

# FLARE



**MOUSTACHE**

SOARING | SPEEDFLYING | SNOWKITING | FUN MACHINE  
USER MANUAL

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## 1 INTRODUCTION

Welcome to FLARE!

Congratulations on the purchase of your new MOUSTACHE and thank you for your trust in us and in our products. In this manual you will find information that will help you quickly get to know your new parakite to ensure your fun for a long time.

We had a dream, that there is more to flying than left & right, to start a revolution in the world of flying and add the first real 3rd dimension to your movements in the air while flying.

20 years of development-knowledge at skywalk Paragliders and FLYSURFER Kiteboarding have led us to something the world has not yet seen.

It's new, it's innovative, it's a dream come true. We have created the ultimate wing system combining power, fun and safety from the best of two worlds: kiteboarding and paragliding.

We are always open for questions, comments or critique and are happy to provide you with further information at any time!

Your FLARE Team  
#Beyond\_Gravity

Edition 1.0 /04\_2022  
The latest version of the manual can be found on  
[www.go-flare.com](http://www.go-flare.com)

## 2 DESCRIPTION

The FLARE MOUSTACHE is a very versatile construction built for your ultimate soaring and speedflying experience. It is the first wing giving you complete control on speed and glide ratio with only one input, your brake handles.

### PILOT REQUIREMENTS

The FLARE MOUSTACHE is equipped with a so-called 'reflex' profile, so it behaves differently than a 'normal' parakite. This requires new skills and a different piloting style. The FLARE MOUSTACHE requires a pilot with regular flying experience, solid active flying experience with other parakites, and experience dealing with canopy collapse.

Pilots who have received proper training on the wing itself are also qualified, as long as they understand its specific behavior and handling characteristics.

Please be honest with yourself, judge your skill-level correctly, and choose a bigger size when getting into FLARING..



THE FIRST FLIGHT MUST BE CARRIED OUT BY A QUALIFIED EXPERT. THE TYPE CERTIFICATE AND THE DATE OF THE FACTORY INSPECTION CAN BE FOUND IN THE MIDDLE CELL OF THE PARAKITE. THE DATE OF THE FIRST FLIGHT AND NAME OF THE PILOT SHOULD BE ENTERED HERE. SHOULD THIS BE MISSING, ASSUME THAT THIS PARAKITE IS A PROTOTYPE THAT HAS NOT BEEN TESTED.



### DISCLAIMER AND LIABILITY WAIVER

#### EXEMPTION FROM LIABILITY, WAIVER OF CLAIMS, ASSUMPTION OF RISK

You agree that, before initially using the FLARE MOUSTACHE, you have read and understood the manual in its entirety, including all applicable instructions and warnings. You also agree, before allowing any other person to use your FLARE MOUSTACHE, to have them read and understand said manual as well.

#### ASSUMPTION OF RISK

The designers of FLARE MOUSTACHE have done everything in their power to guarantee that MOUSTACHEer use of it and of its component parts is safe, however, use of the equipment involves certain risks of personal injury or death for the user of the product and for third parties. By using the FLARE MOUSTACHE, you agree to accept all known and unknown risks that may lead to injury or death.

The risks associated with the practice of this sport can be reduced, to the extent of the care required in a particular case, by observing the warnings contained in this manual. The risks inherent in this sport can be reduced to a large extent by observing the warning guidelines contained in this manual and by using common sense.

#### EXCLUSION OF LIABILITY, WAIVER OF CLAIMS

By making a purchase of the FLARE MOUSTACHE, you agree to the following points, to the extent permitted by law:

To waive any and all claims, however they may arise, from use of FLARE MOUSTACHE and any of its components, which you have or may in the future have against SKYWALK GmbH & Co. KG and any other parties.

To release SKYWALK GmbH & Co.KG and any other parties from any and all claims for loss, damage, injury or expense that you, your next of kin or relations or any other user of your FLARE MOUSTACHE may suffer as a result of use thereof, including liability arising under law and contract on the part of SKYWALK GmbH & Co.KG and any other parties in the design and manufacture of the FLARE MOUSTACHE and any of its components.

In the event of death or disability, all of the provisions contained herein shall be effective and binding upon the user's heirs, next of kin and relatives, executors, administrators, assigns and legal representatives.

SKYWALK GmbH & Co.KG and all other parties have not made any oral or written representations and expressly deny having done so, with the exception of what is set out herein and in the FLARE MOUSTACHE manual.



## TECHNICAL DATA

SIZE	13	15	18	22	26
COLOR	PETROL / WHITE				
AREA (FLAT)	13M <sup>2</sup>	15M <sup>2</sup>	18M <sup>2</sup>	22M <sup>2</sup>	26M <sup>2</sup>
NR CELLS	52	52	52	52	52
WINGSPAN (FLAT)	840CM	910CM	1000CM	1130CM	1249CM
MAX CHORD	187CM	199CM	216CM	234CM	251CM
AR (FLAT)	5,4	5,5	5,6	5,8	6,0
AREA (PROJECTED)	11,00M <sup>2</sup>	12,68M <sup>2</sup>	15,27M <sup>2</sup>	18,56M <sup>2</sup>	21,95M <sup>2</sup>
GLIDER WEIGHT	3,1KG	3,4KG	3,8KG	4,4KG	5,0KG

## LINE SYSTEM

The choice of material for our FLARE products is designed for durability and safety.

The FLARE MOUSTACHE has 3 A-, 4 B-, 4 C- main lines and one brake main line connected to the riser. The brake line is connected to a 'knot-ladder' on the brake handle. The setting at delivery should only be changed by a FLARE certified 'Pro-Partner' if necessary to obtain the perfect trim.

To provide a better overview and to make sorting easier, the lines have different colors:

- the as1, as2, as3 mainlines are red
- the bs1, bs2, bs3, bs4 mainlines are yellow
- the cs1, cs2, cs3, cs4 mainlines are blue
- the brs1-line is orange

The FLARE MOUSTACHE is equipped with 3 risers on each side.

- All A-lines lead to one A-riser.
- The B-lines and the stabilo line lead to the B-riser.
- The C-lines lead to the C-riser.



FLYING A PARAKITE REQUIRES MAXIMUM CAUTION AT ALL TIMES. WE REMIND YOU THAT YOU FLY YOUR PARAKITE AT YOUR OWN RISK! AS THE PILOT, IT IS YOUR RESPONSIBILITY TO ENSURE THE AIRWORTHINESS OF YOUR PARAKITE BEFORE EVERY FLIGHT. REMEMBER THAT MENTAL FITNESS IS ALSO A RISK FACTOR.

The FLARE MOUSTACHE may not be flown:

- > outside of the minimum and maximum recommended takeoff weights
- > in strong thermals
- > in rain, snow, or in extremely turbulent weather conditions
- > in clouds or fog (visual flight)
- > with insufficient pilot experience
- > as a power kite on the water (kitesurfing, kiteboarding, kitefoiling)
- > if the canopy is wet
- > at temperatures under -30°C or over 50°C
- > for acrobatic flight (flight maneuvers at an angle of more than 90 degrees)
- > with more than one person (tandem)

During production, the FLARE MOUSTACHE underwent carefully selected quality controls and was inspected once again before shipping. Keep in mind that a parakite can only be flown while observing the laws of the country in which it is flown.



## 3 RISER / FLARE SYSTEM

The “FLARE System” is a matrix of pulleys around the B and C lines and combines the control handles with the accelerator in the brake handles. This allows controlling the FLARE MOUSTACHE with just your hands.

The C-level moves with a ratio of 1/3 of the brake travel.  
The B-level moves with a ratio of 1/6 of the brake travel.

That means you can fully adjust your glide ratio by completely changing the angle of attack of your wing. This combination was the key to success.

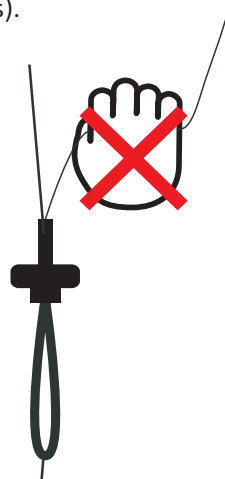
Your brake handle is connected with an elastic ‘Free Brake Line,’ enabling you to grab it quickly when standing on the ground.



**DON'T** release the brake handle while flying and always stay in the loops.

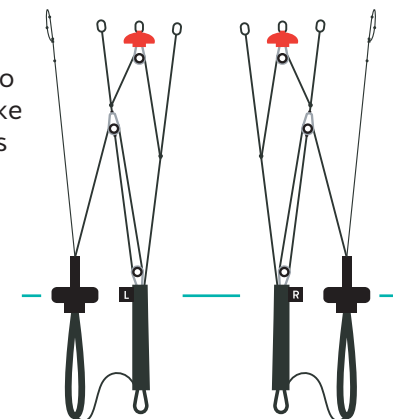
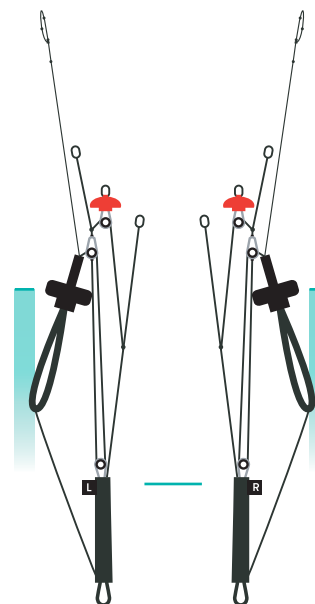
**DON'T** adjust the setting on your brake main line (this is a tool to trim your FLARE MOUSTACHE after many flying hours, and we recommend that it is only adjusted by FLARE itself or one of our Pro-Partners).

**NEVER** steer the FLARE MOUSTACHE by ONLY pulling the main brake line. Always steer in combination with the c-pulley line and the main brake line.



## BRAKE SETTINGS ON THE FLARE SYSTEM

**Best glide position:**  
The FLARE MOUSTACHE has its best glide ratio when you pull your brake handles (not the brake handle loop) to the same height as the L/R flags on the riser. This is your ‘best glide’ position.

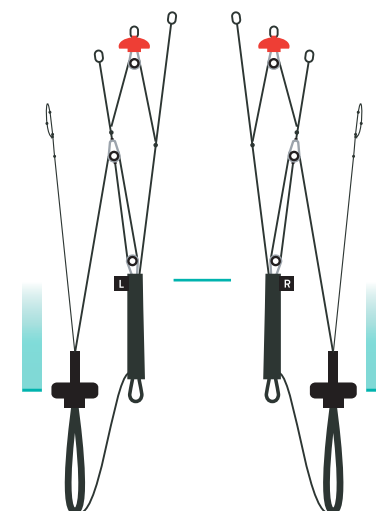


**Full speed position:**  
Your ‘full speed’ position is when you fully release the brakes until they are limited by the pulley from the C-Riser. (Always keep your hands in the brake loops).

**Minimum speed position:**  
If you pull the brake handles to the same height as the end of the risers, you are very close to the stall speed. (Never fly at ‘minimum speed’ position close to the ground, as there is no speed left for a FLARE).



Check our tutorials on youtube for further information.



## 4 HARNESS

The FLARE MOUSTACHE can be flown with all certified harnesses of the GH type (harnesses without solid cross-bracing).

Be aware that the relative brake travel and the agility of the parakite changes with the height of the attachment point.

## 5 FLIGHT TECHNIQUES AND CHARACTERISTICS

### PREFLIGHT CHECK AND MAINTENANCE

It is essential to check your FLARE equipment thoroughly before every flight to see if it has any defects. Also, check the parakite after long flights and after long storage.

Check thoroughly:

- > All seams on the harness, the rescue chute attachments and the risers
- > That all connecting parts, line shackles and carabiners are closed
- > The brake line knots right and left, following all lines from the risers to the parakite canopy.
- > All other lines from the risers to the canopy
- > All line attachment points on the canopy
- > The top and bottom of the wing for damage and wear and tear
- > The profiles and the crossports on the inside
- > Whether the parakite is dry



**DO NOT LAUNCH IF YOU FIND ANY DEFECTS, EVEN SMALL ONES! IF YOU FIND ANY SIGNS OF DAMAGE OR ABNORMAL WEAR AND TEAR, CONTACT YOUR PRO-PARTNER OR FLARE DIRECTLY.**

### LAYING OUT THE GLIDER

When you use your parakite for the first time we recommend that you practise some inflations and try some simple flights at a training site. This way you are able to get used to your FLARE MOUSTACHE.

Lay out the canopy so that the leading edge is clearly arched. The middle of the canopy should form the deepest point of your Parakite. This way the A-lines are tensioned first in the middle whilst inflating. The parakite inflates evenly which ensures a stable and straight take off. Make sure to have no sand or other objects in your wing.

The sorting of the three color-coded lines must be comprehensive. All lines from the risers to the parakite cap must be free of knots, loops, or snags. Release the brake lines lying on the ground before take-off if they are snagged on the ground. When starting, no lines may lie under the parakite. Entangled lines can often not be solved and have fatal consequences!

### TAKE-OFF (forward)

The FLARE MOUSTACHE is easy to launch. It is very important to NOT hold the A-Risers in your hand while performing a forward launch. Follow the black elastic connecting your brake handles with the riser, starting from your main riser connection loop. Slip into the loop and grab the brake handle. Make sure to have the risers lying on top of your arms. Hold your arms slightly sideways and as far backwards as possible, making sure the break handles are fully released.

Before launching check the laid out parakite. Further check the wind direction and the airspace! Start running with the pull of your parakite only in the harness, and when your wing is above your head, check the inflated canopy on any collapsed wingtips or line tangles. You can open any collapsed cells by pumping the affected side. Don't make your final decision to accelerate or to takeoff until you are absolutely sure that the wing is properly and evenly inflated. Otherwise, stop the take-off procedure immediately! Keep some tension on brake handles and run as fast as you can.

If you have a knot in the lines and can't stop the takeoff procedure and start to fly, do not fly fast! Even a tiny knot in the brake lines or C-Lines can take out the Reflex and remove the stability of the FLARE MOUSTACHE and even lead to a collapse without turbulence when going in a 'full speed' position! The knots might also affect your stall speed, so don't try landing somewhere sketchy either. The best is to fly down slowly with break handles pulled and choose a big safe landing spot.

**DON'T PULL TOO MUCH ON THE BRAKES HANDLES, YOUR MOUSTACHE NEEDS A RATHER HIGH TAKEOFF-SPEED.**

When reaching your maximum running speed, increase the tension on the brakes until you lift off.

Make sure to check out our tutorials on youtube.



**REVERSE LAUNCH**

Hold the A-Riser where the split to the B-Riser is located. This way the FLARE MOUSTACHE inflates in a nice and smooth way. If the wind is strong enough, only hold your brake handles and release them and pull with your hips. this way the FLARE MOUSTACHE inflates perfectly.

If your Parakite is overshooting, you have two options. The first one is to let it overshoot and don't stop it at all with your brake handles. The reflex profile will stop it for you.

Second option ist to stop it rapidly with a quick and far pull on the brake handles. The worst thing you can do when your FLARE MOUSTACHE overshoots while standing on the ground is slowly pulling your brake handles.

DO NOT HESITATE TO STOP IT, OTHERWISE IT COULD COLLAPSE.

**TURNING**

The FLARE MOUSTACHE has a unique behavior during turns. For flat turns, fly at about the 'best glide' position and use weight shifting. Only release the outside brake as much as needed.

For steep turns, use weight shifting and release the outside brake (be prepared for a very steep turn and a high flying speed).



WHEN FLYING CLOSE TO THE STALL SPEED, ONLY RELEASE THE OUTSIDE BRAKE IN ORDER TO KEEP YOUR MOUSTACHE FROM SPINNING! PULLING THE BRAKE LINES TOO FAR AND TOO FAST CAN CAUSE A STALL! YOU CAN RECOGNIZE AN IMPENDING NEGATIVE SPIN BY THE HIGH CONTROL LINE PRESSURE AND SLIGHT BACKWARDS FOLDING OF THE WING TIP. IF THIS HAPPENS, RELEASE THE INSIDE BRAKE IMMEDIATELY.

**ACTIVE FLYING**

Active flying means flying in harmony with your Parakite. That means that instead of flying with the brakes always in the same position, you are aware of the slightest disturbances in the air and react accordingly, especially in turbulent conditions.

Never let go of the brake handles, especially in turbulent conditions! Despite your parakite's high stability, you should constantly use brakes and weight shift to correct the position of the canopy in turbulence.

With a light tug on the brakes you can constantly keep in contact with the canopy and feel its internal pressure. That way you can recognize and react early to a pressure drop and impending collapse.

Collapses, while flying in 'full speed' position, in general tend to be more sudden and require increased attention on the part of the pilot. As you gain experience, these reactions will become intuitive. However, maintaining an active flying style will greatly increase your margin of safety.

The neutral position for active flying is slightly above the best glide position at the left and right marks on the 'FLARE SYSTEM'.

Examples:

- > To avoid large changes in the angle of attack, release the brakes when flying into strong updrafts and pull them when flying into downdrafts.
- > When flying in turbulent air, if you feel a drop in pressure in parts of your parakite, pull the brake briefly and progressively until the pressure becomes normal again. If you brake the wing too quickly and too far, you risk stalling it!



NEVER FLY IN FULL SPEED POSITION WITHOUT APPLYING LIGHT PRESSURE ON THE BRAKE HANDLES IN TURBULENT AIR! NEVER LET GO OF THE BRAKE HANDLES!

**LANDING**

The FLARE MOUSTACHE can flare for a very long distance in flat terrain. Make sure to choose a big landing space if you have no headwind. We recommend doing the final approach slightly above the 'best glide' position; this way, you have enough flare left for a smooth flared landing. In no wind situations, be ready to run fast. The Moustache has a much higher stall speed than a regular paraparakite.

**PACKING**

Conscientiously packing your parakite guarantees consistently high quality. First, remove all leaves, grass, sand, etc., then sort the lines and lay them on top of the parakite. Always make sure that the parakite is dry and clean before you pack it. Place your FLARE MOUSTACHE on top of the opened DREAMCATCHER BAG.

Start with the second cell from the middle and lay them cell for cell on top of each other so that the reinforcements of the inlets are kept together.

Repeat this process on the trailing edge by starting from the middle and folding together every second panel, drawing them towards the middle. After that, lay the folded panels on top of each other and press the air from the trailing to the leading edge.

After doing this on both sides, fold one half onto the other and beginning from the bottom, close all clips and fold the bag up towards the leading edge and close the zipper. Make sure no lines or fabric get into the zipper when closing it.

You can also pack any FLARE Parakite with flexible nylon wires by any other method without damaging the leading edge.

A hint to increase the life of your parakite even more:

Don't pack your parakite too tightly. Treat the leading edge with care despite its robustness, and open up your wing if you store it for a more extended period.

## 6 DESCENT TECHNIQUES

The FLARE MOUSTACHE is EN926-1 certified. It has gone through and passed a shock and load test. The FLARE MOUSTACHE has no Motor - DGAC - Direction Generale de l'Aviacion Civile certification. Check the local regulations to fly with the FLARE MOUSTACHE at high altitudes. If so, you will find the most critical descent techniques for the FLARE MOUSTACHE here.

This manual does not claim to be an operating manual, and FLARE, therefore, recommends participation in a safety training course over water.

For all extreme maneuvers it is important:

First to practice them under the tutelage of a certified flight instructor as part of a safety training course.

To ensure that the airspace below you is clear before entering each maneuver.

To maintain eye contact with your glider throughout each maneuver.

### SPIRAL DIVE

The FLARE MOUSTACHE tends towards a stable spiral dive and has above-average sink rates. You can enter a spiral dive starting from close to 'full speed brake setting' by carefully increasing the brake pressure on the inside of a turn while shifting your weight in the same direction.

Do not pull the inside brake too far, in order to not 'spin' and stall your FLARE MOUSTACHE asymmetrically.

The spiral begins when the glider banks sharply to the side and enters a sharp, steep turn. You can control the bank angle and descent rate by applying or releasing the inside brake.

We highly recommend having the outside brake at 'full speed' position' or close to it. This way you will get a higher sink rate with rather low G-forces. The spiral dive can be used to lose altitude quickly, so please consider the following:

- > High sink rates and the related high G-forces lead to a high physical strain on the body that may be too much for inexperienced pilots!
- > Approach spiral dives slowly!
- > Tensing your stomach muscles during a spiral dive can be very helpful!
- > If you feel dizzy or faint, exit the spiral dive immediately!
- > Due to the extreme altitude loss in a spiral dive, make sure you always have enough safe reserve.
- > To avoid strong surging when exiting the spiral dive, slowly release the inside brake while applying the outside brake.
- > The brake line pressure in a spiral dive is substantially higher than in normal flight!



TO EXIT A SPIRAL WITH A HIGH SINK RATE (> 14M/S), IT MAY BE NECESSARY TO BRAKE THE OUTSIDE HALF OF THE GLIDER AND/OR TO SHIFT YOUR WEIGHT TO THE OUTSIDE OF THE TURN. THE EXIT MAY REQUIRE SEVERAL COMPLETE ROTATIONS AND CAUSE A HIGH ALTITUDE LOSS. FOR THIS REASON, DON'T PERFORM THIS MANEUVER AT AN ALTITUDE OF FEWER THAN 200 METERS! BY THE TIME YOU REACH THIS ALTITUDE, THE MANEUVER SHOULD HAVE ALREADY BEEN COMPLETED!

### ROLLING DURING 'FULL SPEED POSITION'

The most effective way of descending with your FLARE MOUSTACHE without increased G-forces is to initiate an alternating rolling motion by shifting weight when in 'full speed' position with your brakes. This will increase your sink rate from an anyway rather high sink rate when in 'full speed' position. 'Full Speed' position will give you a lot of sink, therefore coming down on a parakite is easier than with regular paragliders.

Be aware you can't do Ears, Big Ears or a B-Stall with the FLARE MOUSTACHE. We recommend flying circles or small wingovers (rolling) to lose altitude more quickly. While soaring, we recommend flying out (upwind) of the updraft; this makes it easier for you to descend and land. When soaring, be very careful doing full circles when you are too close to the terrain; it can be very dangerous.



## 7 EXTREME FLIGHT MANEUVERS

In extreme conditions, only professional or experienced pilots should fly the FLARE MOUSTACHE.

### ASYMMETRIC COLLAPSE

The FLARE MOUSTACHE is very stable, but it can collapse at any time in strong turbulence. A parakite tends to collapse in the “full speed position”, which can have serious consequences.

The inherent turn toward the collapsed side of the glider can be minimized by braking the open side. With large collapses, brake the open side carefully to avoid stalling the wing. If the collapse doesn't open despite braking and weight shifting on the open side, you can speed up the opening process by repeatedly pumping the brake on the collapsed side.

### SYMETRIC FRONTAL COLLAPSE

If a front collapse happens, there is a risk that the parakite will form into a horseshoe shape. To avoid this, pull the brake handles quickly and forcefully. This is the quickest way to reopen your FLARE MOUSTACHE.

### CRAVAT / LINE OVER

This type of disturbance has never occurred during test flights with the FLARE MOUSTACHE. However, it is possible in highly turbulent air or due to a pilot error that, part of the wing could get tangled in the lines. The pilot should first stabilize the glider by carefully braking the open side. Without a pilot reaction, a cravat can cause a glider to enter a stable spiral dive!

To clear the cravat, there are two possibilities:

- > Pumping the affected side until deflation of the wing occurs.
- > Fullstall.



SHOULD THESE MANEUVERS NOT SUCCEED, OR IF THE PILOT FEELING OVERWHELMED BY THE SITUATION, THE RESCUE PARACHUTE SHOULD BE DEPLOYED IMMEDIATELY!

### PARACHUTAL STALL

Deep stall can occur after heavy use due to porous material (UV radiation) and in the rain (absorption of moisture). The parakite does not accelerate and gets a high rate of descent.

The FLARE FLARE MOUSTACHE will recover from a parachutal stall by releasing the brakes to ‘full speed’ position immediately.



IF YOU APPLY THE BRAKES DURING A PARACHUTAL STALL, THE GLIDER WILL IMMEDIATELY ENTER A FULL STALL. NEAR THE GROUND, A STABLE PARACHUTAL STALL SHOULD NOT BE EXITED DUE TO THE RESULTING OSCILLATIONS. INSTEAD, THE PILOT SHOULD SIT UP IN HIS HARNESS AND PREPARE FOR A PARACHUTE LANDING FALL..

### NEGATIVE SPIN

A parakite enters a negative spin when one side of the wing is stalled. The canopy rotates around the vertical axis with the center of rotation located within the wingspan. The inside wing flies backwards.

There are two causes for the negative spin:

- > One brake is pulled too far and too hard (e.g. when entering a spiral dive)
- > One brake is pulled too hard when flying slowly.

If an accidental negative spin is exited immediately, the FLARE MOUSTACHE will usually resume flight without much altitude loss. Just release the brake line pulled too far until the airflow is restored to the inside wing. After a long negative spin, the canopy may surge forward on one side. This could result in an impulsive collapse.

### WINGOVERS

Alternating left and right turns as the bank angle is gradually increased. If wingovers are flown high with a large bank angle, the outside wing tip may lose pressure and start to feel light. In this case, don't increase the bank angle any more as the tip could collapse impulsively.



NEGATIVE SPINS AND WINGOVERS OVER 90° ARE FORBIDDEN. ACROBATIC MANEUVERS ARE NOT ALLOWED TO BE FLOWN UNDER NORMAL CONDITIONS IN GERMANY. THE WRONG EXIT TECHNIQUE OR PILOT OVERREACTION CAN HAVE DANGEROUS CONSEQUENCES REGARDLESS THE GLIDER TYPE OR PARAKITE!

## FULLSTALL

A full stall can be performed with the FLARE MOUSTACHE by pulling the brakes below 'minimum speed' position. It is very important to initiate the full stall in a rather slow manner to avoid having the wing fall too far behind the pilot.

In case the FLARE MOUSTACHE is far behind the pilot, DO NOT release the brakes immediately, keep them below the 'minimum speed' position until the wing is above or in front of you. This will prevent the wing from going into a fast surge forward.



DUE TO THE REFLEX CONSTRUCTION OF THE FLARE MOUSTACHE, IT IS VERY IMPORTANT TO STOP A SURGE FORWARD WITH A QUICK AND DEEP PULL ON THE BRAKE HANDLES, RATHER THAN A GENTLE PULL. BY TRYING TO STOP WITH A GENTLE PULL, YOU MOST LIKELY EVEN ACCELERATE THE SURGE AND A FRONTAL COLLAPSE IS INEVITABLE.



## 8 MATERIALS

The FLARE MOUSTACHE is manufactured from the highest quality materials. FLARE has selected the best possible combination of materials with regard to resilience, performance and longevity. We are aware that the durability of the glider is a deciding factor in the pilot's satisfaction.

### WINGS AND RIBS

Upper sail:	Dominico 30DMF, 204444PS
Lower sail:	Dominico 204444PS
Ribs:	Porcher 9017 E29A

### LINES

We have chosen Dyneema due to its high durability.

A, B, C Main lines:	Liros PPSL275, PPSL200, PPSLS180, PPSLS125
A, B, C Middle lines:	Liros PPSLS180, PPSLS125
A, B, C Top lines:	Liros DC100, DC60
Brake lines:	Liros PPSL200 / DSL70 / DC60

### THE FLARE SYSTEM

The FLARE MOUSTACHE compared to a normal paragliding Miniwing has a way bigger usable glide ratio- and wind-range, due to its ability to adjust your full angle of attack.

## 9 RECOMMENDATION TABLES

## TAKE-OFF-WEIGHT CHART

The right choice of size is for sure the most important decision you have to make to enjoy the perfect FLARE experience. According to this, we designed the recommended Take-Off Weight Chart for you.

SIZE m²	WING LOADING OF THE MOUSTACHE AND THE REQUIRED FLYING EXPERIENCE																			
26							3,1	3,3	3,5	3,7	3,8	4,0	4,2	4,4	4,6	4,8	5,0	5,2		
22				3,0	3,2	3,4	3,6	3,9	4,1	4,3	4,5	4,8	5,0	5,2	5,5					
18		3,1	3,3	3,6	3,9	4,2	4,4	4,7	5,0	5,3	5,6	5,8	6,1	6,4	6,7					
15	3,3	3,7	4,0	4,3	4,7	5,0	5,3	5,7	6,0	6,3	6,7	7,0	7,3	7,7	8,0					
13	3,8	4,2	4,6	5,0	5,4	5,8	6,2	6,5	6,9	7,3	7,7	8,1	8,5	8,8	9,2					
WEIGHT*	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135		

\*TOTAL WEIGHT BEFORE TAKEOFF: PILOT'S OWN WEIGHT, PARAKITE, HARNESS AND PROTECTIVE GEAR

Additionally please make sure to watch the 'Sizes' video in our 'Academy' section, which is dedicated to support your decision on what size to choose. Our Recommended Take-Off-Weight Chart shows you how dynamically the wing reacts and which skill level it requires based on your take-off weight (at 0 wind speed).

## COMPARISON CANOPY LOAD OF MOUSTACHE AND PARAGLIDER

## WINGLOAD 3 - 3,5:

Comparable with the dynamic behavior of a normal paraglider size

## WINGLOAD 3,5 - 4,5

Comparable to the dynamic behavior of a paraglider in the sports class

## WINGLOAD 4,5 - 5,5

Comparable to the dynamic behavior of a mini wing

## WINGLOAD 5,5 - 6,5

Comparable to the dynamic behavior of a speedflyer

## WINGLOAD &gt; 6,5

Comparable to the dynamic behavior of a very small speedflyer (9m² or smaller)

## SKILL LEVEL



EXPERIENCE IN PARAGLIDING AND/OR SPEEDFLYING IS STRONGLY RECOMMENDED

How to calculate the wing loading yourself:

- Divide your take-off weight by the designed area of your paraglider/wing.
- Calculate the wing loading of your current paraglider/wing to compare to the skill chart. Choose the MOUSTACHE size that best suits your skills.

The MOUSTACHE has a large speed range.

Our parakites can be compared to paragliders/wings that are two square meters smaller. For example, a 13m² MOUSTACHE has a top speed similar to that of a 11m² speedflyer.



## WINDRANGE-SWEETSPOT FINDER

The FLARE MOUSTACHE compared to a normal paragliding Miniwing has a way bigger usable glide ratio- and wind-range, due to its ability to adjust your full angle of attack.

The information in the tables is a recommendation for the use of your FLARE product. Wind is not constant, but the speed varies with increasing strength! Always measure the wind speed at the top of the dune, the slope or the cliff!

## EXPLANATION OF THE COLOR CODING

Light Green - Green: At the lower limit we are talking about average wind speeds; E.g.: Requires a person with a take-off weight of 75kg, an average of 10 knots of wind, to fly the MOUSTACHE.

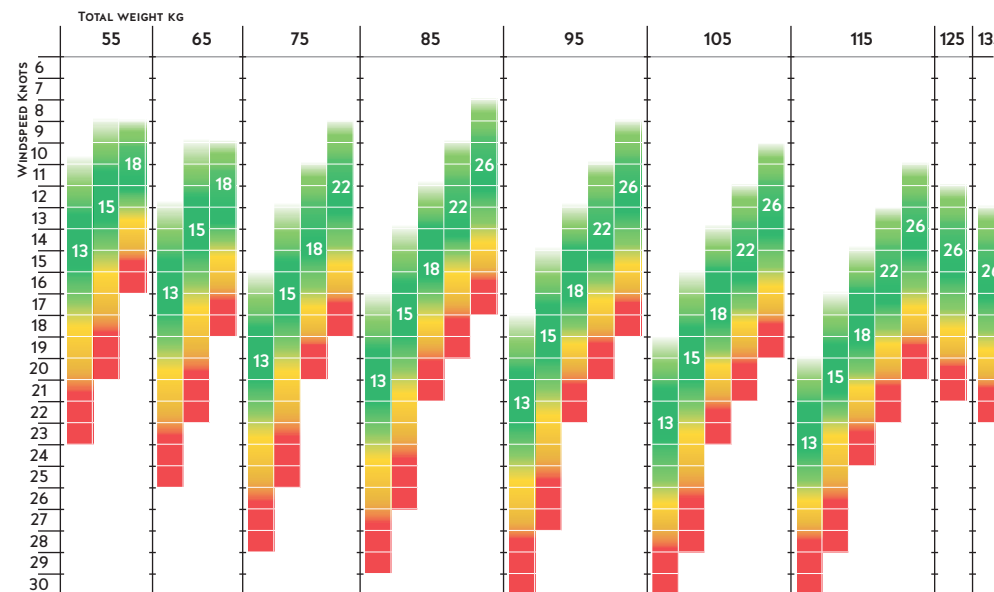
Yellow: In the medium range, the wind tends to fluctuate more strongly. Fly preventively, only with good local knowledge and a suitable weather forecast.

Red: The border area is reserved for very experienced pilots only. The wind speed information relates to possible gusts and does NOT define the average wind speed; e.g.: In a 25 knot wind, a gust of 30 knots or more may occur.

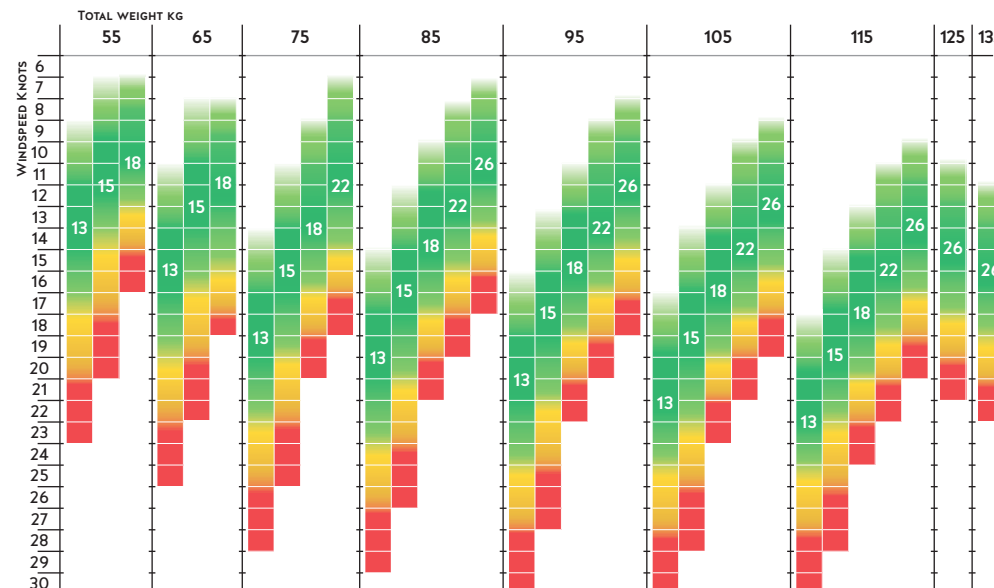
The stronger the wind and the higher your take-off weight, the more dynamic and faster your FLARE product reacts!



## Flat dunes



## Steep dunes





## 10 MAINTENANCE

With proper care, your FLARE product should remain airworthy for many years. A well-treated parakite can fly twice as many hours as a parakite. Always remember: your life depends on your parakite!

### STORAGE

Ideal is a dry, dark place with a constant temperature. Moisture is an old enemy of the durability of all parakites. For this reason, always dry your equipment before you store it, preferably in a heated and well ventilated room, so that moisture can evaporate.

### CLEANING

Any rubbing or abrasion can cause your parakite to deteriorate quickly. The PU coated canopy materials are dirt-repellent but in case of dirt accumulation can be cleaned easily. If you still think you need to clean your parakite (e.g. of cow manure), then use a soft, damp towel or a sponge WITHOUT soap, solvent or detergent. Let your parakite dry thoroughly before storing it.

### REPAIR

The manufacturer or an authorized FLARE service center should only do repairs. Exceptions include the repair of minor cuts (up to about 5cm that don't affect a seam) that can be patched with FLARE sail tape and the swapping out of lines. Replacement lines can be ordered directly from the FLARE homepage.

### LINE REPAIRS

The main lines of the FLARE MOUSTACHE consist of a Dyneema- or Technora core and a polyester sheath. Avoid heavy loads on individual lines, as excessive stretching may be irreversible. Repeating kinking of lines at the same spot reduces their strength.

Visible line damage should be checked and possibly repaired, even if only to the sheath. New lines can be ordered from the manufacturer or an authorized FLARE service center. They will help you to replace defective lines. Before replacing a line, the correct length must be verified by comparing it with the corresponding line on the other side of the wing. After the replacement and before your next flight, perform a line check by kiting up the parakite on the ground.

### HINTS FOR MATERIAL CARE

- > Avoid leaving your parakite unused in the sun or lying outside in bad weather.
- > Avoid exposing your parakite to abrasion by dragging it over sticks and stones.
- > Always fold your parakite carefully and loosely and avoid sharp creases and extreme compression of the material.
- > Should the material come in contact with salt water, rinse it immediately and carefully with fresh water and make sure that it has enough time to dry in a shady location.
- > If you land in a tree, never pull hard on the lines or material to free your parakite. Rather do so carefully and with patience. Once you have removed all leaves and branches from your parakite, inspect the line lengths and symmetry before your next flight.
- > When laying out your parakite, make sure that neither material nor lines are dirty as particles caught in the fibers can shorten the lines and damage the material.
- > If lines get caught on the ground, they can get stretched or torn during launching. For this reason, make sure that all lines are free and avoid stepping on them.
- > Make sure that no snow, sand or stones find their way into the canopy because weight on the trailing edge of the parakite can brake or even stall it.
- > Should this happen anyway, lift up the parakite by C-lines so that the air inlets are pointing down and the canopy can empty itself.
- > When launching in a strong wind, part of the parakite may hit the ground hard. This can lead to tears in the ribs or damage to the seams. For this reason, inspect your parakite on a regular basis for this type of damage.
- > After landing, don't let the parakite fall to the ground on its nose as this can damage the material in the leading edge.

## 11 DISPOSAL

When choosing materials, FLARE places high value on environmental compatibility and the highest quality control. Should your parakite someday no longer be flyable, remove all metal parts such as shackles, pulleys, etc. All remaining parts such as lines, material and risers can be turned in at a recycling center.

The metallic parts can be turned in at a metals recycling center. The best solution is to send your retired FLARE Parakite directly to us. We will then take care of recycling it.

## 12 MAINTENANCE CHECK

The safety of our customers is our highest priority at FLARE. To maintain the flying characteristics of your FLARE MOUSTACHE, it has to undergo a maintenance check after 24 months or after 200 flight hours (whichever occurs first).

According to these regulations the Two-Year-Check has to be carried out by the manufacturer or its representative.

The check will have to be confirmed by an official stamp. Missing this deadline or if an unauthorized company carries out the check will lead the FLARE MOUSTACHE to lose any guarantee claim. Airworthiness is, therefore, not guaranteed.



SUPPOSE THE PARAKITE IS SUBJECTED TO ABOVE-AVERAGE WEAR AND TEAR (EXTREME FLIGHT MANEUVERS, FORBIDDEN ACROBATIC FLIGHT MANEUVERS) OR IS USED FREQUENTLY IN SAND OR SALTY AIR. IN THAT CASE, IT SHOULD BE INSPECTED SOONER OR UNDERGO AN ADDITIONAL INSPECTION!

Changes to the parakite:

Your FLARE MOUSTACHE is manufactured within the regulated parameters of tolerance. These parameters are very narrow and must not be altered under any circumstance. Only this way can the optimum balance between performance, handling, and safety be guaranteed!



UNAUTHORIZED CHANGES INVALIDATE THE TYPE OF APPROVAL AND ALL LIABILITY CLAIMS AGAINST THE MANUFACTURER ARE INVALIDATED.

## 13 HOMOLOGATION

The FLARE MOUSTACHE is certified according to EN926-1.

The FLARE MOUSTACHE underwent 'only' a shock- and load test.

Check your local regulations, whether it is legal or not to use the FLARE MOUSTACHE in your country.

## 14 NATURE AND ENVIRONMENTALLY COMPATIBLE BEHAVIOR

We have taken the first step towards ecological awareness with our nature-friendly sport, especially with our mountain climbers who prefer to climb to the launch site. Nevertheless, we plan on continuing in the same vein. This means specifically: clean up your trash, stay on marked trails and don't cause unnecessary noise. Please help to maintain the balance of nature and to respect animals in their territory.

## 15 CLOSING WORDS

The FLARE MOUSTACHE will provide you plenty of joy over many years if you treat and care for it properly. Respect for the demands and dangers of our sport is essential for successful and beautiful flights. Make sure to watch all FLARE Tutorials at [go-flare.com](http://go-flare.com) and respect your limits. The question is different from how stable is the FLARE MOUSTACHE; the question is how stable you can personally make it by active piloting.

## WE WISH YOU A LOT OF FUN WITH YOUR MOUSTACHE AND HAPPY FLARING!

Your FLARE Team





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FLARE PARAKITES

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