



flight test: Apco Swift Zero pod harness

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In the 1970s Apco founder Anatoly Cohn left his native Ukraine having displeased its Soviet rulers by building powered hang gliders. Settling in Israel, in 1982 he founded Apco, initially making hang gliders and microlights. He swiftly progressed to paragliders, and in the early 90s helped to pioneer fabric technology enabling Apco to offer the first long-term guarantee. Apco is now run by the second generation, headed by Jonathan Cohn.

Apco came to the fore in the early 1990s with the Astra and the Supra; later gliders like the Allegra and Bagheera offered performance very close to the top end of their certifications. The company had long diversified into related products – harnesses, paramotor wings and trikes, and the Mayday emergency parachute, of which more than 30,000 are said to have been sold since its appearance in 1984.

The Swift Race harness was launched in 2016 with a full set of features for competition pilots. Since then the design has spawned the Swift Sport and the Swift Zero, with different details but offering the same geometry and comfort.

The EN/LTF certificated Swift Zero swaps the inflatable rear fairing of the Swift race for one reinforced with plastic wire. It has different material for the pod and only

one reserve container, and comes with Airfoam back protection, Lexan backplate, removable cockpit and speed bar. It is available in two sizes – see sizing table on the Apco website.

Out of the box, the first impression is of very high levels of finish. Tags on the harness direct you to Apco's website and the very well made video manual that will destroy your desire to revert to paper. Viewing it is 15 minutes well spent, revealing things as they should be done rather than via stilted written instructions.

Of particular note is the detailed but easy procedure for correctly installing the emergency parachute. To simplify the process there are labels on the deployment-bag flaps to show the order in which to close them. The Nylon wires

holding the reserve in its container are concealed by a magnetic flap, which prevents anything getting snagged yet is very easy to lift to pre-flight the parachute. The three-step speed system is already in place.

All relevant hardware like carabiners are already supplied except for one very large maillon to join your parachute bridle to the single strop that joins the bridles from each shoulder (unless you use a lark's-foot knot; as the BHPA frowns on webbing-to-webbing connections I used a large maillon).

An adjustment you may be new to is the positioning of the top speed-bar pulley near the hip, allowing you to tune whether the harness goes head-up, head-down, or remains neutral when the bar is applied, depending whether the pulley is

Specification

	M/L	XL
Pilot size	up to 185cm	180cm and over
Total weight (kg)	5.05*	5.25*
EN/LTF certification	Up to 120kg	Up to 120kg
UK price	€1,113**	€1,113**

UK importer: Contact Apco at
apco@apcoaviation.com, tel: ++44 972 4
627 3727, URL: www.apcoaviation.com

* Including three-step accelerator

** Including shipping

The latest generation of pod harnesses have a fair few adjustments. In addition to those that affect comfort and the different sizes of pilots, there is also the placement and adjustment of the lines and clips that facilitate the automatic closure of the pod bag. The Swift Zero is very good in this respect – there are only two extra fixtures for automatic closure and they're both colour-coded and easy to reach.

Adjustment for comfort was straightforward as I was able to set the length of the pod, shoulder and leg straps on a simulator. The angle of the footplate at the bottom of the pod is very well controlled, with sensibly separated straps to set the angle. The pod skirt comes up to and around the carabiners, making the harness very smooth and streamlined. Webbing loops inside the side pockets allow easy attachment of safety lanyards.

Once adjusted, the Zero is a very well fitting and supportive harness; in part due to advice I received from Apco. At 185cm and 90kg I was on the cusp of the size boundary; designer Adam Wechsler advised I'd be better off with the XL size (185cm upwards) rather than the M/L (up to 190cm). The greater carabiner-to-seatplate distance also adds stability.

My first flights – with a Gin Carrera L at 113kg all-up – emphasised this assessment. There is a continuous zone of connected comfort, from the top of the back through the buttock region to the lower end of the thighs where the seat board stops. Pre-flight preparation is dead simple as there are only three more connections to make than with a classic sit-up harness, two of which are for the pod closure. The buckles are slimline metal ones that click together easily, even with cold hands, and the small shoulder-strap tidy and two connectors for the pod closure are plastic.

When pulling up the glider the force seems to be more spread out over the seat and back than other harnesses I have flown, and this actually feels more comfortable and controllable. Once you are off the ground it's easy to get your foot on the bottom of the pod, put the other foot through the gap in the pod and push. This was easiest with trainers or lightweight paragliding boots with smooth sides to the sole; more walking-orientated boots needed a little extra care as the protruding sideways tread was more likely to catch. This would, I think, disappear with a longer familiarisation period.

The top doors close positively and the pod presents a smooth exterior to the passing air. Leg tension required to maintain the harness streamlined is minimal and, as noted above, the comfort and the connection to the wing are confidence-inspiring. Flying with the chest strap set to 46cm, the required setting for my wing at my body weight, the harness allows a good amount of weight shift authority.

The three-step speed bar gives just enough difference in the rungs to get a significant amount of travel for each step,

but not so much that your feet can end up too far away from the footplate. The way the rungs are located in the pod makes finding and applying any amount of speed bar quick and easy, and the way your leg muscles engage with the rungs makes fine control simple. The speed system worked well from the outset, but carefully optimising the length improved it further and kept it out of the way of chunkier boots on getting into the pod. I had set the tilt up/tilt down/neutral alignment at neutral and it worked very well for me.

The landing is one of the best I've experienced in any harness. As I poked a toe out of the skirt at the bottom to extract my legs I found that the act of straightening them, which normally gets me close to a landing position, works incredibly well on the Swift Zero – you find yourself upright and in an excellent landing position with no further effort.

Storage is in the rear fairing. I was able to put away a heavy Cordura glider bag, a concertina inner and other stuff with space left over, having made no effort at being tidy. Just roll it up, put it in and there you go. There's room left for a fairly large water carrier if needed, and a pocket for it to sit in. You should be able to get this harness and your glider into a standard 130-litre glider bag, even with the folding recommendations.

The retail price for the harness, which comes in black with blue and lime trim only, is €1,113 including VAT and shipping. A list of UK dealers can be obtained from Apco through their website.



Simple but effective design for pod skirt closure – only two clips

Exit for landing very quick and effective

Speed bar easy and quick to use

Effective adjustable angle-of-dangle

Thigh, lower and upper back support all excellent

Good value for money.



Slight issues with boots with very chunky tread (this would disappear over time).

placed behind, ahead or directly in line with the risers. In theory you should be slightly more feet-down for best performance on full bar, aligning your legs with the steeper glide angle.

You also need to be aware of the instructions that require the glider to be packed within the harness to avoid excessive bending of the reinforcements that would otherwise take place if the harness was squashed flat.

The cockpit has a Velcro loop fastener on it; you just need to stick the hook type onto your instruments. There's plenty of space and a number of backup loops at spaced intervals to safety-bond your instruments using their lanyards. If you'd rather use your own flight deck it takes about two minutes to remove the cockpit.

The harness weighs 6.1kg against a claimed weight of 5.25kg, but this was with carabiners attached and speed system and flight deck in place (the Apco figure does not include the optional-extra locking carabiners).

Photo: Apco