

Version 1.02
2018 11 19



HIKE HARNESS

Manual

 **APCO Aviation**
Setting Future Standards

Factory: 7, Chalamish Street - Industrial Park - Caesarea 38900 ISRAEL www.apcoaviation.com
Tel: +972 4 6273727 Fax +972 4 6273728





CONTENTS:

1	Overview	4
2	Protection	4
3	Parts	5
4	Specifications	5
5	Karabiner / Maillon fitting and Wing / Riser Attachment	5
6	Reserve Attachment	6
7	Speed System Fitting & Adjustment	7
8	Airbag Attachment	8
9	Towing	8
10	Tandem	8
11	Accessories	9
12	Fitting & Adjusting your Hike	9
13	Flying	10
14	Emergency Procedures	10
15	Inverting & Packing your Hike	10
16	Inspection, cleaning, maintenance and storage	11
17	Recycling	11
18	General Advice	12

WARNING

This is not a training manual. It is extremely dangerous to yourself and others to attempt to use this or any other paragliding equipment without first completing a flying course given by a qualified instructor.

Apco Aviation's equipment is carefully manufactured and inspected by the factory. Please use this equipment only as described in this manual. Do not make any changes to the equipment.

AS WITH ANY SPORT - WITHOUT TAKING THE APPROPRIATE PRECAUTIONS, PARAGLIDING CAN BE DANGEROUS.





HIKE HARNESS

1 Overview

The **HIKE** harness is our ultra-light, reversible paragliding harness/backpack. Designed for maximum comfort while either flying or hiking with your paraglider. Split legs carefully crafted, and ergonomic back support will insure relaxed flying and hiking.

Great for long mountain treks and challenging XC flights.

Generous size glider bag and well padded back support.

Only 1.3 kg. making it one of the lightest harnesses in this category.

2 Certification

The Hike Harness is EN certified (EN1651:1999, EN12491:2015) when used in conjunction with the specific optional airbag from Apco (Product Code: 47035). The Certification Label is at the end of this Manual.

Features

- Optional attachable airbag for extra protection (See more in Protection Tab)
- Split legs
- Emergency parachute shoulder attachment points
- Compression straps for volume adjustment
- Loop and slide buckle on chest – one click strap in
- Mesh side pocket
- Ergonomic breathable back support
- Generous volume to contain most solo wings [approx. 60 liter]
- Attachment points for poles / mountain equipment
- Adjustable shoulder and chest straps
- Two-position lateral strap to adjust seat position
- Weight – 1.3 kg.
- Speed bar ready
- Max Pilot Weight: 120kg

3 Protection

Reserve

The HIKE has emergency parachute shoulder attachment points, and a variety of external reserve containers can be mounted on the harness. We recommend the Apco external container for Mayday LT and SLT reserves with an LT or SLT Mayday Reserve Parachute to complete your setup. Do not connect your reserve to the Maillons on the main hook-in points (refer to page 6). For tandem reserve parachute use, see relevant section in this manual on Page 8.

AirBag

An optional Airbag can be fitted below the seat.

The Apco Airbag for Hike is a separate unit, which can be ordered separately and can be attached to your HIKE harness. It is a simple, light and inexpensive masterpiece – which will be appreciated by every pilot/hiker.

- Quick and simple attachment.
- Only 220 gr.
- No rigid elements – nothing to break



- From extremely high density, light, durable Oxford nylon
- Certified effective high volume airbag protection
- Shaped for minimum drag and maximum airbag efficiency
- Attractively priced – best value for money

4 Parts

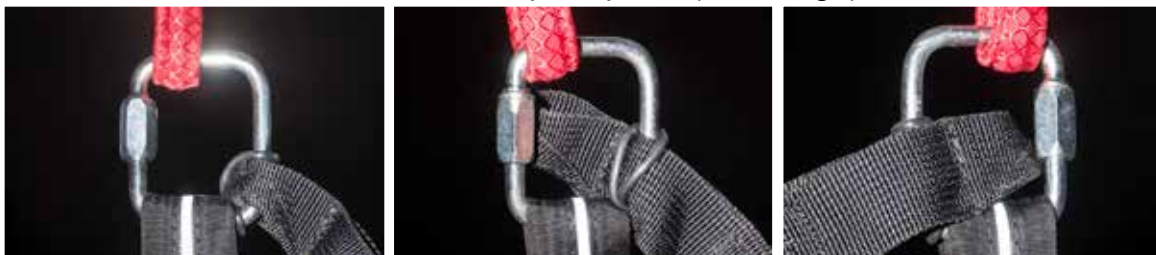


5 Specifications

Harness Weight	1.3kg
Backpack Volume	55 litres
Size Range	160 – 190cm (pilot height)
Max Pilot Weight	120kg
Optional Airbag Weight	220gr
Certification	EN (when used with Airbag option)

6 Karabiner / Maillon fitting and Wing / Riser Attachment

Ensure that both the Main Hook-in Loops and the Lateral Hook-in Loops are fitted correctly to the maillons (or Karabiner / soft link). Attach the risers to the maillons as shown. All Hike Harnesses shipped after October 2018 have a webbing retaining loop for the lateral hook-in loops. This retainer loop simply holds the karabiner or maillon in position so that it does not rotate. This is not a safety concern, but helps to keep things tidy. For harnesses shipped before October 2018, we recommend using a rubber O-Ring on the maillon or karabiner to hold the lateral loops in place (see image).



Pre October 2018 (with O-Ring installed)



Post October 2018 (with retainer strap)

7 Reserve Attachment

The reserve parachute system / container should be fitted by a suitably qualified person. We recommend using an Apco Light External Container for Mayday LT and SLT with a LT or SLT Mayday Reserve Parachute, combined with a pair of dyneema Light Universal Bridles.

- Attach the ends with the small loops of the bridles to the shoulder attachment points using larks head knots.
- Attach the reserve to the two bridles with a single larks head knot by passing the two large loops of the universal bridles through the small loop of the reserve bridle, and then passing the reserve through the two large loops of the universal bridles.
- Attach the Reserve container to the chest strap using the attachments straps.
- Tidy the bridles using the Velcro routing ties on the right side of the harness.



Reserve Deployment in accordance with instructions provided with the reserve container. Ensure that your reserve is repacked at the specified interval.

WARNING

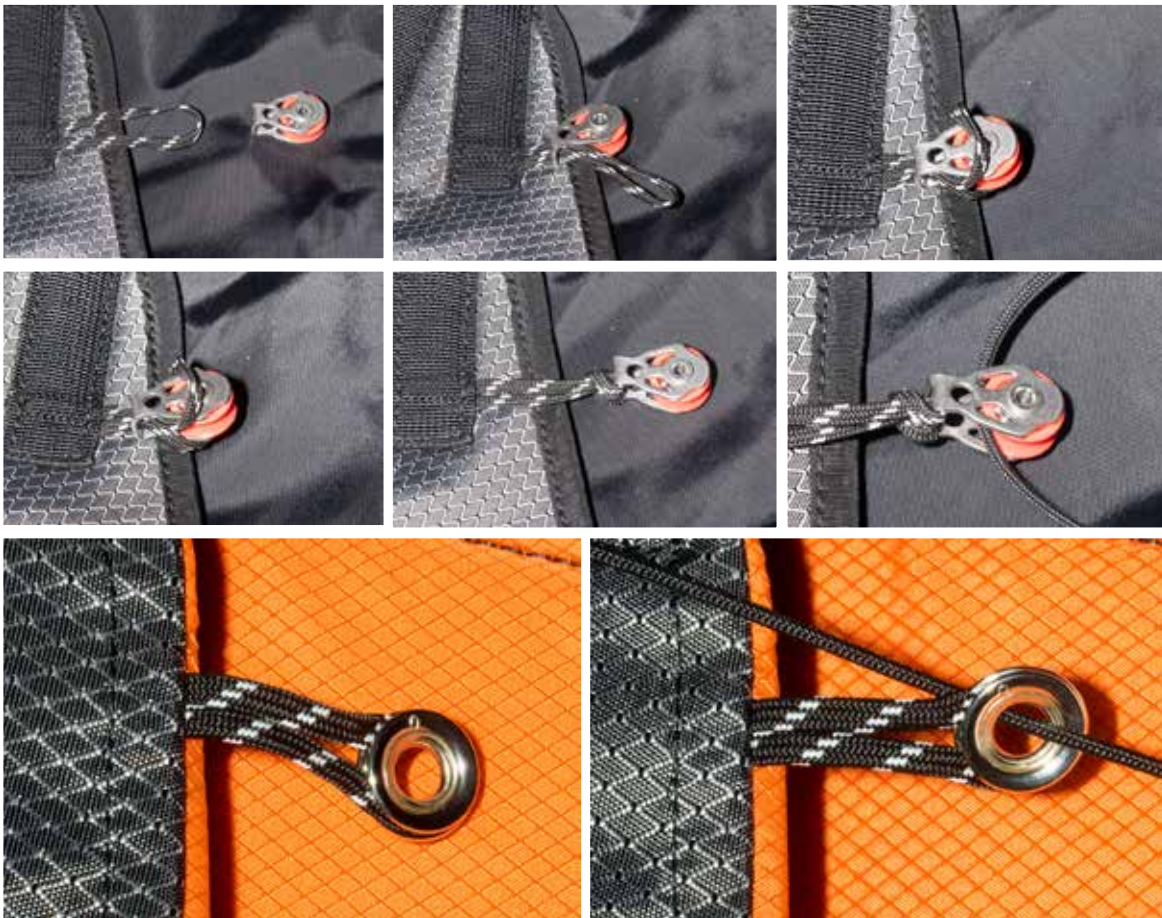
Do not connect your reserve to the square maillon rapide #5 (Code: 43121F) on the main hook-in points. The harness is designed and tested to take reserve opening shock loads on the shoulder attachments, and the abovementioned maillons are rated for flying, not reserve shock loads.



8 Speed System Fitting & Adjustment

The Hike is not supplied with a speed bar as most wings are supplied with one, and the ball bearing pulleys are optional, and can also be installed later if not ordered with the harness. If you do not have one, they are available from Apco as an accessory. Before installing the speed system on the harness, be sure to check the manual of your paraglider and follow it in addition to this. Speed system adjustment is best done by hanging the harness in a simulator. Attach your wing risers to ensure proper adjustment of the speed system length. This process is easier if you have a friend to help you. A well-adjusted speed system will be on full bar when your legs are fully extended, and still easy to reach and apply.

- Remove the brummel hooks from the sewn loops at the ends of the speed system lines.
- Route the speed bar lines through the guiding eyelets and then through the speed system pulleys.
- Replace the brummel hooks back on the speed system lines.
- Clip your wings risers into the maillons on the harness, and attach the speed bar brummel hooks to the matching brummel hooks on the risers.
- Sit in the harness and have a friend hold the risers up to simulate flying. Now shorten the speed bar lines to a point where the par is situated close to the guiding loops on the front of the harness, but not so close that you cannot reach and apply the speed system with your legs.



WARNINGS

It is important, before your first flight after installing the speed system, to check and ensure that the speed system is not set too short, as this would mean the speed bar will be applied throughout the flight.

If you use a side mounted reserve container, make sure that the speed system cannot under any circumstances release the reserve handle and cause a accidental deployment when applying the speed system.

9 Airbag Attachment

The Airbag attachment is available as an optional extra. It is attached to four loops under the seat of the harness, and one Velcro closure that wraps around the lower leg-spread adjustment strap, with the intake facing forwards. The airbag is certified and offers excellent impact absorption.



10 Towing

Connect your tow release to the maillons according to instructions provided with the tow release (usually where the risers are attached to the harness).

11 Tandem

The Hike Harness can be used for tandem flying for pilot, passenger or in both positions. In the case of being used at the pilot harness, the reserve parachute container should be side-mounted, and the bridles routed as for solo flying, but, connected to the reserve attachment point of the spreader bars and not to the shoulder attachment points of the pilot harness itself. Care must be taken that the reserve handle does not snag during launch and cause a accidental deployment.



12 Accessories

We recommend that you always fly with the following accessories in or on your harness:

- Reserve parachute
- Hook knife
- Helmet
- Radio
- Flight Instrument & Live Tracker
- First aid kit, torch & and self rescue equipment

13 Fitting & Adjusting your Hike

This is best done by hanging the harness in a simulator or in a similar safe manor.

The Hike Harness does not have buckles on the leg straps, and must be worn like putting on pants. It is also possible to put it on without opening the chest strap, which is especially convenient if you have a reserve mounted on the chest strap. This adds safety to the harness, in that it is impossible to forget to close your leg straps before take-off.

Putting on the Harness

Hold the harness by the shoulder straps and step over/into the harness, one leg at a time, taking care to put each leg correctly into each leg loop. Next raise the shoulder straps onto your shoulders and pass your arms out to the sides elbows first. If the chest strap buckle is open, close it now. Do a check to ensure it is on correctly.

Shoulder Strap Adjusters

These ensure that the harness is suspended at a comfortable height on the ground and during take-off. Put the harness on and tighten the straps to raise the harness so that the leg straps are close to your crotch. One should be able to stand up straight comfortably once adjusted, without feeling discomfort on the shoulder or leg straps.

Lumbar Adjustment

The Hike harness has two settings for back angle. One slightly more reclined than the upright setting. This adjustment can only be done on the ground prior to flight, and is best done in a simulator. There are two loops on each lateral strap, and the adjustment is made by changing the loops used on the flight maillons.

All Hike Harnesses shipped after October 2018 have a webbing retaining loop for the lateral hook-in loops. This retainer loop simply holds the karabiner or maillon in position so that it does not rotate. This is not a safety concern, but helps to keep things tidy. For harnesses shipped before October 2018, we recommend using a rubber O-Ring on the maillon or karabiner to hold the lateral loops in place (see image in assembly section on Page 5).

Chest Strap

If open, close the chest strap buckle immediately after putting the harness on. Note that it is possible to put the harness on with this buckle closed (recommended), reducing the risk of accidentally taking off with it open. The chest strap buckle is closed by passing the male side through the female side, and adjusted narrower by pulling the black tab on the free end of the chest strap to the right, and released (wider), by pulling the coloured tab attached to the male side of the buckle to the left. It is recommended to fly with the chest strap adjusted to the width that your wing manufacturer recommends (usually 42cm



between karabiners / maillons). Wider settings will give better weight shift, and more feed back from the wing, and a narrow setting will restrict these.

Upper and Lower Leg-spread Adjusters

These can be adjusted in flight according to personal preference, but it is recommended to set in a simulator before the first flight. If using the harness as a tandem pilot harness, these should be further open than for solo flying. A wider setting will make the harness more responsive in weight shift, and will transmit more feedback from the wing. Find your own “sweet spot”.

14 Flying

The Hike is an easy, light, but yet very comfortable harness, offering superb in-flight comfort, even on long flights. In the air it is also very stable and reassuring, but without reducing weight-shift capabilities. Be sure to follow all the instructions in this manual before the first flight, and use it accordingly. The harness is fairly upright, which improves pilot cohesion with the wing, and reduces the chances of experiencing line twists during extreme flight situations. Before landing, slide forward into a standing position by straightening your legs downwards, so that you are ready to land on your feet and run if needed.

Harness Related Preflight Checks

Always check the following points before taking off:

- Harness webbing, sewing and materials in good condition
- Wing (risers and speed system) connected correctly
- Harness buckles closed correctly
- Karabiners / Maillons closed securely
- Harness adjusted correctly

15 Emergency Procedures

Water Landing

In case of water landing, land cross or down wind to ensure that the wing falls far away from you, and not on top of you. If needed, use your hook-knife to escape the harness.

Tree Landing

Choose the most suitable looking tree, set up against the wind, and aim for the centre / crown of the tree, flair as normal, secure yourself to the tree. Assess the situation, and call for help if needed.

16 Inverting & Packing your Hike

Flight mode

Open the main zipper of the backpack, remove your wing and other equipment from the backpack, and ensure there are no small / loose items inside that may be lost (It is best to store small items in the zipped accessory pockets on the back of the backpack).

Now invert the backpack into itself so that the harness is on the outside, and the shoulder and waist straps of the backpack is inside the backpack. Store any items not needed during flight in the backpack and close the zips. It is not recommended to carry heavy ballast in the backpack during flight. The side compression straps, which are now inside the backpack can be clipped tightened to bring any load in the backpack closer to your



body. There are two Velcro loops for attaching hiking poles on the left side of the harness. Take care when using these to ensure that they do not interfere with take-off or in flight.

Hike Mode

After landing, pack your wing neatly and fold it so that its size matches the dimensions of the backpack. Invert the harness into the backpack mode and place the wing inside the backpack. Take care that there are no bulky parts of the harness folded in an uncomfortable way between the wing and your back. Stow larger additional items inside the main compartment with the wing and pack smaller items in the two zipped accessory pockets on the back of the backpack. Close and tighten the side compression straps on the backpack. There are Velcro hiking pole attachments on the right side of the backpack. Put the backpack on and close the hip belt and chest strap before finally adjusting the shoulder straps so that the weight is supported mainly on the hip belt. Additional items can be attached using the side compression straps and the two side mesh pockets can be used to carry water bottles and other items.

17 Inspection, cleaning, maintenance and storage

Pre-flight inspection

The harness should be inspected before every flight to ensure that it is airworthy. Special attention should be paid if the pilot was dragged on launch or had a bad landing where part of the harness may have been damaged by contact with the ground. During inspection, all webbing, materials and thread / sewing should be inspected for damage or deterioration due to use, abrasion or aging etc. If damage is found, do not fly and send the harness for repair to a qualified person, or to Apco.

Manufacturer's Inspection

The harness should be inspected on an annual basis by Apco or designated / approved or qualified person to confirm airworthiness.

Maintenance and Cleaning

If the harness needs to be cleaned, do so with a damp cloth and do not use cleaning chemicals. Air-dry out of direct sunlight.

Storage

Store in a cool dry place, and under no circumstances should a wet or damp harness be packed and stored – dry it first.

18 Recycling

If you need to dispose of this item, do so in an environmentally responsible manner. Recycling of many parts of the wings and harnesses is possible, and there are some organizations that manufacture reusable shopping bags, windsocks, backpacks and more using old donated paragliding equipment. Funds raised are often used for charitable donations. Search the web, or contact *The Cloudbase Foundation* for more information or advice. Do not dispose of a retired wing or harness with normal household waste.



19 General Advice

A qualified person or agent of the company should check your equipment every year.

The equipment is carefully manufactured and checked by the factory. Never make changes to the harness, canopy or the lines. Changes can introduce dangerous flying characteristics and will not improve flying performance.

Do not put your equipment in direct sunlight when not necessary. In order to protect your equipment during transportation or waiting time we recommend one of our lightweight storage bags.

Paragliding and Paramotor flying should always be done in a way that has minimum impact on wildlife and the environment. Respect access regulations and the wishes and rights of landowners. Do not litter or start fires, do not smoke near your or other peoples wing and equipment. Do not launch, fly or land in a manner that harasses, disturbs or endangers people, wildlife or property. To summarise - don't be a jerk!

If you have any doubts about flying conditions - do not begin.

If you have any questions regarding Apco Products, please contact your dealer or Apco.

Lastly, be equipped with a certified emergency parachute and helmet on every flight.



APCO wishes you many hours of enjoyable flying.

Take Air!



AIR TURQUOISE SA | PARA-TEST.COM

Route du Pré-au-Comte 8 • CH-1844 Villeneuve • +41 (0)21 965 65 65

Test laboratory for paragliders, paraglider harnesses
and paraglider reserve parachutes



Paragliding Harness

Inspection number :	PH_239.2018
Manufacturer :	Apco Aviation Ltd
Model and size :	Hike M
Maximum pilot weight [kg] :	120
Integrated container for rescue system:	No
If Yes. Volume of the container [cm ³] :	n/a min n/a max
Serial number:	-----
Production date (year / month) :	-----

Harness protector (impact pad)

Impact pad type:	Airbag
Impact pad integrated:	Yes
Impact pad number:	PH_239.2018
If not integrated : Manufacturer	Serial number:
Production date (year / month) :	-----

Warning : Read the operating manual before using this equipment!

A sample has been tested and certifies its conformity with the following standard:
EN1651:1999, EN12491:2015

RE | rev 01 | 09.03.2018 | ISO 94.20