

# AXIS Comet<sup>3</sup>



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## Axis Paragliders

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# Introduction

When setting out to design our introduction level cross-country glider we had a clear target: we wanted to create the best paraglider possible for novice performance pilots. Pilots who want top performance and sensitive handling, but who rightly demand ever more security.

The Comet 3 is that glider, keeping the comfortable but precise characteristics of Axis gliders and also its predecessor.

With an internal structure based on the successful Vega

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V glider and including our unique differential speed system. This means pilots can achieve a good sink-rate at half or one-third speed bar, and maintain good stability at maximum speed: in short, it gives the glider excellent usable speed.

The Comet 3 is an intermediate glider (EN-B) and is meant for novice pilots who hold a full paragliding pilot licence. It is designed as an ideal beginner cross-country glider, suitable also for experienced pilots who fly regularly and who will enjoy a performance glider with greater safety characteristics.

Comet 3 is not recommended for less experienced pilots or complete novice pilots.

This manual provides information about the glider, which will help you to fly safely and keep your wing in good condition. If after reading this manual you have any further questions, please don't hesitate to contact us or any authorised Axis dealer.

Thank you for choosing the new Comet 3 from Axis.

[www.axispara.cz](http://www.axispara.cz)



## Safety Notice

# WARNING

By the purchase of this equipment, you are responsible for being a certified paraglider pilot and you accept all risks inherent with paragliding activities including injury and death. Improper use or misuse of paragliding equipment greatly increases these risks. Neither Axis nor the seller of Axis equipment shall be held liable for personal or third party injuries or damages under any circumstances. If any aspect of the use of our equipment remains unclear, please contact your local paragliding instructor, Axis dealer or the Axis importer in your country.

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# Pre-flight inspection

The Comet 3 is delivered with a rucksack, inner bag, compression strap and this manual. The dealer or your instructor should have made a test inflation and test flight before delivery to you.

## Trimmers

Comet 3 is delivered without trimmers.

## Brake-line length

When you receive your new Comet 3, the brake-line length is set the same as the Axis test glider. This length has been finely tuned by Axis test pilots and it should not be necessary to adjust it.

If you feel it is necessary to adjust the brake-line length to suit physical build, height of harness hang points, or style of flying we recommend you test-fly the glider after every 20mm of adjustment.

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There should always be free brake travel when the glider is flown hands-up. This means when you look at your brake lines in flight with your hands up, there should be a slight bow, or arc, to the line – the brake lines should not be tight. This is to prevent the brakes being applied when the speed-system is used.

Brake lines that are too short:

- May lead to fatigue from flying with your hands in an unnatural position
- May impede recovery from certain manoeuvres
- Will certainly reduce your glider's speed range.

Brake lines that are too long will:

- Reduce pilot control during launch
- Reduce control in extreme flying situations
- Make it difficult to execute a good flare when landing.

Each brake line should be tied securely to its control handle with a suitable knot.

Brake line travel at maximum weight in flight:

Total Weight	80kg	80 to 100 kg	>100kg
Brake line travel	>55cm	>60cm	>65cm

Other adjustments or changes to your Comet 3 lead to a loss of guarantee, airworthiness and validity of EN certification and may endanger both yourself and others.

If you have any suggestions on improvements let us know and our test pilots will try out your ideas in a controlled situation.

## Weight range

The Comet 3 must be flown within the certified weight range given in the reference section of this manual. The weight range is quoted as the total weight in flight, i.e. the weight of the pilot,



glider, harness and accessories. The easiest way to check your total weight is to stand on weighing scales with all your equipment packed into your rucksack

## Pre-flight safety

Before flying this glider you should:

Have the appropriate practical and theoretical training

Have the required licence and insurance

Be fit to fly and unaffected by stress or drugs

Wear a suitable helmet

Use a suitable harness and emergency parachute

Make a thorough pre-flight check.

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# Flying the Comet

## 3

We recommend you practice inflating your glider before flying it, and make your first flights in gentle conditions on a familiar flying site.

### A. Normal flight

#### Pre-flight check

A proper pre-flight check is essential for safe flying.

Before launch lay the glider out into a slight arc and check that:

- Cell openings are free of obstructions
- Lines are free of tangles or knots
- No twigs, grass or other objects are tangled in the lines
- Risers are correctly connected

- Brake lines run freely through the pulleys
- Knots on brake handles are secure
- Carabiners on risers are closed and/or tightened

#### Launch

The key to successful launching is to practice ground-handling on flat ground as often as possible. The Comet 3 inflates easily and steadily using forward or reverse launch techniques. There is no tendency to overshoot the pilot. To forward (alpine) launch in light or nil wind there is no need to pull the risers hard. Allow the glider to stabilise overhead and run positively forward checking the canopy is fully inflated and clear of any knots or tangles. Reverse launching is recommended in strong wind.

#### Flight

The best glide speed in calm air is achieved in the hands-up position. The best sink rate is produced with both

brake lines drawn down equally to about 20% of their range.

#### Turning

The handling characteristics of the Comet 3 require no special or non-standard procedures. Brake pressure is progressive. This gives a responsive and sporty feel to the handling.

In an emergency (e.g. a broken brake line – main controls failure) the Comet 3 can be manoeuvred by steering carefully with the rear risers or by weight shift.

#### Using the speed system

The speed system on the Comet 3 comes supplied with Brummel hooks ready to attach to your own speedbar of choice. When you have done this, check the speed system runs smoothly by hanging in your harness before flying. In particular check that the speed system won't be engaged when in normal flight. Unnecessary knots and loops in a speed system are not recommended.

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Maximum useable speed is one of the strong points of Axis paragliders and the Comet 3 is no exception. However, in spite of this exceptional stability, any collapse at full speed will be more severe than the same event experienced at trim speed. Always keep both hands on the controls when flying fast and be ready to release the speed system immediately at the first sign of a collapse. Use the speed system carefully when flying close to the ground or the terrain.

Glider is not equipped with trim risers.

## Landing

On your first flights you may be surprised at how well the Comet 3 glides. Take account of this when making your landing approach and give yourself the opportunity for S-turns or a longer approach than you might be used to.

For a normal, into-wind landing evenly pull the brakes all the way down when you are about one metre from the ground. Under nil-wind conditions, or if you are forced to make an emergency

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downwind landing, a wrap on each brake will allow you to make a stronger flare.

## B. Losing altitude

Most pilots will, at some time, want to lose height. This may be because of a change in the weather, you are at cloud-base and don't want to go any higher, or simply because you want to finish your flight quickly.

Ideally, the best way to lose height is to find an area of sink and stay in it. This way you can fly normally to the ground. However, if there is no sink, or if you are in strong lift and want to go down, a rapid descent method may be needed.

There are three main rapid descent methods:

- Big ears
- B-line stall
- Spiral dive

Each of these descent methods places extra, different stresses on gliders and should be avoided if you want to extend the life of the glider.

It is important these manoeuvres are initially practiced under qualified supervision and preferably during a safety training course.

## Big ears

This is the easiest and safest technique for descent while maintaining forward speed. Depending on how much of the wing-tip you deflate, 3m/s to 6m/s sink rate can be achieved. While in big ears your forward speed can be increased by using the speed system.

The Comet 3 can be steered with big ears in by weight-shift alone.

**Initiation:** Reach up as high as possible and take hold of the outer A-line on each side of the glider. Pull one in first, maintain direction, and then pull in the second. Hold them in firmly. Make sure the lines are pulled down equally on each side and your big ears are even.





**Recovery:** Under normal circumstances the ears will come out on their own when the lines are released. Opening may be accelerated by slightly pumping the brakes.

## B-line stall

This is an effective way of making a rapid descent but doesn't allow any forward speed.

**Initiation:** Take hold of the B-risers just below the maillons and smoothly pull them down, twisting your hands until the canopy shows a span-wise crease at the B-line attachment points. It is difficult to pull at first but becomes easier as the aerofoil creases. Your sink rate will increase while your forward speed will reduce to practically zero. Don't release the lines immediately - the glider should be left to settle before releasing.

**Warning:** do not pull B-risers excessively down (ones the canopy is stalled) since then you would be engaging AA3 wing-tip line and such could slightly destabilize the already stalled canopy.

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**Recovery:** Let go of the risers smoothly but determinedly and symmetrically. The Comet automatically returns to normal flight without any deep stall tendencies but may dive slightly forward. If the risers are released slowly and very unevenly the glider could start to spin.

## Spiral dive

The spiral dive is the most effective way of making a fast descent. During the spiral dive the pilot and glider will experience strong centrifugal forces which strain the glider. As such it should be considered an extreme manoeuvre.

**Initiation:** Weight shift and smoothly pull on one brake so the glider goes from a normal 360-degree turn into a steep turn and from there into a spiral dive. Once established in the spiral the descent rate and bank angle can be controlled with weight shift and the outer brake.

**Recovery:** The Comet 3 recovers from a spiral spontaneously as soon as the brakes are released and weight shift

returns to neutral. To exit allow the spiral to slow for a turn or two by applying outer brake and weight shift then release smoothly. Always finish a spiral dive at a safe altitude.

## C. Flying in turbulent conditions

Deflations can occur when flying in turbulence but in most situations the Comet 3 will stabilise without pilot input. Flying with a little brake applied equally will help to prevent deflations and allow you to experience more direct feedback.

Active flying will help avoid deflations. The aim is to keep the glider above your head in all situations by responding correctly to the glider's movements by using the brakes and weight shift.

It is important these manoeuvres are initially practiced under qualified supervision and preferably during a safety training course.



## Asymmetric collapse

The Comet 3 will normally re-inflate after an asymmetric collapse without input from the pilot, but the wing will turn towards the collapsed side. You should always maintain course and direction by weight-shifting away from the collapsed side. This can be reinforced by applying a small amount of brake on the opposite side to the deflation. If the collapse stays in, the collapsed side can be re-inflated by pumping the brake on the collapsed side in a firm and smooth manner.

If you experience a big collapse while accelerated the canopy will fall behind you due to the difference in inertia between you and the canopy. You must wait until you pendulum back under the canopy before dealing with the deflation. Reacting too early can risk stalling the glider completely. Release the speed-bar immediately if you have a big collapse during accelerated flight and, while keeping weightshift neutral, apply slight brake to the open side. Let the glider enter a turn if space allows in order to avoid a spin or stall.

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## Symmetric collapse

A symmetric, or frontal, collapse will normally reopen without any pilot input. The Comet 3 will regain airspeed with a small surge. Be careful not to brake while the glider is behind you as this could induce a stall.

## Deep stall

The Comet 3 has no tendency to either get into, or stay in, a deep stall. If the glider does enter a deep stall, accelerate the glider out of the deep stall by either pushing on the A-risers or by using the speed bar. Never try to steer out of a deep stall. A wet glider has a higher tendency to deep stall, so if you pass through rain accelerate a little and avoid using big-ears until the glider is dry.

## Full stall

This is an extreme manoeuvre that should rarely, if ever, be required. To induce a full stall take one or two wraps of the brake lines and pull both of them down smoothly. Hold them down, locking your arms under your seat until

the canopy falls behind you and deforms into a characteristic crescent shape. In a stable full stall the canopy will oscillate back and forth. Be careful not to release the brakes prematurely or asymmetrically.

The Comet 3 recovers from a full stall automatically after the brakes are released. During correct recovery, where the brakes are let up a little to allow air to enter the glider prior to being released when the glider is in front of you, the Comet 3 shows no tendency to surge strongly in front of the pilot.

If the brakes are released prematurely or too quickly there is a possible tendency for the glider to surge. This can be corrected by simultaneous equal braking on both sides. Be careful not to release the brakes asymmetrically as this can cause a large asymmetric collapse followed by a tendency to enter a spin.

## Negative spin

Should a spin occur the Comet 3 is capable of recovering automatically when the brakes are released. As the



glider surges forward slow it down with the brakes to avoid the possibility of a front collapse or an asymmetric collapse which could cause a cravat. Always wait for the glider to be in front of you or above you - never brake while it is behind you as this can risk a stall.

**Safety notice:** The Comet 3 has excellent passive safety as shown by the certification tests. However, be aware that the Comet 3 can surge forward when a negative spin is released too quickly. Avoid releasing from a spin too quickly or while the glider is behind the pilot.

*Remember:* A wrong manoeuvre at the wrong time may change a straightforward situation into a dangerous problem. Extreme manoeuvres also expose your glider to forces which may damage it. Practice these techniques under adequate supervision preferably during a safety training course.

There are no any special flying procedures or configuration needed for this Comet 3. Comet 3 is designed for single seat flying and should not be used for tandem flying!

## Tow launch

The Comet 3 is suitable for towing by pilots who have the relevant towing rating. The Comet 3 has no tendencies towards deep stall/parachuting. There is sufficient margin to counter steer the glider in a normal towing situation. Make sure you use proper equipment, experienced personnel, the recommended techniques and all relevant safety precautions for towing.

## Motorized flight

The Comet 3 is not certified for motorized flight. Our current range of gliders suitable for paramotoring can be found in the paramotoring section on [www.axispara.cz](http://www.axispara.cz)

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# Care, Maintenance and Repairs

The materials used to construct your Comet 3 have been carefully chosen for maximum durability. If you treat your glider carefully and follow these guidelines it will last you a long time. Excessive wear can occur by bad ground-handling, careless packing, unnecessary exposure to UV light, exposure to chemicals, heat and moisture.

## Ground-handling

Choose a suitable area to launch your glider. Lines caught on roots or rocks lead to unnecessary strain on the attachment tabs during inflation. Snagging lines may rip the canopy fabric or damage lines.

When landing, try not to let the canopy fall on its leading edge. The sudden

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pressure increase can severely damage the air-resistant coating of the canopy as well as weaken the ribs and seams.

Dragging the glider over grass, soil, sand or rocks, will significantly reduce its lifetime and increase its porosity.

When preparing for launch or when ground-handling, be sure not to step on any of the lines or the canopy fabric.

Don't tie any knots in the lines.

## UV damage

Protect your canopy and lines from unnecessary exposure to sunlight.

## Storage

Avoid packing your glider when it is wet. If there's no other way, then dry it as soon as possible away from direct sunlight. Be careful to avoid storing your canopy when damp or wet: this is the most common reason for canopy degradation.

Don't let your glider come into contact with seawater. If it does, rinse the lines, canopy and risers with fresh water and dry it away from direct sunlight before storing.

After flight or when storing, always use the inner protection sack.

When storing or during transport make sure your glider isn't exposed to temperatures higher than 50°C.

Never let the glider come into contact with chemicals. Clean the glider with clean lukewarm water only. Never clean using abrasives.

For long-term storage don't pack the glider too tightly. Leave the rucksack zip open when possible to allow any moisture to evaporate.



## Repairs

Small holes in the canopy can be repaired using adhesive tape (also named ripstop).

Larger repairs or cell replacement should only be carried out by the manufacturer's authorised agent.

Damaged lines should be replaced by your Axis dealer or any authorised workshop. When a new line has been fitted always check its length against its counterpart on the opposite side of the wing. After replacing a line always inflate the glider on flat ground to check that everything is in order before flying.

After tree or water landings always examine the glider carefully. If you suspect the glider may be damaged in any way contact your nearest authorised Axis supplier.

After 100 hours of flying or two years, whichever is sooner, your Comet 3 must be checked and tested by the manufacturer's authorised agent.

Comet 3 should be kept in best possible conditions to prevent any failures and/or non-standard flying modes/reactions to actual air conditions. It's your responsibility as a pilot to ensure that your wing is airworthy at all times.

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# Technical Details

Based on the highly successful Vega V , Comet 3 has a slightly changed profile with improved shaping of the wingtips to reduce drag and give better performance.

The aspect ratio of 5.85, the high number of cells (53), and the reduced total line length gives the Comet 3 even higher performance than its predecessor Comet 2.

The inner structure is a direct development from Axis's Mercury sport competition glider. The changes in the internal structure mean higher passive safety. The canopy is reinforced by tapes which connect attachment points inside the cells – this prevents distortion and helps the canopy keep its form.

A new line system helps to reduce the length of the main lines. The brake attachments have been moved to the trailing edge to create more precise handling and feedback.

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All the stitching is on the inside of the canopy for greater protection.

## Testing and certification

The Comet 3 has passed certification EN-B. The certification of each canopy and its serial number is found on label inside of central glider cell. Certification is valid for all harnesses of ABS type. This type of harness allows a certain degree of adjustment to be made to the length of the waist strap. The recommended distance between the carabiners is 42cm.

In common with all other paragliders, when cross-bracing is looser than the recommended 42cm, weight-shift control increases and the glider feels more sensitive. However, automatic recovery from a collapse when using slack cross-bracing can be slower and more unpredictable. When cross-bracing is tighter, the pilot feels more stable but the effectiveness of weight-shift is less effective.

EN 926-2:2013 (E)

**Figure 5 — Width of harness attachment points**      **Figure 6 — Height of harness attachment points**

**Table 49 — Total weight in flight**

TWF (total weight in flight)	< 80 kg	80 kg - 100 kg	> 100 kg
Width (measurement A on Figure 5)	(40 ± 2) cm	(44 ± 2) cm	(48 ± 2) cm
Height (measurement B on Figure 6)	(40 ± 1) cm	(42 ± 1) cm	(44 ± 1) cm



The Comet 3 has been designed for hill and/or tow launches. It is not a paramotor wing. The use of a power unit, paramotor or motor with the Comet 3 has not been tested by the manufacturer or by the testing authority.

There are no other adjustable or removable or variable devices other than speed-system brommel hooks and standard brake handles (for adjustment, please check page 4).

Test sample glider for each size was checked by testing laboratory after the test flights in accordance to the data in this manual – all suspension lines, control lines and risers. For overall line lengths was used tolerance of +/- 5 mm.

Dimensions given in the User's Manual where checked by testing laboratory – Air Turquoise SA.

## Disposal and environmental information

Environmental protection plays an important role in the selection of materials and the manufacture of an AXIS product. We are privileged to fly in areas of outstanding natural beauty. Respect and preserve nature by minimizing your impact on the environment. When visiting an area, contact the local club for details of

environmentally sensitive areas and local restrictions.

We use only non-hazardous materials that are subjected to continuous quality and environmental impact assessments. When your paraglider reaches the end of its useful life in a number of years time, please remove all metal parts and dispose the lines, canopy and risers in a waste incineration plant or recycling center and/or dispose of it with consideration and follow any local regulations..

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# Technical specifications

Axis Comet 3 specifications

Size	XS	S	M	L	XL
Zoom	92	96	100	103	107.5
Max Wing Chord	239.1	251.9	262.4	270.3	279.6
Area	21.35m <sup>2</sup>	23.71m <sup>2</sup>	25.72m <sup>2</sup>	27.288m <sup>2</sup>	29.21m <sup>2</sup>
Span	11.79m	11.78m	12.27m	12.64m	13.08m
Aspect Ratio			5.85		
Projected Area	18.08m <sup>2</sup>	20.08m <sup>2</sup>	21.78m <sup>2</sup>	23.11m <sup>2</sup>	24.73m <sup>2</sup>
Projected Span	8.57m	9.03m	9.41m	9.69m	10.025m
Projected A/R			4.06		
Number of cells			53		
Lines consumption	229	239	249	256	267
Take Off Weight	55-70 kg	70-90 kg	80-105 kg	95-120 kg	110-135 kg
Min. Speed			24 km.h <sup>-1</sup>		
Trimm Speed			39 km.h <sup>-1</sup>		
Acc. Speed			55 km.h <sup>-1</sup>		
Min. Sink Rate	0.97m.s <sup>-1</sup>			0.98m.s <sup>-1</sup>	
Gliding Ratio			10+		
Certification		EN-B	EN-B	EN-B	

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# Glider Plan



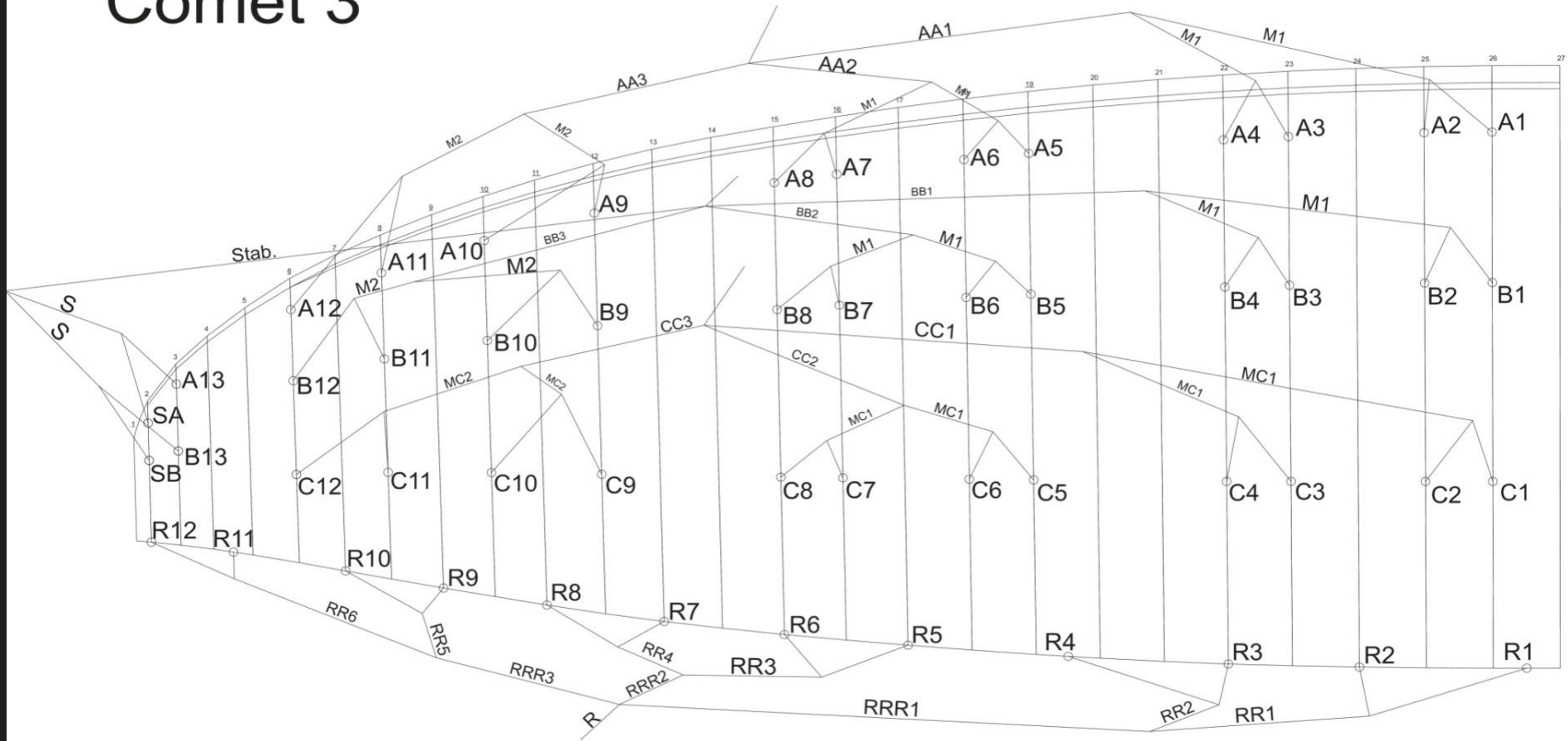
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# Line Plan

## Comet 3



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# Line Chart

All measurements are done under a gradual tension of 50N

Medium Size (Total lengths)

A1	7417	B1	7353	C1	7450	A13	6650	R1	8054
A2	7383	B2	7312	C2	7410	B13	6626	R2	7698
A3	7359	B3	7292	C3	7387	SA	6555	R3	7492
A4	7380	B4	7306	C4	7404	SB	6568	R4	7380
A5	7336	B5	7272	C5	7356			R5	7243
A6	7307	B6	7241	C6	7330			R6	7082
A7	7281	B7	7222	C7	7310			R7	7025
A8	7293	B8	7236	C8	7324			R8	7098
A9	7232	B9	7176	C9	7225			R9	6992
A10	7133	B10	7094	C10	7147			R10	6939
A11	7050	B11	7012	C11	7061			R11	6878
A12	7019	B12	6987	C12	7025			R12	6825

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Medium Size (Each line)

A1	580	B1	511	C1	608	R1	1531
A2	551	B2	474	C2	562	R2	1171
A3	526	B3	455	C3	547	R3	1175
A4	538	B4	474	C4	563	R4	1066
A5	505	B5	436	C5	516	R5	1002
A6	471	B6	407	C6	487	R6	843
A7	449	B7	391	C7	472	R7	824
A8	457	B8	394	C8	481	R8	894
A9	770	B9	716	C9	791	R9	841
A10	683	B10	634	C10	703	R10	782
A11	590	B11	559	C11	620	R11	765
A12	575	B12	536	C12	592	R12	741
		M1	1779	MC1	1792	RR1	1230
		M2	1295	MC2	1299	RR2	1019
						RR3	884
AA1	4511	BB1	4510	CC1	4510	RR4	843
AA2	4511	BB2	4510	CC2	4510	RR5	791
AA3	4623	BB3	4618	CC3	4617	RR6	753
A13	333	B13	355			RRR	2193
SA	262					F	3094
SB	276						
SA	643						
SB	647						
Stab	5118						

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Small Size (Total Lengths)

A1	7161	B1	7091	C1	7196	A13	6405	R1	7708	extension
A2	7129	B2	7056	C2	7155	B13	6423	R2	7366	
A3	7108	B3	7039	C3	7133	SA	6335	R3	7169	
A4	7124	B4	7052	C4	7148	SB	6346	R4	7065	
A5	7087	B5	7017	C5	7106			R5	6861	6934
A6	7057	B6	6993	C6	7080			R6	6707	6783
A7	7035	B7	6974	C7	7061			R7	6653	6729
A8	7043	B8	6983	C8	7073			R8	6722	6798
A9	6979	B9	6923	C9	6979			R9	6615	6691
A10	6888	B10	6848	C10	6901			R10	6560	6633
A11	6804	B11	6768	C11	6821			R11	6509	6586
A12	6780	B12	6752	C12	6789			R12	6485	6533

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Small Size (Each Line)

A1	560	B1	494	C1	586	R1	1475
A2	526	B2	459	C2	542	R2	1131
A3	508	B3	442	C3	522	R3	1130
A4	520	B4	450	C4	543	R4	1022
A5	481	B5	416	C5	497	R5	967
A6	454	B6	387	C6	469	R6	814
A7	432	B7	372	C7	459	R7	793
A8	441	B8	381	C8	466	R8	864
A9	747	B9	690	C9	756	R9	814
A10	654	B10	612	C10	678	R10	754
A11	575	B11	536	C11	602	R11	738
A12	549	B12	516	C12	565	R12	713
		M1	1707	MC1	1725	RR1	1181
		M2	1246	MC2	1245	RR2	983
						RR3	843
AA1	4340	BB1	4337	CC1	4334	RR4	810
AA2	4340	BB2	4337	CC2	4334	RR5	757
AA3	4430	BB3	4435	CC3	4433	RR6	723
A13	321	B13	349				
						RRR	2110
SA	621			SA	254	F	3017
SB	617			SB	268		
Stab	4918						

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Large Size (Total lengths)

A1	7644	B1	7574	C1	7683	A13	6812	R1	8277
A2	7612	B2	7532	C2	7641	B13	6831	R2	7904
A3	7585	B3	7511	C3	7616	SA	6737	R3	7691
A4	7602	B4	7526	C4	7636	SB	6750	R4	7575
A5	7564	B5	7488	C5	7593			R5	7436
A6	7535	B6	7460	C6	7565			R6	7271
A7	7508	B7	7439	C7	7542			R7	7214
A8	7515	B8	7445	C8	7552			R8	7286
A9	7450	B9	7389	C9	7463			R9	7176
A10	7350	B10	7308	C10	7373			R10	7118
A11	7261	B11	7224	C11	7289			R11	7056
A12	7239	B12	7200	C12	7254			R12	7000

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Large Size (Each Line)

A1	604	B1	537	C1	631	R1	1581
A2	570	B2	501	C2	591	R2	1214
A3	551	B3	473	C3	567	R3	1217
A4	569	B4	493	C4	587	R4	1099
A5	528	B5	455	C5	535	R5	1034
A6	496	B6	428	C6	511	R6	869
A7	470	B7	407	C7	494	R7	851
A8	481	B8	416	C8	506	R8	924
A9	804	B9	747	C9	823	R9	868
A10	702	B10	666	C10	730	R10	810
A11	619	B11	583	C11	645	R11	786
A12	596	B12	562	C12	612	R12	763
M1	1837			MC1	1853	RR1	1267
M2	1339			MC2	1337	RR2	1051
						RR3	909
AA1	4652	BB1	4647	CC1	4652	RR4	871
AA2	4652	BB2	4648	CC2	4652	RR5	811
AA3	4755	BB3	4761	CC3	4759	RR6	774
				A13	359	RRR	2258
				B13	370		
				SA	279	F	3199
				SB	292		
				SA	669		
				SB	665		
				Stab	5253		

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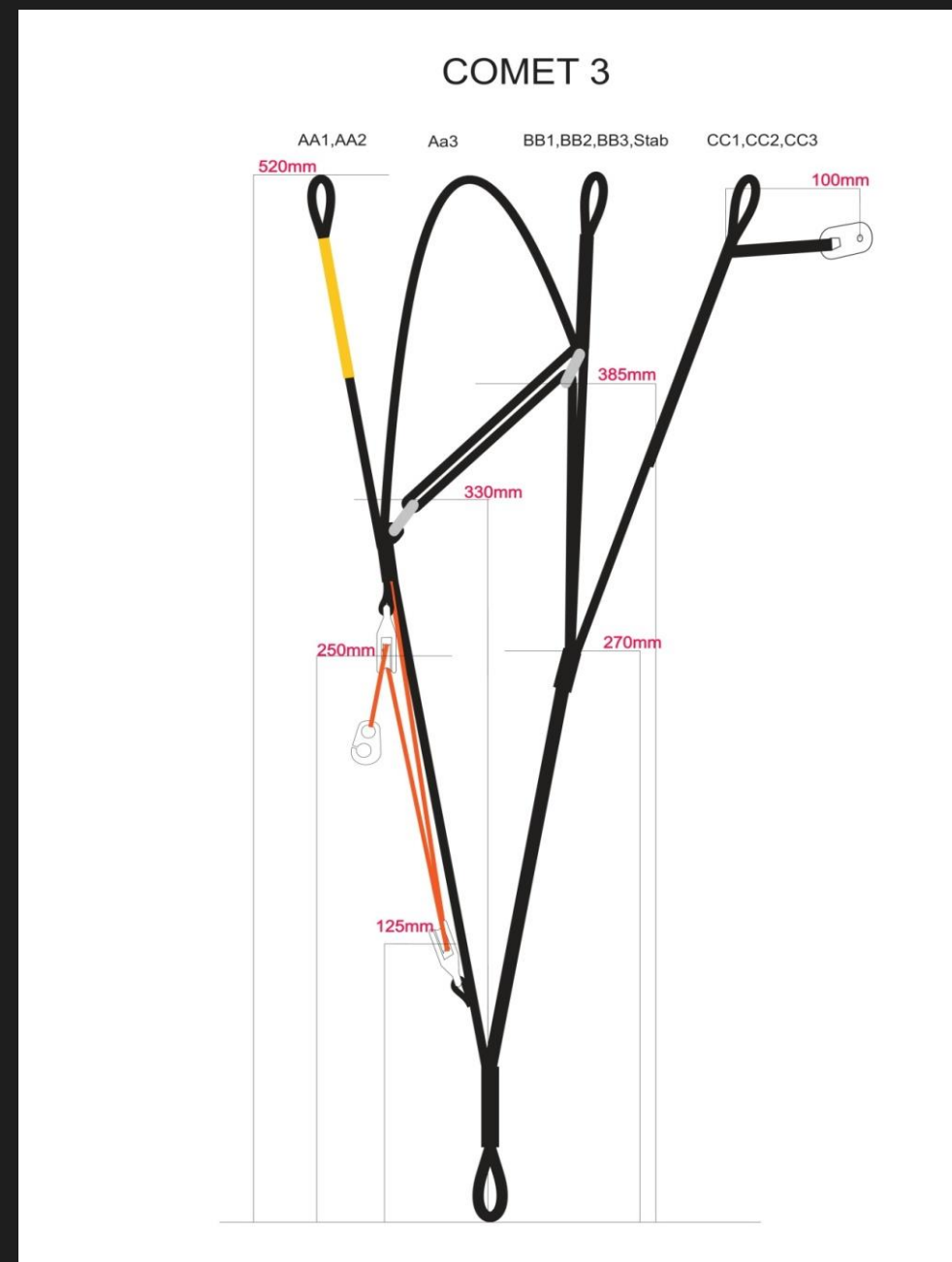




# Risers Configuration

Riser's lengths have tolerance of +/- 5mm

Accelerator travel is 12.5 cm



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# Specification of materials and spare parts

## Canopy

*Upper, Lower surface:* Porcher Sport: Skytex 9017 E25A, universal, 38 g/m<sup>2</sup>

UL version: Porcher Sport skytex 70000 E71, classic, 27g/m<sup>2</sup>  
Porcher Sport skytex 70032 E3W, universal, 32g/m<sup>2</sup>

*Ribs:* Porcher Sport: Skytex 9017 E29A, hard finish, 40 g/m<sup>2</sup>

UL version : Porcher Sport skytex 70000 E91, hard finish, 27g/m<sup>2</sup>

*Reinforcement:* Porcher Sport: SR Scrim-2420, plastic rod

*Thread:* Bonded nylon D60,

## Suspension system

*Lines*

LIROS: Dyneema DC 120/ comp line, 0.6mm, minimum strength 60 daN

LIROS: Dyneema DC 160/ comp line, 0.85mm, minimum strength 120 daN

LIROS: Dyneema PPSL 200/ PES cover, 1.42mm, minimum strength 200 daN

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LIROS: Dyneema PPSL 160/ PES cover, 1.40mm, minimum strength 160 daN

LIROS: Dyneema DFSL 200/ PES cover, 1.42mm, minimum strength 200 daN

Cousin Trestec: Vectraline 12100/ comp line, 0.6mm, minimum strength 50 daN

Cousin Trestec: Vectraline 16140/ comp line, 0.7mm, minimum strength 70 daN

Cousin Trestec: Vectraline 12240/ comp line, 0.9mm, minimum strength 115 daN

Cousin Trestec: Vectraline 16330/ comp line, 1.0mm, minimum strength 145 daN

## Risers

Mouka Tišnov: PES Pre-stretched polyester, minimum strength 2000 daN

## Maillons

Elair Servis: Niro triangle 4/200, minimum strength 200 daN

## Speed-system pulleys:

Riley Fittings Australia, RM 302

Harken USA, Ball Bearing Pulley 467



# About Axis

Axis started to design and make paragliders in 2001. Success swiftly followed and now many of the world's best competition pilots choose to fly Axis. They have won podium places at competitions around the world, including at recent World Cup events and the World Championships.

The lessons learned from these thousands of hours of competition success have been used to develop the Comet 3, a new generation of glider.

We welcome feedback from you about your new Comet 3. Send it to us at [info@axispara.cz](mailto:info@axispara.cz)

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## Please note

We have made every effort to ensure that the information in this manual is correct but please remember it is for guidance only. It

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is not a training manual. It must not be used as a substitute for proper training under the direction of an approved body.

The manual is subject to change without prior notice. Check the websites for updates and the latest information regarding Axis products.

Enjoy your Comet 3

[www.axispara.cz](http://www.axispara.cz)

