



User's manual

Harness EVO XC3



evo xc
3

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Pilote : Jérôme Maupoint, SUP'AIR

Thank you for choosing an EVO XC3 ! We are proud to join you on your journey in our common passion: paragliding.

SUP'AIR has been designing producing and selling accessories for free flying activities since 1984. By choosing a SUP'AIR product you benefit from almost thirty years of expertise innovation and listening to customer feedback. This is also our philosophy: working endlessly to develop better products and to maintain a high quality production in Europe.

We trust that you will find this manual comprehensive, explicit and hopefully pleasant to read. We advise you to read it carefully !

On our website www.supair.com, you will find the latest updated information about this product. If you have any further questions, feel free to ask one of our retailers. And of course, the entire SUP'AIR team is at your disposal through info@supair.com

We wish you many safe flights, enjoyable hours and happy landings.

The SUP'AIR team

Introduction	4	In flight	27
Technical specifications	5	Complements/Accessories	26
Size choice	6	Maintenance	31
Nomenclature	7	Cleaning and harness maintenance	31
Harness overview	8	Storage and transport	31
Seat plate assembly	9	Product lifespan	31
BUMPAIR assembly	10	Repairs	32
Speed-bar system	11	Materials	32
Foot-rest (Option)	12	Recycling	32
Reserve parachute installation	13	Respecting the environment	33
Speedbag + optional cockpit assembly	18	Disclaimer	33
Shoulder straps adjustments	22	Pilot's gear	33
Behavior in flight	25	Service Book	34
Pre-Flight check	26		



Pilot : Jérôme Maupoint, SUPAIR.



Welcome to the world of paragliding ! With the EVO XC3 you are equipped with a complete product to help you broaden your horizons and let you discover new Cross Country thermal flights. With its great comfort level, a BUMPAIR 17 cm, and a reserve parachute pocket under the seat, you will be able to handle any kind of soaring condition anywhere.

After reading this manual, we suggest you check your harness by conducting a hang-test prior to your initial flight with it.

N.B : Three important icons will help you understand this manual :



Advice.



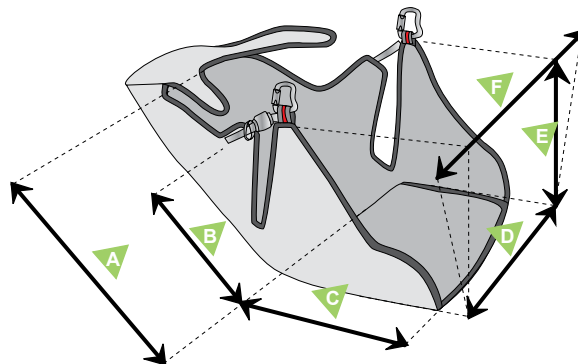
Caution !



Danger !!

	S	M	L	XL
Pilot size	160-175 cm	165-185 cm	175-195 cm	195-205 cm
Pilot weight (cm)	50-75 kg	60-90 kg	70-100 kg	80-110 kg
Harness weight in standard version (Bumpair 17cm, wooden seat plate, two self-locking carabiners)	4560 g	4640 g	4940 g	5005 g
Harness weight in « + » version (Bumpair 17cm, carbon fiber seat plate, foot-rest, risers, two self-locking carabiners)	4315 g	4395 g	4695 g	4760 g
Backrest height (cm)	65	67	70	75
Reclined seating height (cm)	37	38	39	40
Seat length (cm)	44	48	49	51
Seat width (cm)	33	35	37	39
Carabiners height (cm).	44	44	44	44
Carabiners distance between the two (cm)	39-50	39-50	39-50	39-50
Impact damping system : Airbag (Volume)	No			
Impact damping system : Bumpair (Thickness)	Yes			
Certification	EN 1651 - LTF			
Flight : tandem (Pilot- Passenger)	Possible			
Flight : acrobatic flying	No			
Take-off : Winching - towing	Yes			
Jettisoning carabiners compatibility	No			

- A
- B
- C
- D
- E
- F






Size choice

Choosing your harness size is important. You will find below a measurement chart to help with your selection. We recommend you to try out the harness in different sizes during a hang test at the nearest SUPAIR dealers location for proper fitting.

For a complete list of our retailers please click here : www.supair.com

Preliminary test under hanging device.

Size Weight	1m45	1m50	1m55	1m60	1m65	1m70	1m75	1m80	1m85	1m90	1m95	2m	2m05
50				S	S	S							
55				S	S	S							
60				S	S			M					
65				S			M	M					
70					M	M	M	M	L				
75					M	M	M	M	L	L			
80					M	M	M		L	L	L		
85						M		L	L	L			
90								L	L		XL	XL	XL
95							L	L		XL	XL	XL	XL
100										XL	XL	XL	XL
105										XL	XL	XL	XL
110										XL	XL	XL	XL

-  XS
-  XS/S
-  S
-  S/M
-  M
-  M/L
-  L
-  L/ XL
-  XL

1 EVO XC3 harness

Standard version.

2 BUMPAIR 17 XC

3 Wooden seat plate (see corresponding size on page 9)

4 30 mm Self-locking Zicral

5 Reserve parachute handle (ref : E2)



Version +

2 BUMPAIR 17 XC

6 Carbon fiber seat plate, see corresponding size on page 9

4 30mm Zicral Self-locking carabiners

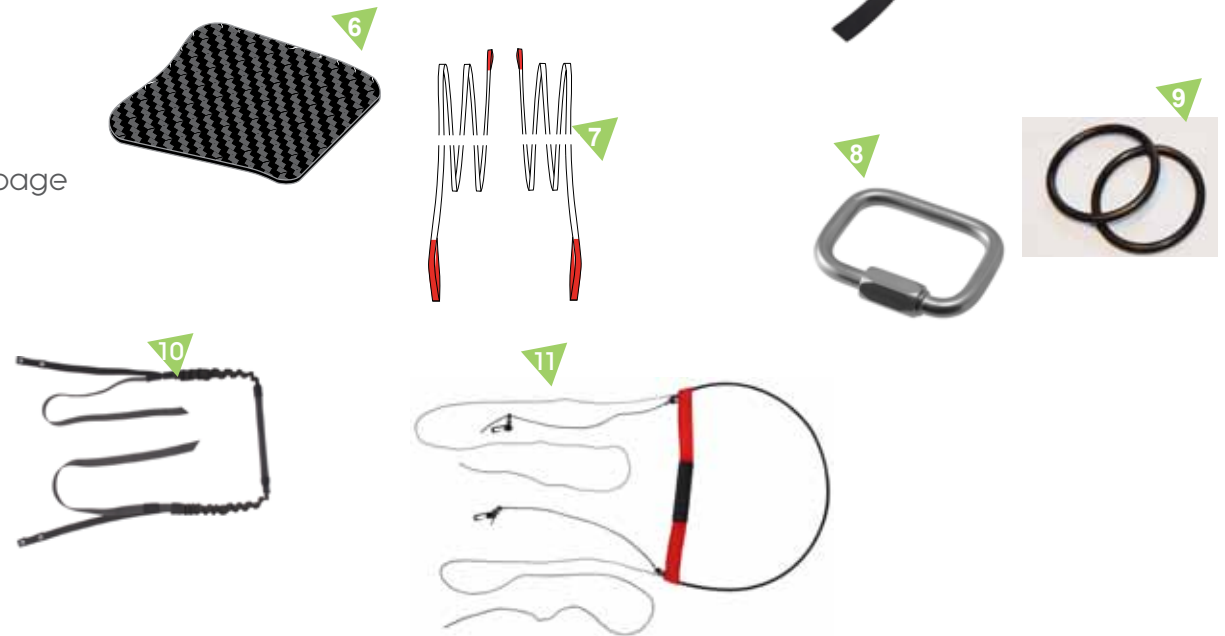
5 Reserve parachute handle (ref : E2)

7 Solo Dyneema individual risers

8 7mm Maillon Rapide®

9 Toric ring (x2)

10 Self-retractable foot-rest 20mm



Options

11 Standard double stage speedbar

12 EVO CX3 Speedbag

Harness overview

This illustration will help you understand the manual content.



- 1 Attachment points.
- 2 Main buckles.
- 3 Chest strap adjustment.
- 4 Leg straps.
- 5 Backrest tilt adjustment.
- 6 Shoulder straps adjustments.
- 7 Seat plate angle adjustment.
- 8 Seat depth adjustment.
- 9 Foot-rest buckle.
- 10 Speed-bar guide.
- 11 Reserve parachute handle.
- 12 Dorsal pocket.
- 13 BUMPAIR placement.

Installing the seat-plate.

The EVO XC3 can be equipped with a wooden or a carbon fiber seat plate to loose overall harness weight.



Lift the rear end of the seat fabric, and insert the seat plate leading edge first.



Push the seat plate all the way to the end of the housing.



Once the seat plate is fully inserted in its housing, fold the hood over it.

Corresponding seat plates for the various harness sizes.

	Size S	Size M	Size L	Size XL
Wooden seat plate.	Wooden seat plate. S 33x34 Ref. (Reference) : MPPL017	Wooden seat plate. M 35x37 Ref. (Reference) : MPPL018	Wooden seat plate. L 37x37 Ref. (Reference) : MPPL019	Wooden seat plate. XL 39x37 Ref. (Reference) : MPPL020
Carbon fiber seat plate.	Carbon fiber seat plate. S 33x34 Ref. (Reference) : MPPL005	Carbon fiber seat plate. M 35x37 Ref. (Reference) : MPPL006	Carbon fiber seat plate. L 37x37 Ref. (Reference) : MPPL007	Carbon fiber seat plate. XL 97x37 Ref. (Reference) : MPPL008

BUMPAIR assembly.



Inside the dorsal pocket :
open the vertical zip.



Insert the BUMPAIR 17XC
inside the slot.



Push the BUMPAIR between the exterior of the container
and the BUMPAIR housing.

Once the BUMPAIR is fully inserted inside its housing,
push behind the dorsal pocket.

Once the BUMPAIR is fully inserted inside its housing,
close the vertical zipper.

Installing the speed-bar system.

The EVO XC3 is pre-equipped to use a speed-bar as most of our harness models are. Within the SUPAIR gear lineup, the standard speed-bar is the most adaptable for being the lightest and self-retractable.



- 1** Push the accelerator cord through the guiding tube. **D**
- 2** Push the speed-bar line through the pulley.
- 3** Push the accelerator cord through the lateral skirt slot. **E**
- 4** Attach the end of the speed-bar lines to the crimped hooks which is to be connected to the riser's crimped hooks. Adjust the lines length and securely knot it.
- 5** Self-retracting speed-system: push the elastic cords through the (D) ring to connect them to the white loop stitched on the inner sides of the harness. **F**
- 6** If the foot rest is not used, the lateral skirt can be folded over and around the guiding tube and close by pressing the button.



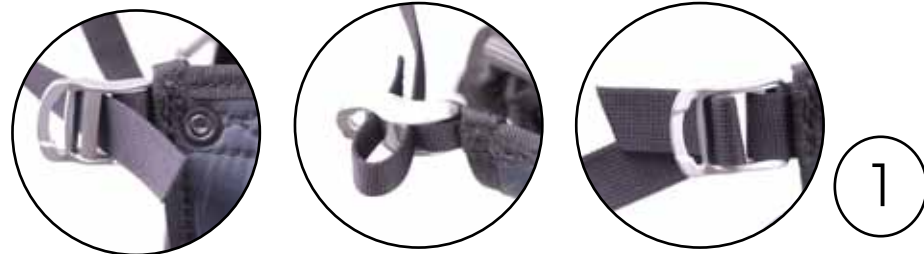
Foot-rest installation (Option).



The EVO XC3 is pre-equipped to accept a retractable foot-rest 20mm (A).



Push the foot-rest strap through buckle (B) located at the front of the harness side skirt.



Push the elastic under the guide (C).

2



Inner view.

Outer view.

3



Adjust the foot-rest length during a hang-test, and stow away the straps excess in the elasticated holder.

4

Rescue parachute setup assembly.



Thank you for carefully reading the following! We advise you to have the initial rescue parachute installation done by someone knowledgeable with the process.

Connecting the handle to the rescue parachute's deployment bag.



1. Place the handle inside the middle webbing loop and make a lark's head knot with the handle.
2. Fasten tightly the lark's head knot, and verify the solidity of the link.

The handle must be connected to the central loop, except for large reserve parachutes (use side loop). Must be checked at the end of the installation procedure by gently pulling on the handle, and make certain to disengage both safety pins held in place

Setting up the reserve parachute risers guiding sleeves.

Completely open the reserve parachute risers guiding sleeve zipper.



Connecting the risers to the harness.

Make a lark's head knot configuration with each Dyneema riser on the harness parachute connections.



Connecting the reserve parachute to the Dyneema risers

Connecting the reserve parachute with the parachute risers using the 7mm carabiners (Mailon Rapide®). Secure the bridles in place, using the toric elasticated rings.



Connected risers to the harness (lark's head knot connection).



Tuck the risers away in the riser sleeve.



To close the protective riser sleeve...



... lower the zipper tab down to the reserve parachute pocket level...



Once the tab can not move further and aligned with the reserve parachute pocket ; bring it up to close the zipper.



Place the POD in the pocket. Reserve handle on the seat plate side, lines and risers facing outward.

With a small cord : hook the loop - #1 marker.



Push the cord and the loop through grommet #2.





Push the cord with the loop through grommet #3, and push the handle's pin through the loop. Then tuck away the pin with the handle's end behind the neoprene flap #3.



With a small cord : hook the loop #4 marker.



Push the cord and the loop through grommet #5.



Push the cord and the loop through grommet #6.



Push the cord with the loop through grommet #7, and push the handle's pin through the loop.



Then tuck away the pin with the handle's end behind the neoprene flap #7.



The tab is located at the end of the zipper on the bridle side (inside the fabric sleeve).

Top view



Zip up the reserve parachute riser sleeve.

Reserve parachute riser protective sleeves.

Upon setup completion, conduct an extraction sequence during a hang-test to verify that all works properly before repeating the installation procedure.

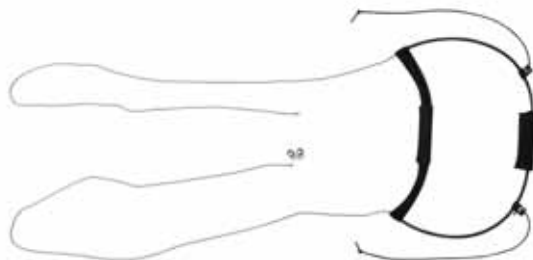
Harness with reserve parachute overview.

- 1 SPEEDBAG EVO XC3
- 2 COCKPIT XC
- 3 SPEEDBAG plate.
- 4 Tape Loop
- 5 Weebing adjustment
- 6 Connecting elastic
- 7 Female quick buckle 15mm
- 8 Connecting ring



Option

- 9 Double stage speedbar



Install one tape loop N°4 on each side.



Outside view. Installation finished.



Inside view. Installation finished.

Speedbag plate installation



Zip



1



2



3



4



5



6



1



2



3



4



5



6



Left side

1



2



3



On each side



Cockpit

1



2



3



4



Harness installation

1



2



3



4



Setting your position inside the harness before taking-off is extremely important.



Harness adjustments.



All those adjustments must be conducted while seating in a hang-test device, and before the initial flight.

Shoulder straps adjustments.

Tighten the shoulder straps using the small looped cord by pulling forward (or downward).



Loosen by pulling the checkered strap reward.



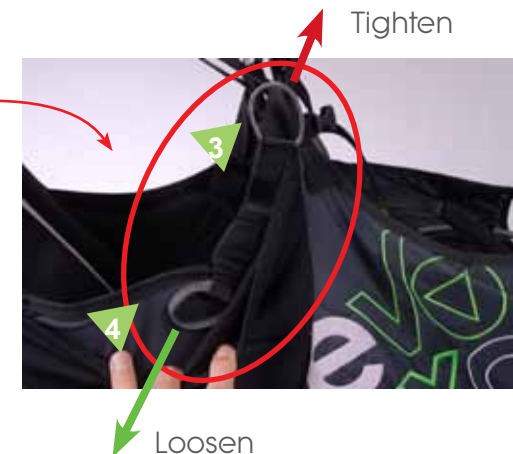
Resting precisely on the shoulder straps improves comfort. You must find the perfect equilibrium between the side/lateral trim straps adjustments and the shoulder straps.

In a reclined seating position, the shoulder straps also participate to the overall comfort by supporting the upper torso/shoulder area.




Backrest angle adjustment.

Change the backrest angle by pulling the loop.



Chest strap adjustment.

 This adjustment is important for acting on the ABS and the harness overall stability. The tighter the more stable. The opposite is true while still enabling weight-shift steering.

To tighten the chest strap:

Place your left hand in front of the risers, and grab the right carabiner.

With the right hand shorten the distance by, grabbing the chest strap finger-loop and pull it to tighten the chest strap.  1

To loosen the chest strap:

Place your left hand in front of and pass the risers to grab the right carabiner.

Using the left hand, shorten the distance between the risers and pull the finger-loop in the opposite direction to loosen the chest strap.  2



Seat plate adjustment.

This adjustment enables leg support variations toward to front of the seating area. Comfort and seating posture can be improved for pilots with long legs.

To tighten and increase leg support to the front of the seat plate : bringing the legs upward will reduce tension on the adjustment buckles, and decrease the effort required to pull the end straps upward.

To loosen the tension : raising the legs upward will reduce tension on the adjustment buckles, and decrease the effort required to unlock them with an upward tilt.



Seat depth adjustment.

This adjustment enables the seat depth to be adjusted. It can be an asset when flying with feet on the foot-rest in a more reclined posture. On the other hand, it is not necessary to reduce the seat depth for an adopted upright seating flying posture.

To reduce the seat depth : raise your hips while pressing on the foot-rest (this action reduces the tension on the buckles), and the pull exerted on the adjustment straps ends.

To loosen the support : tilt the adjustment buckles and relax the adjustment straps.



Inflight behavior.

The harness geometry creates a very good symbiosis ou correlation between the wing and seat stability (especially when tightening the chest strap).

The EVO XC3 is a stable and dampened harness.

The backrest is stiffened thus enabling a better pressure distribution on the entire dorsal area during for long comfortable flights.

The EVO XC3 structural design brings an excellent correlation between the wing and the harness (noticeably when tightening the chest strap).



Prior each takeoff, conduct a pre-flight verification by running through the following list :



- Check that the harness and the carabiners are not damaged.
- Be certain for the reserve parachute pocket to be properly closed with its handle securely in place.
- Check that your personal settings have not been modified.
- Check the connexion risers / harness as well as the self-locking carabiners (locked and secured).
- Check your speed-bar system if your harness is equipped with one.

Only after a thorough weather conditions analysis, can the decision to wether fly or not be made and to outfit yourself with the harness.



- Properly and securely fasten the leg / chest strap buckles.
- Double check that all buckles are fully locked and secured by pulling firmly on them. Check that no line, tab or cloth is stuck / jammed in the buckles.
- Be absolutely certain for the reserve parachute handle to work freely without anything impeding its proper functioning.



Main buckles.

Flight phases



The takeoff phase is easily conducted.
Once air borne, the transition from running to seating is smooth and effortless.



Never keep your steering toggles in hands to push yourself inside the harness, and risk stalling the glider for flying too slow.
Never let go the steering toggles when flying close to obstacles.

In flight :

Once in flight, the harness is very instinctive and precis to handle.



Please set the distance between the two carabiners according to aerology conditions, and to the wing manufacturer's guide lines.



Tightening the chest strap provides more stability but less harness piloting efficiency. Beware of the increased risk of riser twisting. The reverse is true, and enables more piloting control, but could become dangerous in turbulent air, with the risk of falling toward the collapsed side of the wing without being able to actively counteract.

Speedbar use.



We recommend a careful use of the speed-bar due of an increased risk of a potential frontal collapse. Please, carefully read the manufacturer's recommendations in the glider manual for more detailed information.

Using the optional foot-rest.



Using the foot-rest enables the pilot to have a harness more in tune with the wing while increasing leg comfort during extended flights.



Landing

Straighten yourself in your harness, and adopt a running posture to dissipate the horizontal speed after touchdown.



Never land while seating ! It is dangerous !



Optional fully compatible accessories are available for your EVO XC3 harness.

Function	Code	Description	Weight
Accelerator/Speed-bar.	ACCELSOUPLE	Thin double stage speed-bar.	100 g
20mm self-retractable foot-rest.	CALEPIEDRETRACT	20mm self-retractable foot-rest.	150 g

All necessary technical information comes with the product and/or can be accessed through our website at www.supair.com

Cleaning and harness maintenance.

It is a good idea to wash your harness from time to time. We recommend using a mild solvent (such as soap) with a soft brush. Rinse thoroughly.

DO NOT use chemicals agents such as aggressive detergents or strong solvents potentially harmful to the webbing stitching, and harness fabrics.

Zippers should be lubricated from time to time using a silicon spray only.

Storage and transport.

When not using your harness, store it inside your paragliding rucksack in a dry cool and clean place protected from UV exposure. If your harness is wet, please dry it thoroughly before storing.

During transport protect the harness from any mechanical or UV deterioration (use a bag). Please avoid long transports in wet or humid conditions.

Product longevity.

Independently from the pre-flight checks you must open and unfold your rescue parachute once every 6 months. A full compulsory maintenance harness check must be conducted every two years :

- Carbon fiber seat plate : no cracks or splinters.
- webbings (no wear tear or material unraveling - no unwanted folds).
- The buckles and self-locking carabiners (no hairline cracks, apparent damage, and functioning properly).



The threads making the webbing and fabrics used in the EVO XC3 have been selected to offer the best possible light weight to longevity ratio. Nonetheless, in some conditions, after long term exposure to UV and/or significant abrasion or exposure to chemicals, it is compulsory to have your harness's integrity checked at a certified repair centre. Your safety depends on it.

These carabiners must never be used for anything else than paragliding (not for climbing, towing etc.).

Repairs



Though we use the highest quality materials it is possible that your harness may eventually deteriorate through general use. If showing any signs of significant wear and tear, you should have it inspected and eventually repaired at a certified repair centre if necessary. SUP'AIR also offers the possibility for its products to be repaired beyond the end of the warranty period. Please contact us by either telephone or E-mail sav@supair.com in order to receive a quotation.

Materials

Fabrics

CORDURA® light

Webbings

Polyamide 20 mm (500 DaN)

Polyester 25 mm (1250 DaN)

Recycling

All our materials are selected for their technical and environmentally friendly characteristics. Most of them are recyclable.

If you estimate that your harness has reached the end of its lifespan you can then separate the plastic from the metallic parts and apply up-to-date sorting rules in effect in your community. As for the fabric parts, we would advise you to contact your local specialized recycling center(s).

Environmental friendly practices

We highly recommend you to respect the environment when paragliding. Do not wander outside marked trails. Do not make unwanted noise, and do not disturb nature as a whole. Please be mindful of the environment at all times.

Disclaimer



Paragliding is an activity requiring specific skills, knowledge, and sound judgement. Learn the basics in a certified school. Carry an adequate insurance policy as well as a flying licence, and use common sense as to whether or not to fly based on your experience level. Be humble ! SUP'AIR can not be held responsible for your paragliding decisions or activities.



This SUP'AIR product has been designed exclusively for paragliding. Any other activity such as skydiving or BASE jumping is absolutely forbidden.

Pilot's gear.



It is essential for your personal safety to wear a helmet, suitable boots, and adequate clothing for the activity. Having a reserve parachute properly connected to your harness when flying is not an option but rather, a mandatory part of your safety gear.

This page will help you to record all the life stages of your EVO XC3 harness.

Serial number :

Purchase date	
Owner's name	
Shop's name and stamp.	

<input type="checkbox"/> Care	
<input type="checkbox"/> Resale	
Date	
Workshop's name/ Buyer's name	

Care	
Resale	
Date	
Workshop's name/ Buyer's name	

Care	
Resale	
Date	
Workshop's name/ Buyer's name	

Care	
Resale	
Date	
Workshop's name/ Buyer's name	

SUPAIR



**evo xc
3**