DAVINCI GLIDERS

CLASIC

REV. 1

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Congratulations!

Congratulations!
Thank you for choosing the CLASSIC.

The CLASSIC has been designed for who are willing to progress in the sport safely, chasing their first XC flights but who are also comfortable with the technical control of this type of glider.
The CLASSIC is an easy and fun paraglider with excellent glide and a very efficient speed system designed as a low EN-B class glider.

This manual will help you to get all information about your glider. We strongly recommend that you read this manual carefully in order to be aware of any general limitations, performance characteristics, take off and flight characteristics, landing procedures, dealing with emergency situations and general maintenance.

This is information about the design of the CLASSIC, advice how to use it best and how to care for it to ensure it has a long life, We hope that the CLASSIC will give you a lot of satisfactory flying times.

-DAVINCI GLIDERS TEAM-

WARNING!
THIS IS NOT TRAINING MANUAL. ATTEMPTING TO FLY THIS OR ANY OTHER PARAGLIDER WITHOUT PROPER INSTRUCTION FROM A CERTIFIED PROFESSIONAL INSTRUCTOR IS EXTREMELY DANGEROUS TO YOURSELF AND BYSTANDERS.

DAVINCI GLIDERS are carefully manufactured and inspected at the factory. Please use the glider only as described in this manual.

Do not make any modifications to the glider.
As with any sport – without taking the necessary safety precautions, paragliding can be dangerous.

INDEX

1. Technical DATA

CLASSIC			XS	S	M	L
CELLS	NUMBER		50	50	50	50
	CLOSED		10	10	10	10
FLAT	AREA	m²	24.2	25.8	27.3	29.3
	SPAN	m	11.2	11.5	11.9	12.3
	ASPECT RATIO		5.17	5.17	5.17	5.17
PROJECTED	AREA	m²	21.0	22.2	23.4	25.5
	SPAN	m	9.1	9.3	9.5	10.0
	ASPECT RATIO		3.88	3.88	3.88	3.88
FLATTENING		%	14	14	14	14
CORD	MAX	m	2.65	2.74	28.1	2.92
	MIN	m	0.27	0.28	0.29	0.30
	AVER	m	2.16	2.23	2.30	2.38
LINES	HEIGHT	m	6.8	7.0	7.2	7.5
	MAIN		3/4/3			
RISERS	NUMBER	3	A,A'/B/C			
	TRIMS		NO	NO	NO	NO
	ACCELERATOR		160	160	160	160
WEIGHT RANGE	MIN-MAX	KG	60-85	70-95	85-105	95-120
CERTIFICATION	EN-926-1/2 LTF	KG	EN-B	EN-B	EN-B	EN-B
GLIDER WEIGHT		KG	5.0	5.5	5.8	6.2

2. Materials DATA

CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	30D MF	DOMINICO TEXTILE CO
BOTTOM SURFACE	30D MF	DOMINICO TEXTILE CO
PROFILES	30D MF(NON WR)	DOMINICO TEXTILE CO
DIAGONALS	30D MF(NON WR)	DOMINICO TEXTILE CO

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	DSL-70	LIROS
MIDDLE CASCADES	PPSL-120	LIROS
MAIN	7343-280	EDELRID
UPPER STABLE	9200-30	EDELRID
MAIN STABLE	6843-160	EDELRID
UPPER BRAKE	DSL-70	LIROS
MIDDLE BRAKE	PPSL-70	LIROS
MAIN BREAK	10N-200	EDELRID

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	12mm zero stretch polyester	GUTH&WOLF GMBH
PULLEYS	Ronstan ball bearing	Ronstan

3. Introduction and Pilot Target

The CLASSIC has been designed for who are willing to progress in the sport safely, chasing their first XC flights but who are also comfortable with the technical control of this type of glider.
The CLASSIC is an easy and fun paraglider with excellent glide and a very efficient speed system designed as a low EN-B class glider. Long brake travel and excellent passive safety, as well as the good stability make the good ideal for progression. The CLASSIC is an easy and fun paraglider with excellent glide and a very efficient speed system designed as a low end EN B class glider.

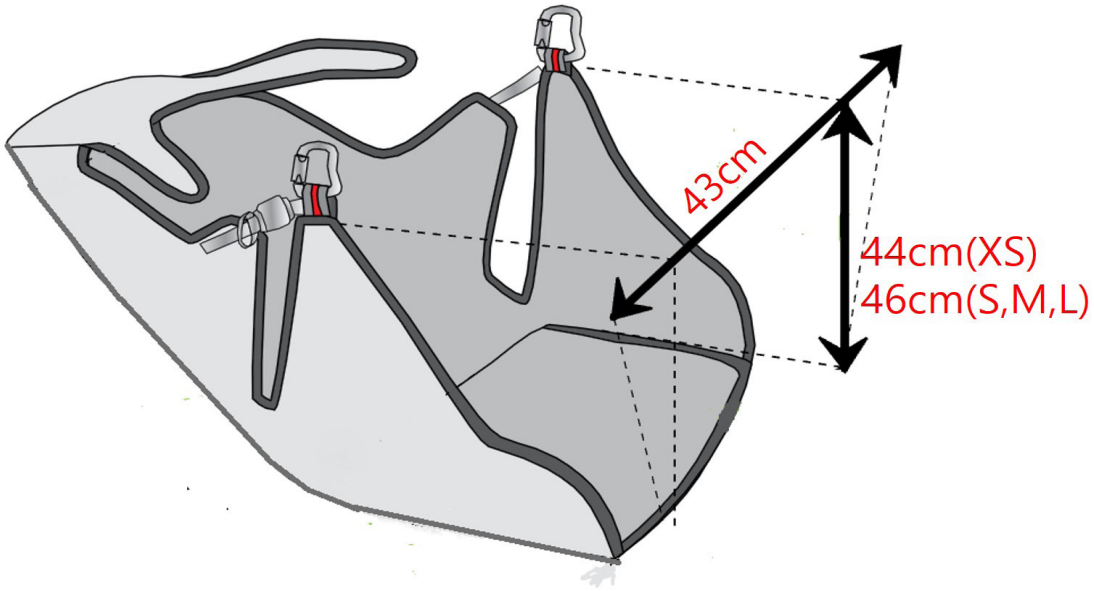
-LTF and EN certification
The CLASSIC is certified during official testing as LTF /EN-B.
The glider has been type-tested for “one-seated” use only.

-Suitability for training The CLASSIC is suitable for the use in the school and educational flying.

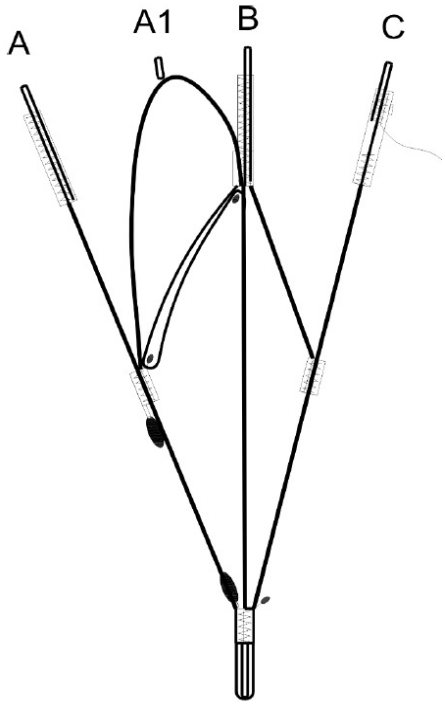
-For the CLASSIC it has minimum of 65cm symmetrical travel length at maximum total-load.
It would be dangerous to use the brake travel according to those numbers, because it is not practicable to measure the brake travel during flight, and in turbulences the stall might

4. Harness

The CLASSIC is certified for harnesses in Group GH(without rigid cross-bracing). The suspensiion points of the chosen harness should ideally have a caraviner distance of approximately 43cm and a height of 46cm(CLASSIC XS 44cm).



5. Risers



CLASSIC has 3 risers. The A riser has a red cover to easy identification. There is another line with red mailon. There is A' and is for the big ears.

	Standard [mm]	Accelerated [mm]	Travel length [mm]
A	470	470	0
B	470	445	125
C	470	310	160

6. Lines

They come in different diameters of Kevlar and Dyneema with sheathed cover. They must to be inspected every 150 hours or 24months maximum.

In case of Brake lines, it was cut a little longer, so every pilot can adjust it according to his personal taste.

But you must always leave 10cm before the brakes line starts acting in order to avoid trailing edge deformation when the wing is fully accelerated. In case the brake handle comes loose during flight or any brake lines is cut you can use the C riser softly for directional control instead of brake line.

7. Accelerator system

The accelerator has being limited in travel up to a safety point, however you can gain 8-12 km of extra speed.

You have to adjust the harness to the speed system so you can use all the speed travel.

To do so you have to be seated in the ground meanwhile you are in your harness and adjust the lines by pulling up the risers with tension. Another person help to do this is recommended. Make sure also that the speed bar is not pulling down the risers when you are not using it.

Once all the gear is rigged you have to test the whole speed travel in calm air. The use of the speed system reduces the angle of attack and the canopy may be more sensitive to collapses therefore do not use near the ground or in turbulent air and in case you are hit by turbulence remove your feet off the speed bar as quickly as possible. Always far away from the ground when using the speed bar.

8. Pre-flight check

To know yourself with the glider it is a good idea to perform practice inflations and ground handling in advance. You should have no difficulties flying the CLASSIC for the first time in suitable conditions, but as with all new equipment.

When you have the new glider, the below points should be inspected.

- Check the lines are clear and not twisted.
- Connection points between the glider and harness.
- All harness buckles are closed.
- The Karabiners are fully closed and not damaged.
- The sewing, condition of the lines and connection of the lines are right
- Internal demage to ribs and diagonal ribs.
- Demage to the top and bottom panels and seams between panels.

9. Take-0ff

CLASSIC has easy inflation behaviour at the forward/reverse launch because of its profile system. To get the right wing shape for the take-off, pull the brake until the canopy shows at the perfect banana shape on the flat ground. While inflating the CLASSIC, you should hold both of th A risers on your hands. Smoothly and gradually inflate the wing. It does not need excessive energy and you feel the lift force very fast. It does not tend to over-shooting characteristics and provides a leisurely launch time with you.

9.1 Tow launch

The CLASSIC is easy to launch using a winch and it has no any special skills. To practice this launching technique special training is needed and you have to know the procedures and dangers, which are specific for winching. We do not recommend using any special towing device which accelerates the glider during the winch launch.

10. In flight characteristics

CLASSIC has the best stable glide performance in a normal position with no any brakes. In strong thermals and turbulence, we recommend to gently pull both brakes without acceleration to increase stability. The brakes provide feedback about the surrounding air, which is needed for active flying.

To familiarize yourself with the CLASSIC your first turns should be gradual and progressive. To make efficient and coordinated turns with the CLASSIC first look in the direction you want to go and check that the airspace is clear. Your first input for directional change should be weight-shift, followed by the smooth application of the brake until the desired bank angle is achieved. To regulate the speed and radius of the turn, coordinate your weight shift and use the outer brake.

In the unlikely event that a brake line releases from the brake handle or breaks, the glider is manoeuvrable using the C-risers. By pulling gently on the C-risers it is possible to steer the glider and land safely.

Alternative Steering:
In the unlikely event, that a brake line releases from the brake handle, or breaks, or the brake-lines are tangled up, the glider is manoeuvrable using the rear-risers. By pulling gently on the rear-risers, it is possible to steer the glider and land safely. Don't pull the rear-risers too much, to avoid a deep stall!

11. Deflations

In spite of the CLASSIC has great stability of the flight, strong turbulence or piloting error may cause a portion of the wing suddenly to be a deflation.

11.1 Asymmetric collapse

Asymmetric collapse usually happens when the pilot has not foreseen this possible reaction of the wing.

Asymmetric collapses should be controlled by weight shifting away from the collapse and applying enough brake to control your direction. And you should use the brake to re-inflate the glider.

11.2 Frontal collapse

CLASSIC does not come out the symmetrical front collapse by itself. It has high internal pressure with its well designed profile. However a symmetric collapse my occur in strong turbulent condition, but It could be fast recovered, if you apply the brake down to 15 to 20cm. Release the brake lines, you may recover to the normal flight.

11.3 Full stall

Full stall can occur when you fully pull the both brakes enough long time. This means that the wing loses its forward momentum. To recover to the normal flight you must release both brakes. After this usually comes a front dive with a possible front deflation. An asymmetric recovery (one control released faster than the other) from a full-stall can cause a big dynamic collapse. The full-stall is a hazardous manoeuvre and as such outside the scope of this manual. You should practice and learn this manoeuvre only on a SIV course under professional instructor.

11.4 Deep stall

It is possible for gliders to enter a state of deep stall. This can be caused by several situations including; a very slow release from a B-line stall; flying the glider when wet; very old glider; or after a front/symmetric deflation.

When you meet this situation you should fully raise up the both brakes and push the A-risers forwards or use the speed bar symmetrically to regain normal flight.

11.5 Asymmetrical stall

It can take place when you pull one of the brakes too hard, or while spiraling at a small speed in turbulence you increase the angle of attack. Rotation in the asymmetrical stall is called negative spiral. This is one of the most dangerous flying situations. In order to get out of asymmetrical stall, just release the brakes. There may follow side thrust forward with a following wing collapse.

11.6 B stall

The CLASSIC has a very clean stable B stall. To enter the B stall, the pilot has to pull the first 20cm slowly until the r glider loses forward speed and starts to descend at around 6 m/s vertically. Do not release the brake handles during B stall. If you pull too much B-line the glider may horseshoe and move around a lot. If this happens, release the B risers.

To exit the B-stall the B-risers should be released symmetrically and in one smooth, progressive motion. The glider will resume normal forward flight without further input. Check you have forward flight again before using the brakes.

11.7 Cravat

In case a cravat should occur from an asymmetric collapse or other manoeuvres, it is important to keep your flying direction by applying some brake on the opposite side and weight shift.

You can also use strong deep pumps on the brake to the cravated side. If a pull of the break line is unsuccessful, pulling the stable line which is the outermost line on the B-riser may work.

If you can not do it and the rotation is increasing, you must use the parachute.

12. Descent Techniques

12.1 Big ears

Sink rate can be decreased in a controlled way by folding both wing tips. While holding the brakes you should symmetrically pull the outermost A-risers.

In order to return to the normal flight, you should release the A-risers and pull the brake short times until wing tips regain pressure.

Spiraling is not permitted with big ears, because of the increased load on the remaining lines so that they can be physically deformed.

12.2 Spiral dive

The spiral dive is the most demanding descent technique and should be learned at enough height, preferably during an SIV course.

When you hold one sided brake down for a long time, the glider goes into a fast sharp turn and loses a lot of height. The sink rate could be more than 15 m/sec. To get out of the spiral dive you must release the inner brake and use the outside brake to manage your sink rate. Mind that CLASSIC may take one more turn after releasing the brake.

13. Landing

We recommend to land with trimmers to the normal slow position. Don’t use the sharp turns or radical maneuvers.

When you are 1-2m over the ground, you should face into wind and standing upright and ready to run. Finally you may pull the brakes smoothly for minimize vertical speed.

Don’t hit the ground by your overtake the glider. If you in windy condition, as soon as you touch the ground you have to turn around to face the glider and move towards it during full pulling break symmetrically.

14. Packing your CLASSIC

Spread the CLASSIC completely out on the ground. Separate the lines to the each side. The CLASSIC must be folded cell to cell to keep the plastic reinforcement at the leading edge lie flat on each other and don’t get bent. Try to pack your CLASSIC as loosely as the rucksack allows, because every fold weakens the fabric.

Avoid packing the glider where it is wet or abrasive conditions(sand, asphalt pavement, concrete)

15. Maintenance and cleaning

Cleaning should be carried out with only pure water. If the glider comes in contact with salt water, clean thoroughly with fresh water. Do not use solvents of any kind, as this may remove the protective coatings and destroy the fabric.

16. Caring tips

- Do not expose your glider to the sun any longer than necessary
- Keep it away from water and other liquids
- Do not let the front edge hit the ground
- Keep your glider away from fire
- Do not put anything heavy on your glider, do not pack it in a rucksack too tightly.
- Regularly inspect the canopy, lines, risers and harness. If you find any defects, contact your dealer or the manufacturer. Do not attempt to repair the paraglider by yourselves.
- If you detect a damaged line, inform the dealer or manufacturer about the line number according to the line plan
- Keep your CLASSIC in a bag in a dry well-ventilated place under neutral temperature and humidity conditions
- If you do not use the glider, then once a month you should unpack it, ventilate it well, and then pack it back in the bag

17. Warrantee

The producer guarantees the correctness of the declared characteristics and the paraglider's normal performance for two years after the purchase date. The producer conducts special, and after warranty repairs and maintenance at the owners' request for an extra price.

We recommend to inspect your paraglider (including checking suspension line strength, line geometry, riser geometry and permeability of the canopy material) one time at two years, or every 150 hours of flying time (whichever comes first); Those inspection must be made by manufacturer, importer, distributor, dealer or other authorised persons. The checking must be proven by a stamp on the certification sticker on the glider as well in the manual book.

18. Respecting nature and environment

Finally, we would ask each pilot to take care of nature and our environment. Respect nature and the environment at all times but most particularly at take-off and landing places. Respect others and paraglider in harmony with nature.

Do not leave marked tracks and do not leave rubbish behind. Do not make unnecessary noise and respect sensitive biological areas.

The materials used on a paraglider should be recycled. Please send old Davinci gliders back to us Davinci Gliders offices. We will undertake to recycle the glider.

Checked line sheet(with riser)

The measured values at the lower surface of the tailing edge, cll depth and spacing of the articulation points were determined under tensile load of 50N.

XSmall size

	A	B	C	D	Brake
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15(stable)					

Small size

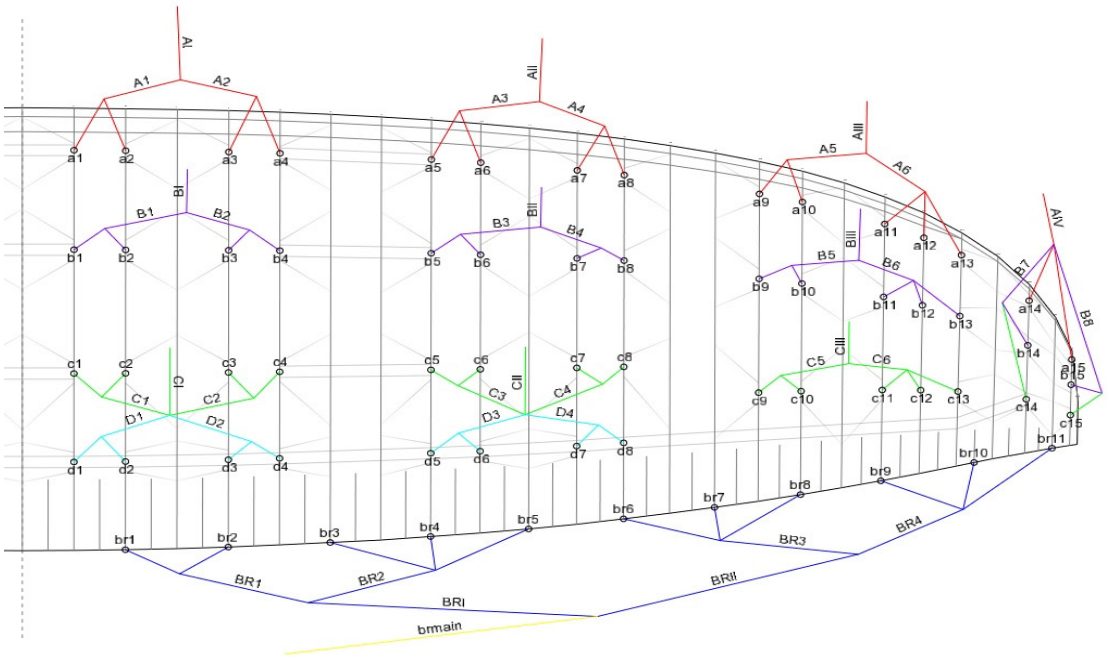
	A	B	C	D	Brake
1	6971	6856	6910	7029	7378
2	6928	6816	6870	6990	7135
3	6900	6795	6857	6978	6977
4	6910	6802	6866	6949	6834
5	6896	6795	6856	6972	6854
6	6880	6778	6835	6955	6744
7	6855	6763	6825	6931	6612
8	6866	6769	6827	6915	6593
9	6790	6696	6765		6518
10	6750	6657	6734		6489
11	6660	6593	6659		6521
12	6597	6549	6609		
13	6586	6548	6609		
14	6385	6345	6416		
15(stable)	6269	6270	6340		

Medium size

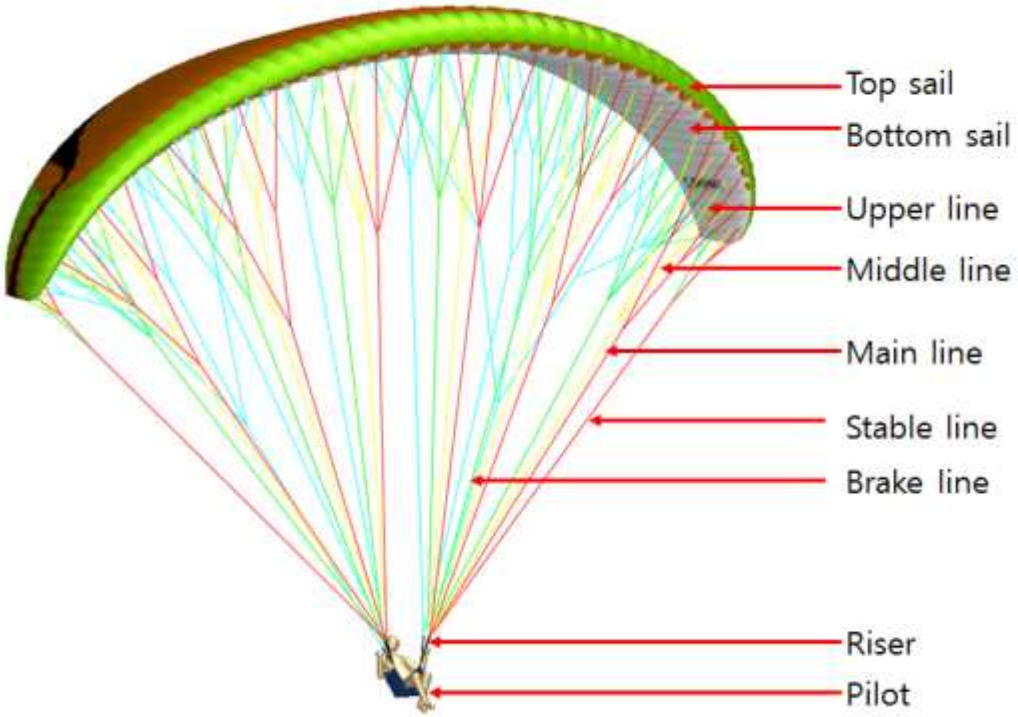
	A	B	C	D	Brake
1	7123	6985	7033	7144	7426
2	7076	6938	6987	7095	7233
3	7050	6929	6977	77092	7074
4	7051	6929	6981	7096	6941
5	7059	6949	7027	7150	6966
6	7023	6920	6994	7116	6796
7	6964	6874	6944	7060	6649
8	6959	6863	6934	7027	6618
9	6747	6690	6796		6488
10	6690	6639	6736		6444
11	6582	6530	6629		6484
12	6498	6458	6560		
13	6493	6456	6546		
14	6272	6232	6308		
15(stable)	6156	6168	6295		

Large size

	A	B	C	D	Brake
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15(stable)					


AI
AII
AIII
AIV
A1
A2
A3
A4
A5
A6
B1
B2
B3
B4
B5
B6
C1
C2
C3
C4
C5
C6
D1
D2
D3
D4
BR1
BR2
BRI
BRII
BR3
BR4
bmain

Overview


Top sail
Bottom sail
Upper line
Middle line
Main line
Stable line
Brake line
Riser
Pilot

Serial Number	
Date of Production	
Dealer	
Date of sales	
Check and repair information	