SUPAIR
LIFE IS IN THE AIR

User's manual

SAVAGE

English
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Photo : Guy Bolton

Photo : Guy Bolton

Thank you for choosing to fly our SAVAGE. We are delighted to have you on-board to share our passion for paragliding.

SUPAIR has been designing, producing and selling accessories for free flying activities since 1984. By choosing a SUPAIR product you benefit from almost thirty years of expertise, innovation and customer care. We pride ourselves on our work ethics and customer care.

We hope you will find this user's manual comprehensive, explicit and hopefully enjoyable as well. We advise you to read it carefully.

You will find the latest information and updates on this product on our website : www.supair.com. If however you have any further questions, do not hesitate to ask one of our dealers.

Naturally the entire SUPAIR team remains at your disposal at info@supair.com
We wish you many safe and enjoyable flying hours and happy landings.

Team SUPAIR

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Introduction

The wing SAVAGE meets all the requirements of the sport pilot whishing to fly under an accessible but yet efficient and lightweight C glider. It was designed for high performance flying and will give the pilot maximum comfort and optimized feedback for long distance XC adventures.

The SAVAGE glider is EN 926 -1 : 2006 & 926 - 2 : 2013 Class C. Certified.
This means that the paraglider in spite of good passive safety can react dynamically to over-piloting or in turbulence, and will have to be handled accordingly to stabilize it.
It also means that it requires a skill level and experience compatible with the wings in that category.

It can be used with most harnesses found on the market today. For better inflight comfort and feeling we will advise you to choose the SUPAIR XC harness models.

After reading this manual we advise you to inflate & check your wing on a training hill first.

N.B. : The following three icons will help you to read this manual.

 Advice

 Caution !

 Danger !!

Technical data

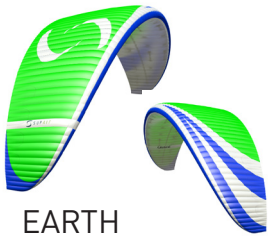
Glider SAVAGE	XS	S	M	ML
Cell number	67	67	67	67
Flat surface area (m²)	22.5	24.5	26	27.5
Span (m)	12.09	12.62	13	13.37
Chord (m)	2.32	2.42	2.49	2.56
Flat Aspect Ratio	6.5	6.5	6.5	6.5
Projected surface area (m²)	18.88	20.57	21.82	23.08
Projected span (m)	9.37	9.78	10.07	10.36
Projected aspect ratio	4.65	4.65	4.65	4.65
Glider weight (kg)	3.6	3.8	4	4.3
In-flight weight range (kg)	65-85	75-95	85-105	95-115
Certification	Class C, EN : 926-2 : 2013 & 926-1 : 2015, LTF : 2. DV LuftGerPV §1, Nr 7 c			
Aerobatics flying	NO			
Riser number	3+1 (B on Dyneema string)			
Speed system	yes, travel: 150mm	yes, travel: 160mm	yes, travel: 160mm	yes, travel: 170mm
Trimmer	No			
Other variable device	No			
Break travel at maximal weight (cm)	59	62	65	68
Harness dimensions used for certification At minimum weight	* Length between main suspension points: 40 ±2 cm * Height of main suspension points: 40 ±1 cm	* Length between main suspension points: 40 ±2 cm * Height of main suspension points: 43 ±1 cm	* Length between main suspension points: 40 ±2 cm * Height of main suspension points: 41 ±1 cm	* Length between main suspension points: 43 ±2 cm * Height of main suspension points: 44 ±1 cm
Harness dimensions used for certification At maximum weight	* Length between main suspension points: 43 ±2 cm * Height of main suspension points: 40 ±1 cm	* Length between main suspension points: 43 ±2 cm * Height of main suspension points: 43 ±1 cm	* Length between main suspension points: 44 ±2 cm * Height of main suspension points: 43 ±1 cm	* Length between main suspension points: 48 ±2 cm * Height of main suspension points: 43 ±1 cm

In-flight weight range

Weight (kg)	65	70	75	80	85	90	95	100	105	110	115
SAVAGE XS											
SAVAGE S											
SAVAGE M											
SAVAGE ML											

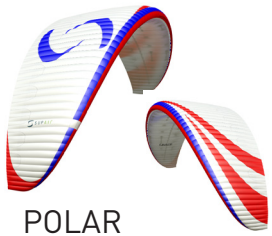
In-flight weight range (kg)

Perfect In-flight weight range (kg) to optimize flight performances

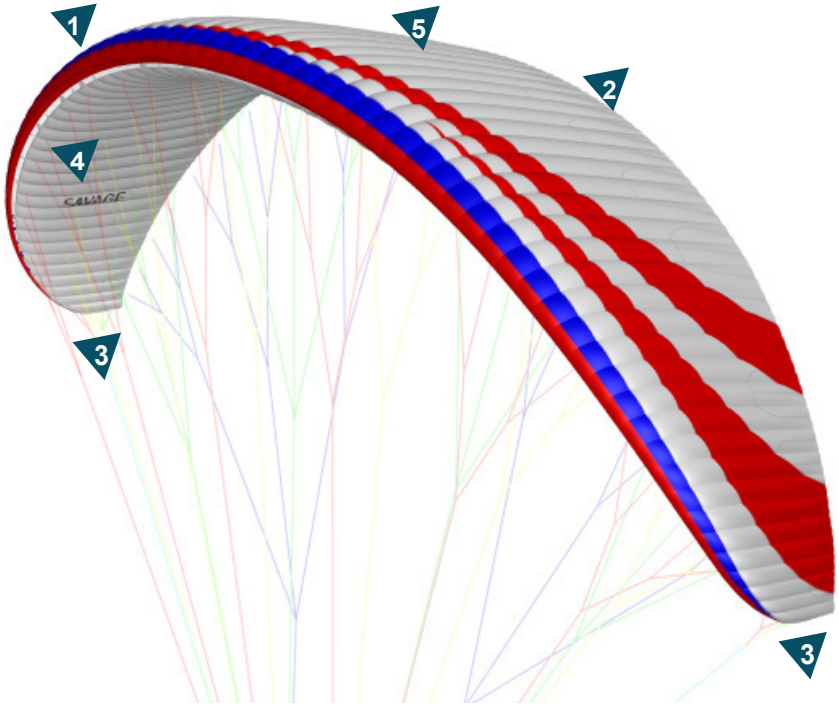


EARTH

FIRE



POLAR



1. Leading edge
2. Trailing edge
3. Stabilizer
4. Inner surface
5. Outer surface
6. A riser
7. « A » split riser (for Big Ears)
8. B riser
9. C riser
10. Brake line
11. Brake holder
12. Brake handle
13. Riser hook-up loop
14. TREK 130 lt. capacity carrying rucksack
15. Speedbar Split-hook
16. COMPACT CASE
17. Pocket with repair kit

Setting up the glider

Opening the wing

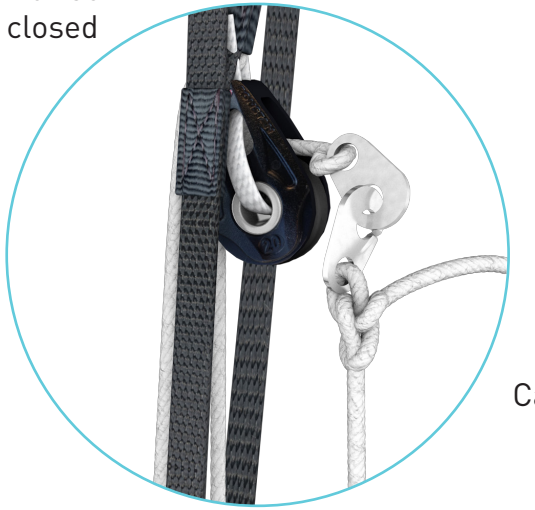
Choose a flat or lightly angled training hill without obstacles or wind.
Open your wing and arrange it in a crescent shape.
Check the fabric and the lines for any sign of wear or damage.
Check for the links connecting the lines to the risers to be fully closed.
Identify, separate and arrange the A,B and C risers as well as the brake lines neatly. Knots or tangles can not be present.

Choosing an adapted harness

The SAVAGE glider was certified EN C with a EN1651 & LTF certified harness and can therefore be flown with most harnesses models found on the market today.
We wil advise you to choose a EN1651 and or LTF certified harness with a built-in back protection system.

Connecting the wing to the harness

Without twisting the risers, connect them to the harness connection loops using the carabiners. Check for the risers to be properly positioned and untwisted. The "A" risers must be located at the front and facing the flight direction(see schematic). Lastly, check for the main carabiners to be fully closed and locked in place.



Installing the speed system

Install the speed system according to your harness manufacturer's recommendations. Connect it to the wing using the split hooks.
Once the accelerator/speedbar is connected, adjust its length according to your measurements. For correct use, there must not be any tension on the split-hook level when the accelerator/speedbar is not activated by the pilot.

Setting up the glider

Brake line length

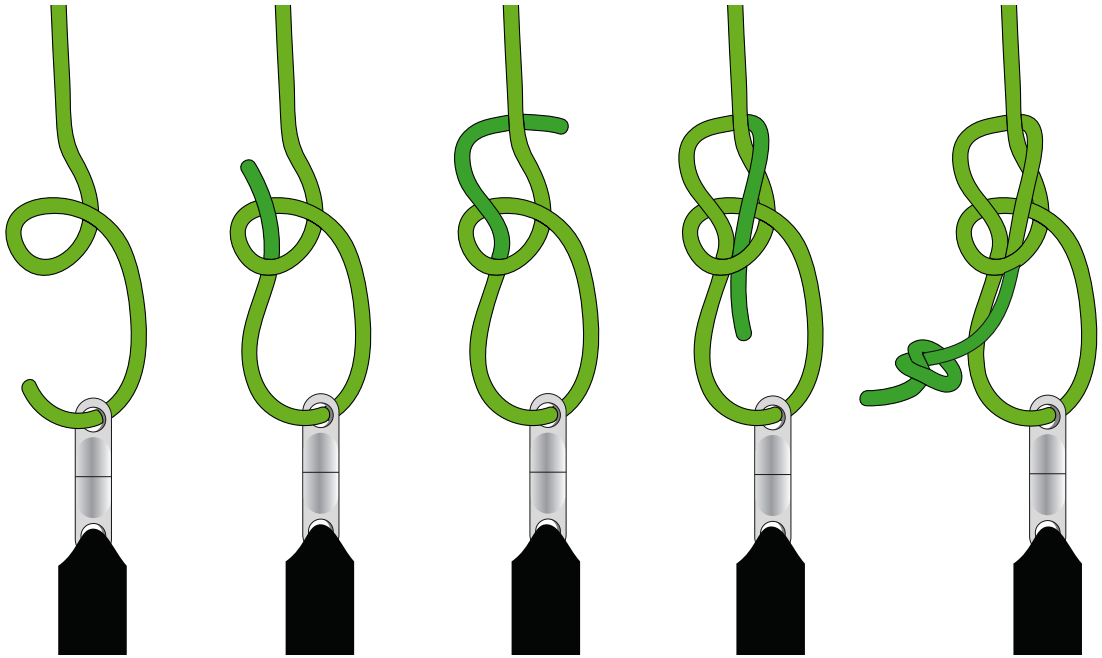
Brake line lengths are set at the factory to allow optimal glider control. However, if they do not suit you they can be adjusted to your liking.

We will advise using a fisherman's knot and to keep your length changes to a minimum (approx 5cm maximum).

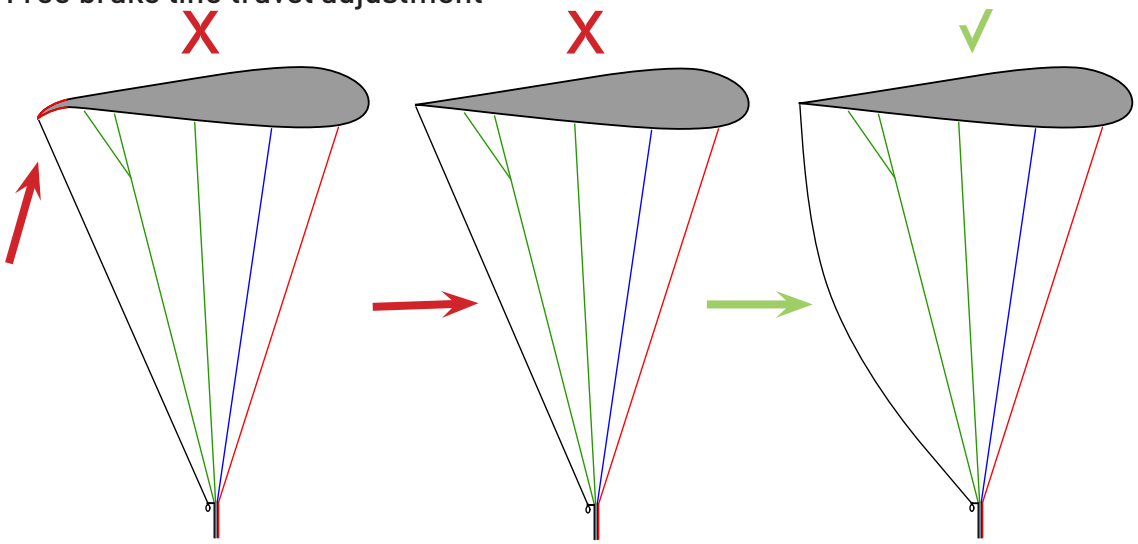
If you modify the original default setting, have it inspected and approved by a professional before flying..

Be certain to maintain a small amount of slack in the brake line. While flying with the accelerator on (full speed) you must be able to pull the first centimers of brake line towards you without having any noticeable action on the trailing edge.

Fisherman's knot



Free brake line travel adjustment



Pre-flight preparation

The SAVAGE glider was designed for cross-country pilots wishing to fly far and fast. The glider itself gives a sporty feeling similar to the one fed by competition gliders within a much more accessible EN-C package. It is lightweight, ideal for bivouac adventures.

To discover your new wing, we will advise you to conduct your first small flights in calm conditions on a school training hill or a familiar site you are used to flying with your own harness.

Unfold the glider and place it on its upper surface in an arc.

Separate the A,B,C risers and the brakes, be certain for the risers and lines not to have any twists or knots or be hooked to a branch, stone etc...

Caution !

It vital to conduct a thorough pre-flight check and have the harness properly connected to the glider prior to each takeoff.

Run through the following procedure prior to each takeoff :

- Harness and carabiners do not show signs of wear and tear.
- The reserve parachute container is correctly closed and the handle is in the correct position
- Your personal settings have not been altered
- The wing is properly connected to the risers with all links securely tightened and locked in place.
- The risers are properly connected to the harness without any twist.
- You are securely connected to the harness with the leg and chest strap buckles closed, carabiners locked.
- Your are wearing your helmet and it is properly fastened.

Take-off

Before the first flight, practice ground-handling to become familiar with your new glider. It is possible to inflate it in a front- or reversed-launch method.
Inflating the SAVAGE is easy without any hard point. The sequence demands an adaptation to the weather conditions of the day.

Forward launch

To inflate the glider grab the upper ends of the "A" risers with your hands and progressively move foreward guiding the glider upward. Once the wing is flying overhead, apply brakes as necessary, look up and perform a visual check before accelerating to take off.

Reverse launch

If the wind speed is sustained and allows it, we will advise you to use a reversed inflation method more adapted to conduct a better visual check. Face the wing and grab the "A" risers. With a light pull and adapted rearward walking motion, inflate your wing. Once the glider is stable overhead, turn around, look up once more to check that all is ok before running down the slope and taking off.
Note: In strong winds you may only need to use the inner A risers to inflate the wing.

Caution !

Before take-off, ensure for the airspace to be clear in front, around and above you with weather conditions matching your flying skill level..

Flight characteristics

Here are a few tips to take advantage of your SAVAGE's performance in flight:

In flight, the SAVAGE remains homogeneous even in turbulent air. The "Shark Nose" profile remains solid even when accelerated. The turn is intuitive and easy to control.

« Hands up » speed or trim speed

Flying « hands up » will provide the best glide ratio in nil wind.

Using the speedbar

According to the EN C norm, the SAVAGE glider was designed to be stable throughout its speed range.
Accelerated, the wing becomes more sensitive to turbulence. If you feel a glider internal pressure decrease while pushing on the accelerator; lessen the speedbar tension to bring it back to its neutral default setting while pulling the C-riser handles and prevent a possible leading edge frontal collapse.

Piloting without the brake handles

If for whatever reason, the brake handles are no longer available, you will need to pilot your wing using the harness and "C" risers instead. Beware not to overcontrol the glider to limit the risk of experiencing a stall.
To land, let your wing glide for as long as possible before applying a full braking motion. Braking using the "C" risers is not as efficient as using the handles and could lead to a more energetic landing than normal.

Piloting with the « C »

Piloting with the "C" is used for accelerated or non-accelerated transitions or, in some cases, for gliding into a thermal, making the most of the wing's performance.
Piloting with the C risers offers a better wing feedback, and is ideal to anticipate the piloting moves.
This method also optimizes the performance of your wing: using brake input to counteract the turbulence strains the wing's profile and deteriorates its performance.
By using the "C" an effective controlled action is obtained while maintaining a "clean" profile and therefore a better performance.
To steer the glider with the "C" risers, keep the brake handles in hand, and use the bars mounted on the risers to pilot the wing.
This technique brings a true performance gain, very effective, especially coupled with the accelerator during transition.

Turns

To make your glider turn efficiently, and only after checking that the space below you is clear and safe to land on, shift your weight toward the inside of the turn and progressively pull your brake handle on the same side until the desired turning angle is reached. The turning speed and radius can also be adjusted by using the other brake handle controlling the upper half side of the wing. When flying at low speed, begin your turn by raising your hand on the upper and external side of the turn to prevent a possible flat-turn or twisted turn on the vertical axis. The SAVAGE turns very well with handle input, and does not require big weigh-shifting in the harness.
When flying at low speed, begin your turn by raising your hand on the upper and external side of the turn to prevent a possible spin from occuring.

End of the flight

Landing

Be certain to always have enough altitude for a safe landing before approaching the chosen Landing Zone. Never make aggressive maneuvers close to the ground. Always land into the wind (upwind), standing up and ready to run to a stop if necessary. Make your landing approach with maximum air speed if possible depending on the weather conditions of the moment, then progressively brake to slow the glider to a final touchdown. Beware not to brake too much, too soon and too rapidly to prevent a possible stall and hard landing.

In case of a landing in sustained higher wind speeds, you will need to quickly turnaround, face the wing, move forward while braking down symmetrically. You can as well pull the "C" risers down to deflate the glider and bring it to the ground.

Folding

Fold each side of your wing in an accordion-like shape. Stack-up the leading edge reinforcements on top of one another.
Bring one side of the glider over the other while keeping the leading edge reinforcements flat. Fold the wing on itself, starting from the leading edge toward the trailing edge. During the entire packing procedure, avoid as much as possible bending the leading edge's reinforcements.

Specific use

Towing

The SAVAGE can be towed up. Fly only with certified gear operated by qualified personal and only after taking a towing clinic. The towing force must correspond to the weight of the equipment, and the pulling sequence can only start when the wing is fully inflated and stable over the pilot's head.

Aerobatics

Your wing was not designed for aerobatic maneuvers. We highly discourage its use for this type of flying.
Repeated practice of said exercise exceeding 4xG (or 2xG if they are asymmetrical) will cause premature aging of your glider and is to be avoided. “SAT” maneuvers are the most damaging to your equipment.

Tandem

The SAVAGE wing was not designed for tandem flying.

Fast descents

The following techniques should only be used in emergencies and require prior training to be safely conducted. Appropriate analysis and anticipation of the conditions will often prevent the need to use fast descent techniques. We will advise you to practice in still air and preferably above water.

Big Ears

Pulling "ears" increases the glider sink rate along with the angle of attack. We do not recommend the use of big ears close to the ground
In order to pull "ears", grab the specific riser (outer "A" riser) while keeping the brake handles around your wrists and lowering them until the wingtips collapse.
Once the "Ears" are folded and stabilized, we recommend using the speedbar to recover your initial horizontal horizontal speed.

To reopen the "Ears", bring the speedbar back to its neutral default setting, then let go the risers symmetrically. You can pump the brake handles on either side of the wing to facilitate its reopening sequence.

Fast descents

B-line stall

This technique is usually physically demanding and will lead to a deep stall configuration and therefore wing control will be diminished.
Loosing altitude using the "B" risers is done by grabbing the risers at the metal (or soft) links level and applying a symmetrical downward vertical pull until the wing's profile is deformed. This maneuver can be maintained to increase the wing's sink rate.
To regain a normal flying configuration, bring your hands up progressively to the "A" risers red markers, then let go of the "B" risers altogether. The wing will experience a moderate surge forward which will need to be instantly neutralized and controlled.

360° spiral dives

To begin a spiral dive make sure the air space is clear around and below you, then lean toward the chosen side while gradually applying brake handle pressure on that side. The wing will gradually accelerate before entering a full spiral dive. You may use the outer upper handle to manage your sink rate.

In order to exit the rotation, get back to a neutral (centered) position in the harness and gradually release the inside brake. You need to keep the glider in a turn as it decelerates in order to limit the surge while exiting the spiral. If your exit is too radical the glider will surge aggressively and experience a substantial dive to be immediately controlled. Gradually slowing down the rotation with the outside and upper brake will allow you to exit the spiral in a controlled manner.

To avoid excessive stress on the glider we do not recommend combining spiral dives with "Ears".

Conforming to the C-class of EN-926-2, the SAVAGE glider does not show any tendency to stay in a locked spiral configuration and will return by itself to a normal flying angle in less than four full rotations when the brakes are brought back up.

DANGER : This maneuver places a lot of stress on the glider. The high speed and "G" force might be disorientating and, in extreme cases, cause you a temporary loss of consciousness. Practice this maneuver gradually with ample space around and below you.

Flight incidents

Asymmetric collapses

Any paraglider may occasionally collapse due to turbulence or a piloting error. In the event of an asymmetric collapse your priority must be to stay clear of the terrain and regain level flight.
In the event of an asymmetrical collapse induced by turbulence or purposely by the pilot, we want to remind you that the best course of action to take is:

- Shift all your weight onto the open side of the wing.
- If necessary, slightly brake on the open side of the wing to further prevent it from rotating.
- Once the wing is balanced and stabilized, (straight flight), if the folded side does not spontaneously reopen, give ample up and down pumping motions until the collapsed glider side is fully reopened.
- Repeat if necessary until full reinflation is achieved. In the event of a “cravat” (where the wing tip is snagged between the lines) you may pull on the tangled line to release the wingtip.

Front collapses

During a front collapse according to the certification standard the glider is designed to reopen on its own.
In the event of a frontal collapse induced by turbulence or purposely by the pilot, we want to remind you that the best course of action to take is :
- Brakes must be fully released during the collapse. If the collapse is purposely induced by the pilot, we recommend that brake handles be clipped back on the stoppers before collapsing the glider.
- Grab the brakes, arms up. Wait for the wing to reopen and come back overhead – do not keep the brake pressure on, if the glider falls behind you – risk of stalling.
- Dampen the following surge by using the brakes proportionally and symmetrically once the wing has flies again.

Parachutal stall

Even though this configuration only rarely occurs, you may find yourself in a situation called "parachutal stall " where the glider descends vertically with no forward motion. If it happens, release the brakes handle fully and trims symmetrically and push the speed bar. You might also need to push forward on the "A" risers. Make sure you regained a normal flight configuration before proceeding with brake handle usage again.

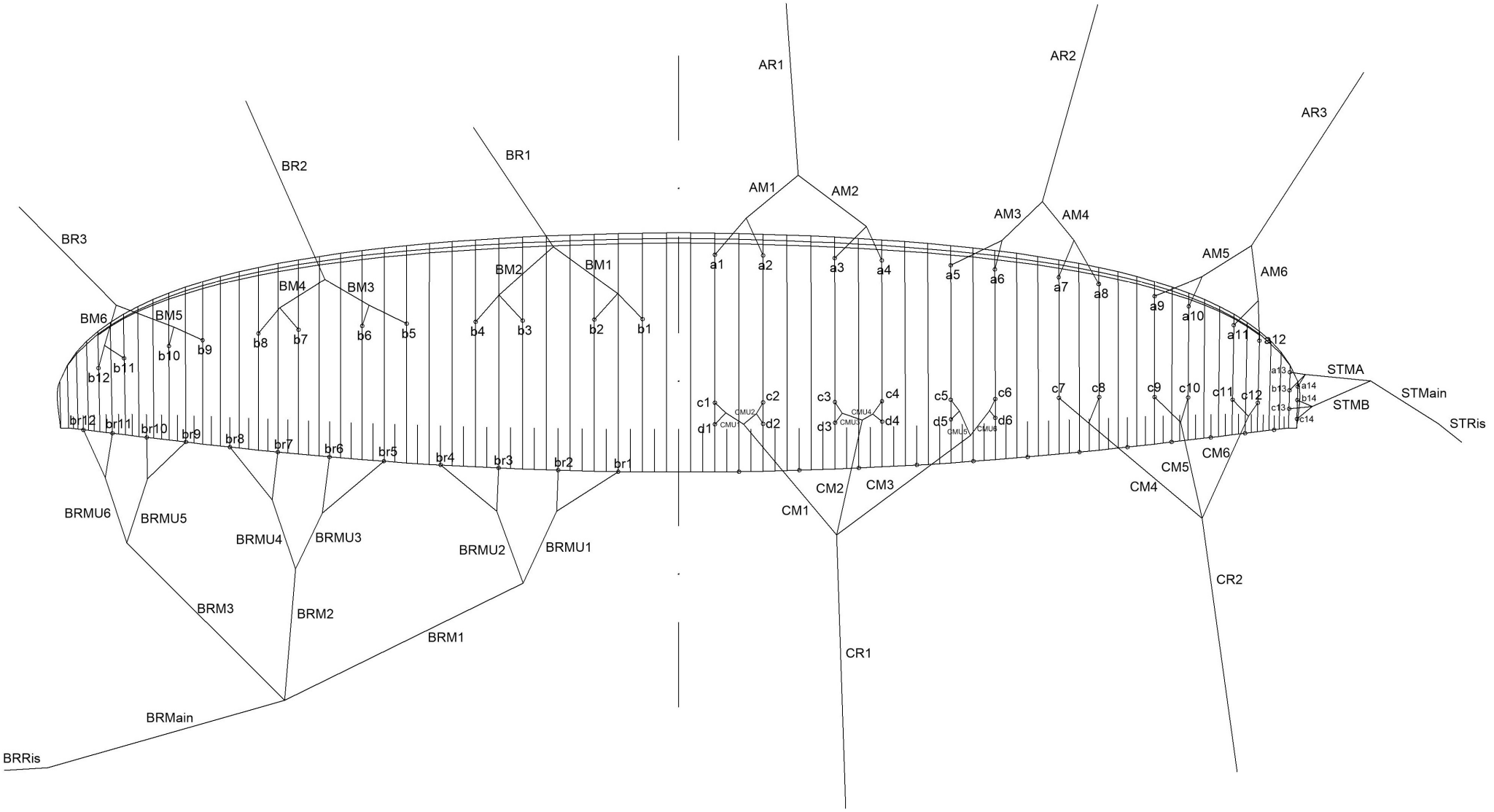
Stall

A stall does not happen by itself even in turbulent air. In the event of a cravat (deflated part of the wing tucked in the lines) from which you can't recover by pumping the concerned side's brake, you might have to stall the glider.
We do not recommend using this technique unless you have proper training and sufficient altitude.

Spin / asymetric stall

A spin will only occur because of a piloting error. If so, release the brake fully on the stalled side and be certain to keep the glider in check during the ensuing dive and reopening sequence.

Line layout


AR1
AR2
AR3
BR1
BR2
BR3
AM1
AM2
AM3
AM4
AM5
AM6
BM1
BM2
BM3
BM4
BM5
BM6
a1
a2
a3
a4
a5
a6
a7
a8
a9
a10
a11
a12
a13
a14
b1
b2
b3
b4
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b6
b7
b8
b9
b10
b11
b12
b13
b14
c1
c2
c3
c4
c5
c6
c7
c8
c9
c10
c11
c12
c13
c14
d1
d2
d3
d4
d5
d6
CMU1
CMU2
CMU3
CMU4
CMU5
CMU6
STMA
STMain
STMB
STRis
br1
br2
br3
br4
br5
br6
br7
br8
br9
br10
br11
br12
BRMU1
BRMU2
BRMU3
BRMU4
BRMU5
BRMU6
BRM1
BRM2
BRM3
BRMain
BRRis
CM1
CM2
CM3
CM4
CM5
CM6
CR1
CR2

Materials

Fabrics	Producer	Reference
Outer surface	Porcher Sport	Skytex 27 Classic 2 - 70000E3H // Skytex 32 Universal - 70032E3W
Inner Surface	Porcher Sport	Skytex 27 Classic - 70000E71
Supported ribs	Porcher Sport	Skytex 32 Hard - 70032E4D
Compression straps and D ribs	Porcher Sport	Skytex 32 Hard - 70032 E4D
Unsupported ribs	Porcher Sport	Skytex 27 Hard - 70000E91
Rib reinforcements	Porcher Sport	Sticky Skytex

Main lines	Producer	Reference
Top cascade	Edelrid	8000U-050 /8000U-070 / A-9200-030
Upper middle cascade	Edelrid	8000U-050
Lower middle cascade	Edelrid	8000U-130 / 8000U-090 / 8000U-070 / 8000U-050
Lower cascade	Edelrid	8000U-230 / 8000U-130

Stabilo lines	Producer	Reference
Top cascade	Edelrid	A9200-30
Middle cascade	Edelrid	A9200-30 / 8000U-050
Lower cascade	Liros	DSL 70

Brake lines	Producer	Reference
Top cascade	Liros // Edelrid	DC60 // A-9200-30
Upper middle cascade	Liros // Edelrid	DC60
Lower middle cascade	Edelrid	8000U-90 // 8000U-190
Lower cascade	Edelrid	A 7450 X - 240-041
Mailons	Supair	Soft link dyneema

Measurements tables

SAVAGE glider size XS

Line Check Maintenance Sheet

Measurements made from the base of the lines to the base of the wing, WITH risers and soft links, under a 5 kg tension.

		A			B			C			D			Brake		
		Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff
Center	1	7509	7515	6	7422	7427	5	7619	7610	-9	7666	7662	-4	7752	7751	-1
	2	7412	7417	5	7324	7328	4	7505	7498	-7	7555	7550	-5	7495	7491	-4
	3	7384	7391	7	7295	7301	6	7401	7397	-4	7448	7445	-3	7312	7303	-9
	4	7446	7452	6	7355	7361	6	7387	7389	2	7426	7424	-2	7255	7247	-8
	5	7344	7354	10	7256	7259	3	7406	7406	0	7444	7451	7	7080	7083	3
	6	7241	7249	8	7157	7167	10	7473	7466	-7	7505	7502	-3	6960	6967	7
	7	7185	7191	6	7103	7110	7	7211	7207	-4				6914	6921	7
	8	7223	7220	-3	7142	7140	-2	7114	7114	0				6942	6942	0
	9	7035	7038	3	6978	6979	1	6998	6994	-4				6849	6854	5
	10	6924	6923	-1	6879	6874	-5	6950	6944	-6				6783	6783	0
	11	6819	6817	-2	6790	6792	2	6887	6883	-4				6750	6753	3
	12	6794	6803	9	6766	6767	1	6852	6849	-3				6785	6794	9
Stabilizer	13	6572	6570	-2	6548	6547	-1	6588	6587	-1						
Wingtip	14	6499	6496	-3	6512	6510	-2	6593	6591	-2						

Tolerance +/- 10mm

Riser length measurement (mm) table

Risers length, Measured with carabiner.

	Trim			Accelerated		
	Manual	Tested sample	Diff	Manual	Tested sample	Diff
A	544	543	-1	394	396	2
A'	544	541	-3	394	394	0
B	544	546	2	444	448	4
C	544	540	-4	544	540	-4

Tolerance +/- 5mm

Measurements tables

SAVAGE glider size XS

Lines lenghts under 5 kg of tension

Tolerance +/- 10mm

Lines individual lengths

A LINES			B LINES			C LINES			D LINES			STABILO LINES			BRAKE LINES		
NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**
AR1	5000	4740	BR1	4928	4668	CR1	4316	4056				STRis	492	292	BRRis	1899	1599
AR2	5009	4749	BR2	4941	4681	CR2	4289	4029				STmain	5338	5138	BRmain	1284	1084
AR3	5152	4892	BR3	5126	4866												
AM1	1300	1100	BM1	1288	1088	CM1	2302	2102				STMA	455	255	BRM1	2350	2150
AM2	1277	1077	BM2	1268	1068	CM2	2214	2014				STMB	464	264	BRM2	2297	2097
AM3	1215	1015	BM3	1205	1005	CM3	2306	2106							BRM3	2885	2685
AM4	1164	964	BM4	1158	958	CM4	1908	1708									
AM5	1044	844	BM5	1034	834	CM5	1844	1644									
AM6	953	753	BM6	953	753	CM6	1913	1713									
						CMU1	720	520							BRMU1	1770	1570
						CMU2	662	462							BRMU2	1582	1382
						CMU3	659	459							BRMU3	1434	1234
						CMU4	650	450							BRMU4	1394	1194
						CMU5	616	416							BRMU5	904	704
						CMU6	650	450							BRMU6	958	758
a1	1355	1155	b1	1352	1152	c1	639	439	d1	686	486				br1	1534	1334
a2	1258	1058	b2	1254	1054	c2	583	383	d2	633	433				br2	1277	1077
a3	1253	1053	b3	1245	1045	c3	570	370	d3	617	417				br3	1282	1082
a4	1315	1115	b4	1305	1105	c4	565	365	d4	604	404				br4	1225	1025
a5	1266	1066	b5	1256	1056	c5	526	326	d5	564	364				br5	1251	1051
a6	1163	963	b6	1157	957	c6	559	359	d6	591	391				br6	1131	931
a7	1158	958	b7	1150	950	c7	1164	964							br7	1125	925
a8	1196	996	b8	1189	989	c8	1067	867							br8	1153	953
a9	981	781	b9	960	760	c9	1015	815							br9	962	762
a10	870	670	b10	861	661	c10	967	767							br10	896	696
a11	856	656	b11	853	653	c11	835	635							br11	811	611
a12	831	631	b12	829	629	c12	800	600							br12	846	646
a13	565	365	b13	541	341	c13	572	372									
a14	492	292	b14	496	296	c14	577	377									

*the cut value may differ according to the type of stitching/machine and the thread used

**the sewn value is the final length of the line, from one loop end to the other

Measurements tables

SAVAGE glider size S

Line Check Maintenance Sheet

Measurements made from the base of the lines to the base of the wing, WITH risers and soft links under a 5 kg tension.

		A			B			C			D			Brake		
		Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff
Center	1	7858	7865	7	7767	7768	1	7956	7952	-4	8008	8002	-6	8074	8080	6
	2	7758	7761	3	7665	7665	0	7838	7833	-5	7892	7884	-8	7807	7807	0
	3	7731	7733	2	7635	7640	5	7729	7722	-7	7775	7772	-3	7618	7610	-8
	4	7796	7797	1	7699	7703	4	7715	7705	-10	7758	7750	-8	7560	7567	7
	5	7685	7686	1	7598	7601	3	7736	7734	-2	7779	7779	0	7386	7378	-8
	6	7579	7577	-2	7495	7504	9	7806	7804	-2	7841	7841	0	7263	7267	4
	7	7522	7517	-5	7440	7445	5	7545	7549	4				7212	7207	-5
	8	7555	7549	-6	7474	7475	1	7437	7433	-4				7240	7239	-1
	9	7366	7368	2	7304	7305	1	7317	7314	-3				7140	7142	2
	10	7254	7255	1	7205	7207	2	7271	7266	-5				7078	7085	7
	11	7146	7148	2	7112	7109	-3	7206	7205	-1				7039	7041	2
	12	7120	7121	1	7086	7080	-6	7170	7169	-1				7073	7070	-3
Stabilizer	13	6875	6877	2	6851	6851	0	6892	6890	-2						
Wingtip	14	6800	6799	-1	6814	6808	-6	6897	6893	-4						

Tolerance +/- 10mm

Riser length measurement (mm) table

Risers length, Measured with carabiner.

	Trim			Accelerated		
	Manual	Tested sample	Diff	Manual	Tested sample	Diff
A	568	565	-3	408	412	4
A'	568	563	-5	408	409	1
B	568	573	5	455	450	-5
C	568	563	-5	568	563	-5

Tolerance +/- 5mm

Measurements tables

SAVAGE glider size S

Lines lenghts under 5 kg of tension Tolerance +/- 10mm

Lines individual lenghts

A LINES			B LINES			C LINES			D LINES			STABILO LINES			BRAKE LINES		
NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**
AR1	5229	4969	BR1	5151	4891	CR1	4494	4234				STRis	506	306	BRRis	1973	1673
AR2	5236	4976	BR2	5169	4909	CR2	4478	4218				STmain	5580	5380	BRmain	1331	1131
AR3	5393	5133	BR3	5363	5103												
AM1	1349	1149	BM1	1338	1138	CM1	2400	2200				STMA	466	266	BRM1	2447	2247
AM2	1326	1126	BM2	1317	1117	CM2	2308	2108				STMB	476	276	BRM2	2403	2203
AM3	1261	1061	BM3	1251	1051	CM3	2405	2205							BRM3	3012	2812
AM4	1209	1009	BM4	1202	1002	CM4	1988	1788									
AM5	1083	883	BM5	1073	873	CM5	1921	1721									
AM6	989	789	BM6	988	788	CM6	1994	1794									
						CMU1	743	543							BRMU1	1840	1640
						CMU2	682	482							BRMU2	1646	1446
						CMU3	679	479							BRMU3	1491	1291
						CMU4	670	470							BRMU4	1450	1250
						CMU5	635	435							BRMU5	936	736
						CMU6	670	470							BRMU6	993	793
a1	1406	1206	b1	1404	1204	c1	657	457	d1	708	508				br1	1593	1393
a2	1306	1106	b2	1302	1102	c2	600	400	d2	653	453				br2	1326	1126
a3	1302	1102	b3	1293	1093	c3	586	386	d3	631	431				br3	1331	1131
a4	1367	1167	b4	1357	1157	c4	581	381	d4	623	423				br4	1273	1073
a5	1314	1114	b5	1304	1104	c5	540	340	d5	582	382				br5	1298	1098
a6	1208	1008	b6	1201	1001	c6	575	375	d6	609	409				br6	1175	975
a7	1203	1003	b7	1195	995	c7	1209	1009							br7	1165	965
a8	1236	1036	b8	1229	1029	c8	1101	901							br8	1193	993
a9	1012	812	b9	990	790	c9	1048	848							br9	998	798
a10	900	700	b10	891	691	c10	1002	802							br10	936	736
a11	886	686	b11	883	683	c11	864	664							br11	842	642
a12	860	660	b12	857	657	c12	828	628							br12	876	676
a13	581	381	b13	557	357	c13	588	388									
a14	506	306	b14	510	310	c14	593	393									

*the cut value may differ according to the type of stitching/machine and the thread used

**the sewn value is the final length of the line, from one loop end to the other

Measurements tables

SAVAGE glider size M

Line Check Maintenance Sheet

Measurements made from the base of the lines to the base of the wing, WITH risers and soft links under a 5 kg tension.

		A			B			C			D			Brake		
		Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff
Center	1	8064	8068	4	7988	7992	4	8197	8188	-9	8248	8239	-9	8333	8328	-5
	2	7962	7963	1	7884	7887	3	8071	8062	-9	8130	8120	-10	8059	8067	8
	3	7934	7939	5	7855	7861	6	7965	7959	-6	8014	8006	-8	7864	7861	-3
	4	8001	8004	3	7921	7925	4	7950	7948	-2	7993	7983	-10	7805	7803	-2
	5	7910	7912	2	7819	7816	-3	7974	7970	-4	8016	8011	-5	7619	7617	-2
	6	7800	7805	5	7713	7717	4	8045	8043	-2	8080	8074	-6	7492	7494	2
	7	7740	7742	2	7657	7663	6	7774	7771	-3				7443	7436	-7
	8	7781	7785	4	7698	7695	-3	7670	7666	-4				7474	7467	-7
	9	7584	7587	3	7521	7521	0	7543	7540	-3				7370	7377	7
	10	7465	7463	-2	7415	7414	-1	7490	7487	-3				7299	7298	-1
	11	7353	7353	0	7319	7319	0	7421	7418	-3				7261	7262	1
	12	7325	7323	-2	7291	7289	-2	7383	7380	-3				7299	7300	1
Stabilizer	13	7080	7083	3	7055	7048	-7	7098	7098	0						
Wingtip	14	7003	7002	-1	7017	7018	1	7103	7104	1						

Tolerance +/- 10mm

Riser length measurement (mm) table

Risers length, Measured with carabiner.

	Trim			Accelerated		
	Manual	Tested sample	Diff	Manual	Tested sample	Diff
A	564	561	-3	404	408	4
A'	564	559	-5	404	406	2
B	564	561	-3	457	456	1
C	564	562	-2	564	562	-2

Tolerance +/- 5mm

Measurements tables

SAVAGE glider size M

Lines lenghts under 5 kg of tension Tolerance +/- 10mm

Lines individual lenghts

A LINES			B LINES			C LINES			D LINES			STABILO LINES			BRAKE LINES		
NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**
AR1	5361	5101	BR1	5300	5040	CR1	4636	4376				STRis	516	316	BRRis	2027	1727
AR2	5391	5131	BR2	5322	5062	CR2	4618	4358				STmain	5756	5556	BRmain	1354	1154
AR3	5553	5293	BR3	5523	5263												
AM1	1385	1185	BM1	1373	1173	CM1	2469	2269				STMA	474	274	BRM1	2518	2318
AM2	1362	1162	BM2	1353	1153	CM2	2376	2176				STMB	484	284	BRM2	2466	2266
AM3	1295	1095	BM3	1284	1084	CM3	2477	2277							BRM3	3103	2903
AM4	1241	1041	BM4	1234	1034	CM4	2046	1846									
AM5	1111	911	BM5	1101	901	CM5	1975	1775									
AM6	1014	814	BM6	1013	813	CM6	2048	1848									
						CMU1	759	559							BRMU1	1891	1691
						CMU2	697	497							BRMU2	1692	1492
						CMU3	694	494							BRMU3	1532	1332
						CMU4	684	484							BRMU4	1490	1290
						CMU5	648	448							BRMU5	957	757
						CMU6	684	484							BRMU6	1013	813
a1	1444	1244	b1	1441	1241	c1	671	471	d1	722	522				br1	1636	1436
a2	1342	1142	b2	1337	1137	c2	607	407	d2	666	466				br2	1362	1162
a3	1337	1137	b3	1328	1128	c3	597	397	d3	646	446				br3	1366	1166
a4	1404	1204	b4	1394	1194	c4	592	392	d4	635	435				br4	1307	1107
a5	1350	1150	b5	1339	1139	c5	551	351	d5	593	393				br5	1333	1133
a6	1240	1040	b6	1233	1033	c6	586	386	d6	621	421				br6	1206	1006
a7	1234	1034	b7	1227	1027	c7	1240	1040							br7	1199	999
a8	1275	1075	b8	1268	1068	c8	1136	936							br8	1230	1030
a9	1042	842	b9	1019	819	c9	1080	880							br9	1022	822
a10	923	723	b10	913	713	c10	1027	827							br10	951	751
a11	908	708	b11	905	705	c11	885	685							br11	859	659
a12	880	680	b12	877	677	c12	847	647							br12	897	697
a13	592	392	b13	567	367	c13	600	400									
a14	515	315	b14	519	319	c14	605	405									

*the cut value may differ according to the type of stitching/machine and the thread used

**the sewn value is the final length of the line, from one loop end to the other

Measurements tables

SAVAGE glider size ML

Line Check Maintenance Sheet

Measurements made from the base of the lines to the base of the wing, WITH risers and soft links under a 5 kg tension.

		A			B			C			D			Brake		
		Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff	Manual	Tested sample	Diff
Center	1	8306	8314	8	8220	8226	6	8421	8416	-5	8476	8472	-4	8552	8562	10
	2	8202	8206	4	8115	8117	2	8296	8291	-5	8355	8350	-5	8267	8257	-10
	3	8174	8183	9	8086	8095	9	8182	8173	-9	8240	8235	-5	8072	8066	-6
	4	8243	8252	9	8154	8161	7	8168	8165	-3	8217	8213	-4	8016	8026	10
	5	8139	8146	7	8049	8056	7	8194	8191	-3	8241	8240	-1	7820	7819	-1
	6	8026	8029	3	7941	7950	9	8269	8268	-1	8307	8308	1	7690	7693	3
	7	7965	7974	9	7883	7889	6	7991	7989	-2				7640	7648	8
	8	8006	8007	1	7925	7920	-5	7884	7881	-3				7672	7664	-8
	9	7795	7791	-4	7737	7732	-5	7755	7754	-1				7569	7564	-5
	10	7672	7674	2	7629	7631	2	7701	7702	1				7496	7501	5
	11	7557	7557	0	7530	7527	-3	7631	7622	-9				7459	7456	-3
	12	7528	7528	0	7501	7504	3	7592	7589	-3				7498	7508	10
Stabilizer	13	7280	7273	-7	7255	7258	3	7298	7295	-3						
Wingtip	14	7201	7199	-2	7215	7210	-5	7303	7299	-4						

Tolerance +/- 10mm

Riser length measurement (mm) table

Risers length, Measured with carabiner.

	Trim			Accelerated		
	Manual	Tested sample	Diff	Manual	Tested sample	Diff
A	584	584	0	414	416	-2
A'	584	580	-4	414	411	3
B	584	589	5	472	477	-5
C	584	581	-3	584	581	-3

Tolerance +/- 5mm

Measurements tables

SAVAGE glider size ML

Lines lenghts under 5 kg of tension Tolerance +/- 10mm

Lines individual lenghts

A LINES			B LINES			C LINES			D LINES			STABILO LINES			BRAKE LINES		
NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**	NAME	CUT*	SEWN**
AR1	5512	5252	BR1	5442	5182	CR1	4745	4485				STRis	526	326	BRRis	2079	1779
AR2	5533	5273	BR2	5466	5206	CR2	4728	4468				STmain	5907	5707	BRmain	1406	1206
AR3	5691	5431	BR3	5668	5408												
AM1	1420	1220	BM1	1407	1207	CM1	2536	2336				STMA	482	282	BRM1	2587	2387
AM2	1397	1197	BM2	1388	1188	CM2	2442	2242				STMB	492	292	BRM2	2535	2335
AM3	1328	1128	BM3	1316	1116	CM3	2547	2347							BRM3	3192	2992
AM4	1272	1072	BM4	1265	1065	CM4	2102	1902									
AM5	1139	939	BM5	1128	928	CM5	2031	1831									
AM6	1039	839	BM6	1038	838	CM6	2108	1908									
						CMU1	775	575							BRMU1	1940	1740
						CMU2	711	511							BRMU2	1737	1537
						CMU3	708	508							BRMU3	1572	1372
						CMU4	698	498							BRMU4	1529	1329
						CMU5	661	461							BRMU5	983	783
						CMU6	698	498							BRMU6	1043	843
a1	1480	1280	b1	1477	1277	c1	683	483	d1	738	538				br1	1678	1478
a2	1376	1176	b2	1372	1172	c2	622	422	d2	681	481				br2	1393	1193
a3	1371	1171	b3	1362	1162	c3	605	405	d3	663	463				br3	1401	1201
a4	1440	1240	b4	1430	1230	c4	601	401	d4	650	450				br4	1345	1145
a5	1384	1184	b5	1373	1173	c5	559	359	d5	606	406				br5	1366	1166
a6	1271	1071	b6	1265	1065	c6	597	397	d6	635	435				br6	1236	1036
a7	1266	1066	b7	1258	1058	c7	1271	1071							br7	1229	1029
a8	1307	1107	b8	1300	1100	c8	1164	964							br8	1261	1061
a9	1067	867	b9	1043	843	c9	1106	906							br9	1047	847
a10	944	744	b10	935	735	c10	1052	852							br10	974	774
a11	929	729	b11	926	726	c11	905	705							br11	879	679
a12	900	700	b12	897	697	c12	866	666							br12	918	718
a13	603	403	b13	578	378	c13	611	411									
a14	524	324	b14	528	328	c14	616	416									

*the cut value may differ according to the type of stitching/machine and the thread used

**the sewn value is the final length of the line, from one loop end to the other

Maintenance

Taking a good care of your light wing

SUPAIR takes the greatest care in the design of your wing, but we would like to remind you that a "light" wing is usually more fragile than a classic wing.
To ensure a lot of flight and your glider's optimal durability, we will recommend some specials daly cares as follow :

- Restrict use of your light wing for ground "playing" and learning exercises. From experts' investigation, one hour of Inflate training with a light wing is using it like 6 hours of flight.
- NEVER let drag your light wing while carrying it
- Don't expose your light wing to the sand and salt
- Never storage your wing in a wet place
- Never storage your wing in a hot place, 30°C is the maximum
- Save your wing from any wet (dew, rain, sweat...) while carrying it.
- Restrict use of your light wing for aerobatic maneuvers who increase the load factor (360°, wing over...)
- Choose a proper folding who preserve the leading edge rushes

Washing and glider maintenance

It is a good idea to wash your glider from time to time. We recommend using sponge or soft hair brush and a non aggressive water-soluble cleaning agent (such as baby soap).
We will recommend wing inspections to be conducted at regular intervals:

- Repair eventual small fabric damages (holes smaller than a 1Euro coin or 1 US. 25 cents coin) with the small rounded sticky ripstop pieces included in your repair kit.
- Empty out the cells/caissons from sand, pebbles, grass, leaves, etc...

Storage and transport

When not using your glider store it inside your paragliding rucksack in a dry cool and clean place protected from UV exposure. If your harness is wet please dry thoroughly before storing. If your glider is wet or humid, dry it thoroughly first.
Keep all metal parts away from corrosive elements.

Product longevity

Irrespective of pre-flight checks, your glider must be serviced regularly and in accordance with its maintenance schedule. We will recommend for the wing to be inspected once a year or every one hundred (100) hours, whichever comes first, and more specifically have the following points checked :

- Lines (no excessive wear no breakages or folds) maillons and carabiners
- Materials selected for the SAVAGE ensure the best compromise for lightness and longevity. However in certain conditions such as exposure to UV or abrasion or exposure to chemical products the glider must be submitted to a thorough inspection by a qualified facility. Your safety depends on it!
- Carabiners must be replaced every five (5) years by identically rated and certified models recommended by the manufacturer (SUPAIR).

Maintenance

Spare parts

In case of premature wear or tear of your gear, you may order the following parts:
* Suspension and brake lines, through a specialized workshop
* Riser maillons, through SUPAIR directly
* Whole risers, through SUPAIR directly

Repair

In spite of using the best quality materials, your glider may be exposed to wear and tear and hence will therefore need to be regularly inspected at a qualified repair center.

SUPAIR also offers the possibility for its products to be repaired beyond the end of the warranty period. Please contact us either by telephone or by E-mail sav@supair.com in order to receive a quote.

Mandatory controls

Your glider must be checked every year or every 100 flying hours (whichever occurs first) by a qualified operator.
We advise you to take this opportunity to have your reserve repacked.

For an easier maintenance of your Savage, it would be easier for your service shop to change soft links than to change the length of your lines.
To that end, your Savage is delivered with :

- 2 « S » softlinks to shorten the lines by -7mm
- 2 « L » softlinks to lengthen the lines by +8 mm

Pilot's gear

It is essential to wear a helmet, suitable shoes with good ankle support and adapted clothing. Carrying a reserve emergency parachute corresponding to your weight and properly connected to the harness is also highly recommended. The entire SUPAIR harness, accessory and reserve parachute selection (except for tandem gear), is compatible with the SAVAGE glider. For additional information, please access our internet site : www.supair.com

Warranty

SUPAIR takes the greatest care in the design and production of its product line hence offers a 3 years limited warranty from the purchase date against any manufacturing defect or design issues occurring during normal use. Any damage or degradation resulting from incorrect or abusive use, abnormal exposure to aggressive factors including but not limited to; high temperature intense sun exposure high humidity etc. will invalidate this warranty.

Disclaimer

Paragliding is an activity requiring, skills, specific knowledge and sound judgement. Be safe by learning in certified schools, subscribe and obtain an adequate insurance policy as well as a flying license while always making sure your flying skills are up to the task in various weather flying conditions. SUPAIR cannot be held responsible for your paragliding decisions or activities.

This SUPAIR product was designed for solo use only. Any other activity such as tandem paragliding, skydiving or BASE jumping is absolutely forbidden.

Recycling

All our materials are selected for their technical and environmentally friendly characteristics. None of the components found in our products will harm the environment. Most of them are recyclable.
If your SAVAGE's life span is over, you can separate all metallic and plastic parts from the cloth and dispose of the rest according to your country's recycling guide lines and requirements. Please contact your local recycling center for more information..

Eco-responsibility

Paragliding is an outdoor activity. You are responsible for the environment in which you play . So please mind:
* respecting the local flora and fauna
* not throwing your trash out in nature
* keeping your noise level low.

By doing so you participate in securing a future for the planet and for the sport.

SUPAIR
LIFE IS IN THE AIR

SAVAGE

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Photo : Guy Bolton