



IOTA DLS

Product presentation



HIGH-B PARAGLIDER



IOTA DLS

A New Era Begins

The IOTA 3 becomes the IOTA DLS. We have been using our extra time due to later release to further develop the performance, handling and weight of our top-end B wing, achieving a new level of excellence in all three of these qualities. Welcome to the new IOTA DLS.

The DLS stands for DURABLE LIGHTWEIGHT STRUCTURE and signals the start of a new development philosophy combining structural innovation with a unique mix of materials. Starting from a weight of 3.75* kgs the new IOTA DLS can be up to 700 gms lighter than its equivalent predecessor, and where weight is concerned it belongs in the light wing category. However, it is equivalent to the previous IOTA in terms of robustness and useful life, thanks to DLS.

The fundamental concept of the new IOTA DLS stems from the exceptional success and notable performance of the SIGMA 11. The result is a marked performance improvement over the IOTA 2. Both extreme flight behaviour and passive safety have been considerably improved. Turbulence is better accommodated by the wing – without losing any of the important environmental air behaviour feedback to the pilot. A welcome degree of flying comfort for the pilot encourages longer, more relaxed and less tiring cross countries.

* Size 21 with optional light risers





ADVANCE

Pioneering spirit and Swiss precision
Our story

Putting our ideas into the air. That's what we can do. For more than 30 years, ADVANCE have kept the needs and wishes of our pilots at the forefront. With Swiss precision we refine model after model. Highest quality and absolute reliability have our top priority, in the air and in our customer service. So from pioneers we have become perfectionists, and a leading worldwide comprehensive service provider.





IOTA DLS

A New Era Begins



PERFORMING



LIGHT & DURABLE



PREDICTABLE



IOTA DLS

Quick facts

- **Outstanding performance** (benchmark for the class), extremely good to have along in turbulent air
- **Very good comfort in flight**, especially when accelerated due to balanced pitching behaviour and good directional stability. This avoids fatigue during long cross countries
- **Very light, but robust and long-lived** thanks to DURABLE LIGHTWEIGHT STRUCTURE. The weight from 3.75 kgs puts the IOTA DLS in the light wing class
- **Much better extreme flight characteristics** and more passive safety due to the softer canopy
- No upper surface C-Wires thanks to perfect structure design, **very simple and compact to pack**



IOTA DLS

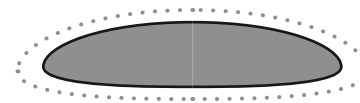
Technical features and comparison with the IOTA 2



STABLE CENTRE OF PRESSURE

PROFILE

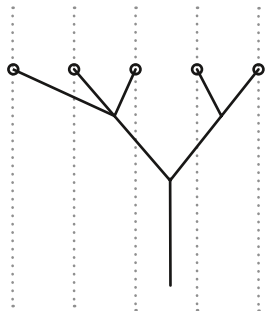
Achieves more usable performance and clearly more flying comfort because of better pitching behaviour. Requires lower degree of corrective input from pilot.



A LITTLE SMALLER

AREA

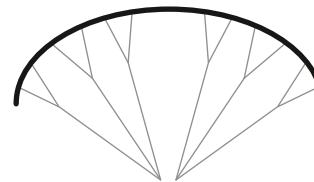
The efficiency of the new profile made it possible to reduce the wing area by 0.5 square metre. The result is more real performance.



MODIFIED C LEVEL

SUSPENSION

This change leads to even better extreme flight characteristics and therefore increased passive safety.



REDUCED

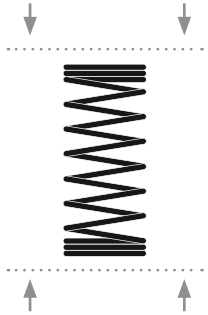
LINE DRAG

The total forward-facing area of drag-producing line has been reduced by another 4 %, contributing to increased glide performance.



IOTA DLS

Technical features and comparison with the IOTA 2



SOFTER

CANOPY STRESS DISTRIBUTION

Altered stressing gives the pilot a better flying feeling because canopy feedback is more damped, and this canopy absorbs turbulence better.



SLIGHTLY INCREASED

ARCHING

Adjusted wing curvature provides a more direct handling.



NEW

PLANFORM

Less sweepback creates less induced drag - therefore more performance. Handling is also smoother.



IOTA DLS

Piloting requirements

The IOTA DLS is classified as an EN/LTF B wing and is intended for pilots with several years of flying experience who fly regularly and already have some cross-country flying experience.

An active flying style using brakes, speed system and/or riser control (C-Handles) is required with the IOTA DLS. The pilot must be able to recognise canopy disturbances at their onset, and be able to oppose them by means of adequate, appropriate and timely control response. In addition he must be fully familiar with the normal fast descent techniques and be capable of using them when required. Only then the pilot will be able to make use of the high performance potential of the IOTA DLS, and fly far across the countryside, relaxed and safe.



DLS

DURABLE LIGHTWEIGHT STRUCTURE

DLS COMBINES STRUCTURAL INVENTIVENESS WITH A UNIQUE COMBINATION OF FABRICS. THIS FORWARD-LOOKING DEVELOPMENT PHILOSOPHY INCLUDES A WHOLE HOST OF SMALL BUT EFFECTIVE DECISIONS, WHICH TOGETHER RESULT IN SIGNIFICANT WEIGHT REDUCTION. ROBUSTNESS AND DURABILITY REMAIN AT THE USUAL HIGH LEVEL.

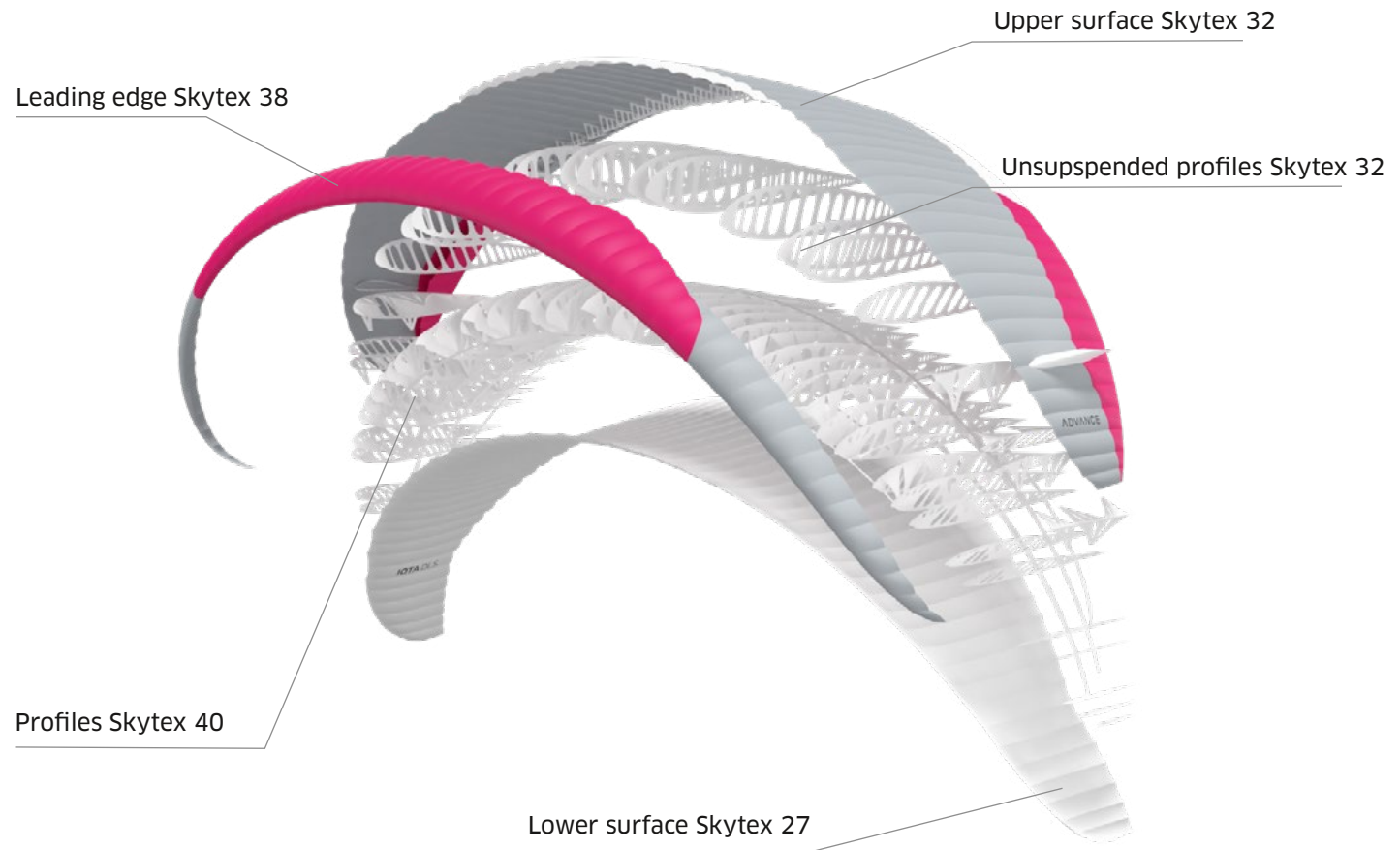


IOTA DLS

DLS Philosophy

A SMART MIXTURE OF FABRICS

Highly stressed components such as leading edge, wing upper surface and direct load-bearing profiles are made of a robust, low-stretch material mix. A relatively lighter material is used for less stressed areas, such as the wing lower surface and unsuspended profiles.





IOTA DLS

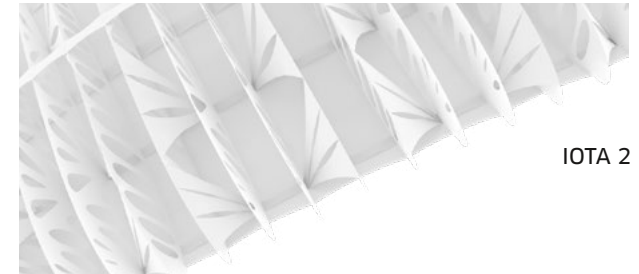
DLS Philosophy

OPTIMISED INTERIOR

A whole host of very selective fabric economies in the internal structure add up to an impressive weight reduction without affecting structural strength. These geometric optimizations are the result of the magic of computer-aided analyses and deformation calculations.



Bone-Shaped tensioning straps



IOTA 2



IOTA DLS

Reduced diagonals



Perforated Mini-Ribs



DURABLE LIGHTWEIGHT STRUCTURE (DLS) MEETS THE NEEDS OF THE TIMES. MANY PILOTS WANT LIGHTWEIGHT, BUT STILL ROBUST PRODUCTS. THEY DELIBERATELY DON'T WANT ULTRA-LIGHT GLIDERS BECAUSE THEY DON'T COMPLETELY FULFIL THEIR DESIRED LEVEL OF DURABILITY AND REQUIRE SPECIAL CARE IN HANDLING.



IOTA DLS

Features

EFFICIENT PITCH-CONTROL-SYSTEM WITH C HANDLES

The IOTA DLS has an up-to-date Pitch-Control-System with C handles. This system transmits an element of C line input to the B line level so as to maintain an ideal profile shape. Even in accelerated flight the wing can be actively flown and steered by means of this C/B arrangement, giving a realistic two-liner feeling.





IOTA DLS

Features

LATEST EDELRID PRO DRY LINES

The IOTA DLS is equipped throughout with colour-differentiated Pro Dry Lines from Edelrid. This latest generation of uncovered line is a further development of the highly respected 8000 Aramid line and has a 60% higher humidity exclusion factor. This line is extremely stable in length and demonstrates above-average resistance to failure after long use.



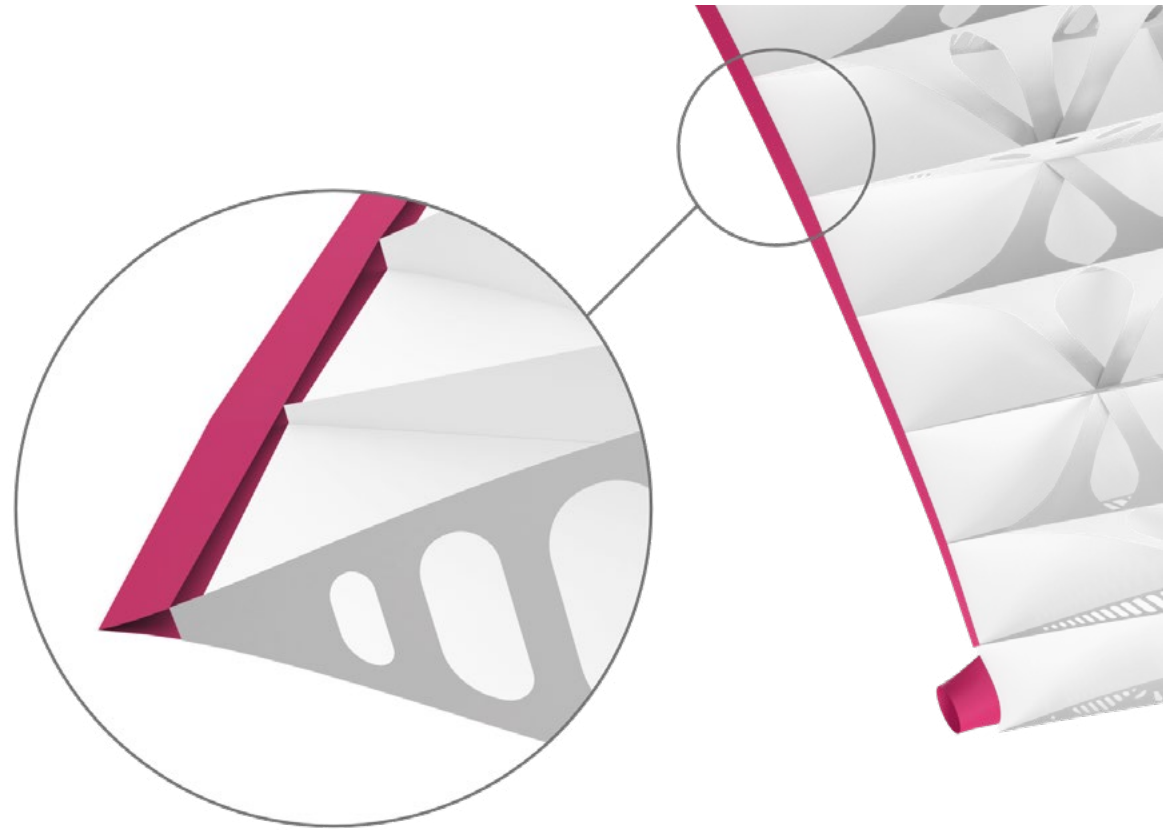


IOTA DLS

Features

AUTOMATIC DUST REMOVER

The IOTA DLS has a new, continuous, cross-cell dust removal channel along its trailing edge. Foreign bodies and substances such as dust, sand and melting snow can be emptied as required. Dirt can be either removed by shaking out on the ground, or passively airflowed out during flight.





IOTA DLS

Colours



Grey



Spectra



Royal



Fire



IOTA DLS

Scope of delivery



COMPRESSBAG DLS



REPAIR KIT



MINI WINDSOCK



IOTA DLS

Options

LIGHT ADD-ONS

The IOTA DLS is available with optional light risers including softlinks, which saves another 150 grams.

The new LIGHTPACKS are also available as an option.



Light risers incl. softlinks



LIGHTPACK DLS

Sizes / Height / Width / Depth / Weight

81L / 786 mm / 330 mm / 380 mm / ~0.62 kg

91L / 826 mm / 336 mm / 387 mm / ~0.65 kg



LIGHTPACK ULS

Sizes / Height / Width / Depth / Weight

52L / 735 mm / 310 mm / 285 mm / 0.55 kg

60L / 755 mm / 320 mm / 305 mm / 0.57 kg

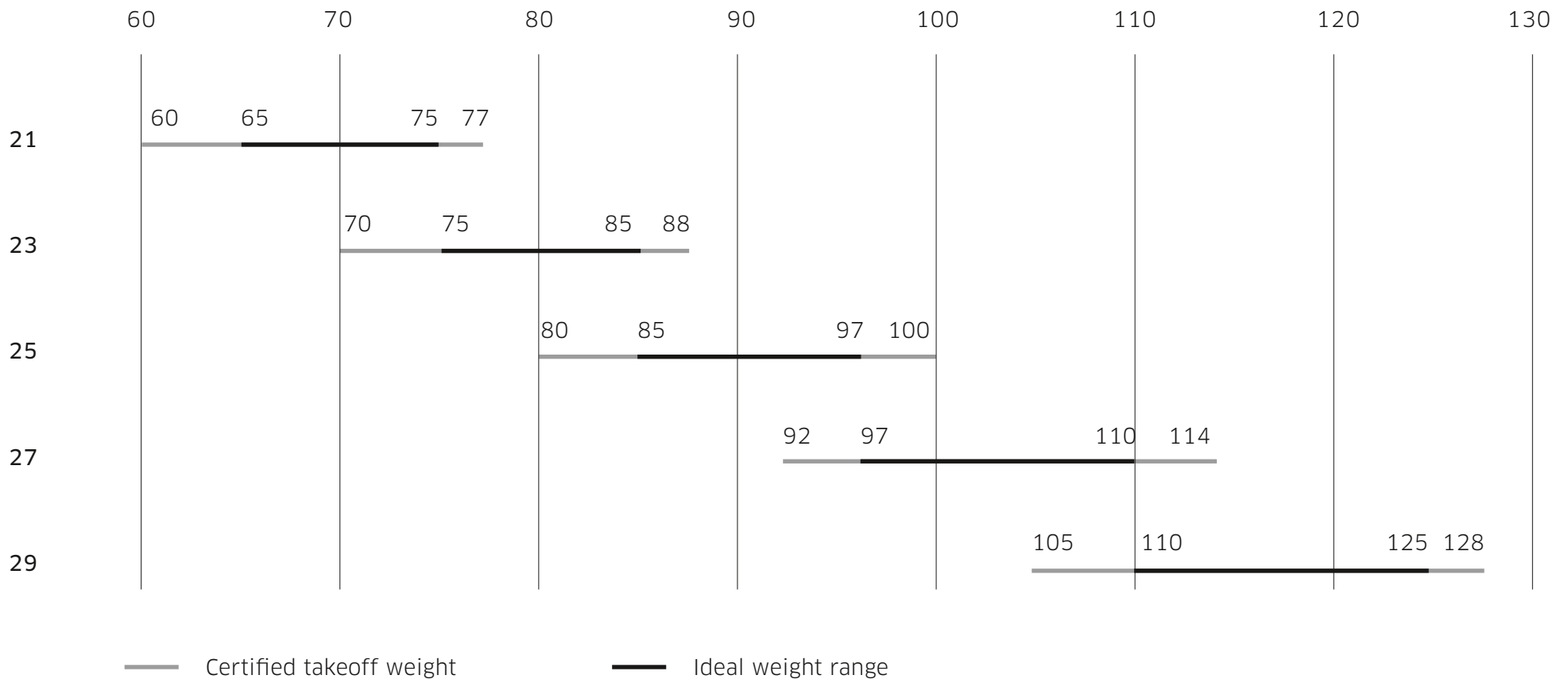
70L / 766 mm / 330 mm / 335 mm / 0.59 kg



IOTA DLS

Seamless Weight Ranges

IOTA DLS sizes cover the complete glider Ideal Weight Range in 10 to 15 kg steps (small to large wings). Any flying weight occurs within only one glider size, because this range extends progressively through the glider sizes, with no overlaps. These IOTA DLS ideal takeoff weight areas provide the optimal relationship between gliding speed and climb performance for each size in all normal flying conditions, and also take into account the different paraglider size characteristics.





IOTA DLS

Technical data

| IOTA DLS | | 21 | 23 | 25 | 27 | 29 |
|--------------------------|----------------|----------|----------|----------|----------|----------|
| Flat surface | m ² | 21.78 | 23.48 | 25.18 | 27.23 | 29.24 |
| Projected surface | m ² | 18.57 | 19.94 | 21.39 | 23.13 | 24.83 |
| Ideal weight range | kg | 65-75 | 75-85 | 85-97 | 97-110 | 110-125 |
| Certified takeoff weight | kg | 60-77 | 70-88 | 80-100 | 92-114 | 105-128 |
| Weight | kg | 3.90 | 4.10 | 4.35 | 4.60 | 4.90 |
| Weight with light risers | kg | 3.75 | 3.95 | 4.20 | 4.45 | 4.75 |
| Span | m | 11.05 | 11.47 | 11.88 | 12.35 | 12.80 |
| Projected span | m | 8.80 | 9.10 | 9.42 | 9.80 | 10.15 |
| Aspect ratio | | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 |
| Projected aspect ratio | | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 |
| Max. chord | m | 2.45 | 2.54 | 2.63 | 2.74 | 2.84 |
| Number of cells | | 59 | 59 | 59 | 59 | 59 |
| Certification | | EN/LTF B | EN/LTF B | EN/LTF B | EN/LTF B | EN/LTF B |



IOTA DLS

Materials

| | |
|----------------------|--|
| Leading edge | Skytex 38 universal, 39 g/m ² |
| Upper surface | Skytex 32 universal, 32 g/m ² |
| Lower surface | Skytex 27 classic, 27 g/m ² |
| Profiles | Skytex 40 hard finish, 40 g/m ² |
| Unsuspected profiles | Skytex 32 hard finish, 33 g/m ² |
| Risers | PES/Technora 12mm |

| | |
|----------------|------------------------------|
| Main lines | A-8001-230, -190, -130 |
| Galery lines | A-8001-130, -090, -070, -050 |
| Brake lines | A-8001-070, -050 |
| Steering lines | A-8001-190, A-7850-240 |
| Quick links | MR Delta 3.5mm / S12 |



advance.swiss