the expense of easy handling. My usual wing has very light handling, and I found the Tetra heavy in turns, but the beginner may not notice this. While not offering the responsive handling of gliders in higher classes, the Tetra's well-damped and predictable handling is just what most beginners need. I have reservations about the recovery behaviour in asymmetric tucks; I think that instructors may wish to try the wing for themselves before selling it to absolute beginners. The DHV

version may suit some better when it arrives. Giving the wing to some novices to fly, they reported that the wing felt safe and was easy to fly. Ex-Fiesta owners said that they thought the Tetra noticeably faster. Doing this review, I've discovered that novice pilots really find it difficult to describe a wing and it was difficult to get much impression from them, but watching them launch and fly it was clear that they had few problems. It seems that Apco's target market would be happy with the new Tetra.



**Good Performance**  
**Long-lasting materials**



**Heavy handling**  
**Asymmetric tuck recovery**

## importer's comment

I'd agree with much of Dave's assessment of the Tetra, however Dave is obviously used to flying his Vertex and so not surprisingly found the handling somewhat tamer! We have found that the Tetra's handling is exactly what the new pilot or low airtime recreational pilot needs – it goes where you tell it and irons out the unnecessary lumps, bumps and mis-timed inputs. This is offset by the stunning performance as measured by Dave (who couldn't get full bar travel), quite probably the best in its class. The asymmetric recovery is a mystery to me as Apco tell me that they expect it to gain DHV 1 without modification other than to the brake arrangement. We are sure the Tetra will continue to be a big hit with its combination of performance, reliability, quality materials and price.

NEIL CRUICKSHANK, NORTHERN PARAGLIDING

New Skywings paraglider reviewer Dave Massie has logged 840 hours in the last ten years and a further 300 hours on hang gliders since 1999. He's flown over 30 different paragliders, 20 of them in the last couple of years, from DHV1-2s to DHV2-3s. His own wing is a Nova Vertex.