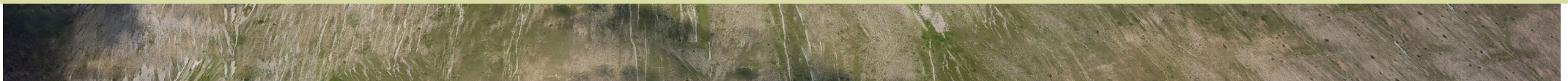




SIGMA DLS

Product presentation

XC SPORTS CLASS PARAGLIDER





SIGMA DLS

Ambitious Cross Country

Cross Country made fun! The new SIGMA DLS promises a performance boost and plenty of fun while thermalling thanks to its forgiving flight characteristics. The redesigned internal structure not only makes this cross-country sportster more powerful but also lighter. This is achieved with mini ribs featuring nitinol wires at the leading edge and a Durable Lightweight Structure that perfectly balances lightness and robustness. The SIGMA DLS weighs from just 3.70 kg.



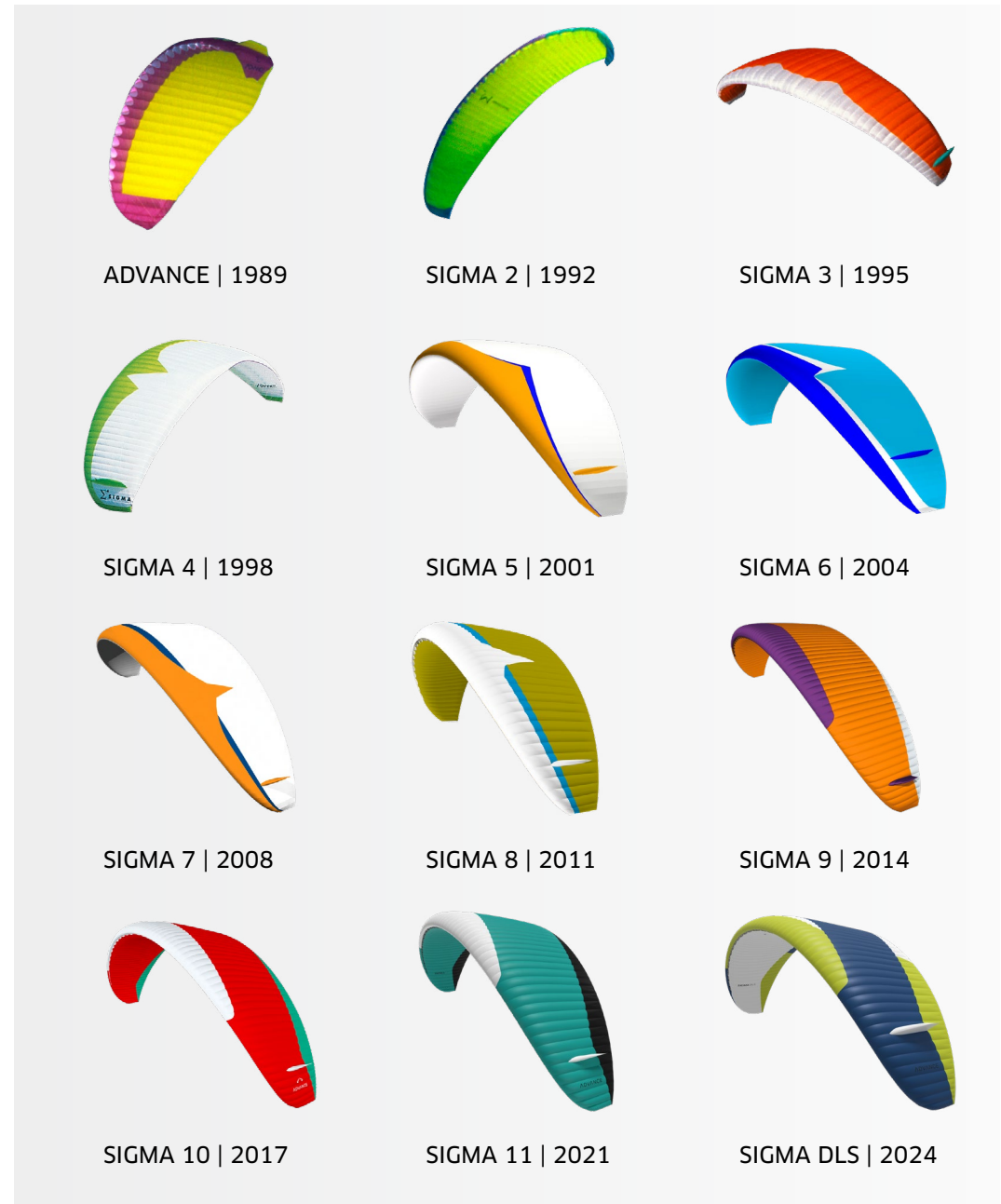
SIGMA SERIES

The Legacy

THE BENCHMARK IN THE SPORTS CLASS SINCE 1989

The ADVANCE (SIGMA) was the first ADVANCE wing in 1989, and it has the longest tradition. Since then, 11 generations of the SIGMA have provided countless pilots with fun, safety, and long flights.

To this loyal audience, we offer the SIGMA DLS, a wing that continues this tradition. It is a product that remains precisely positioned in the middle of the C-class, meeting the familiar pilot requirements of the previous SIGMA series and featuring predictable, forgiving extreme flight characteristics.





SIGMA SERIES

The Legacy

RECORDS AND TOP RESULTS

SIGMAS have repeatedly achieved top sporting performances, including in national and international XC online contests and national championships in the C-Class. The current world and European records in open distance (C-Class) can both be attributed to the SIGMA 11.





SIGMA DLS

ADVANCE brand faces

"WITH THE SIGMA 11, I
ACHIEVED MY DREAM OF
A 400 KM FLIGHT IN THE
FLATLANDS OF POLAND. MY
NEXT GOAL IS TO REACH THE
500 KM MARK WITH THE
SIGMA DLS."

LUKASZ PROKOP

ADVANCE Team Pilots







ADVANCE

Pioneering spirit and Swiss precision
Our story

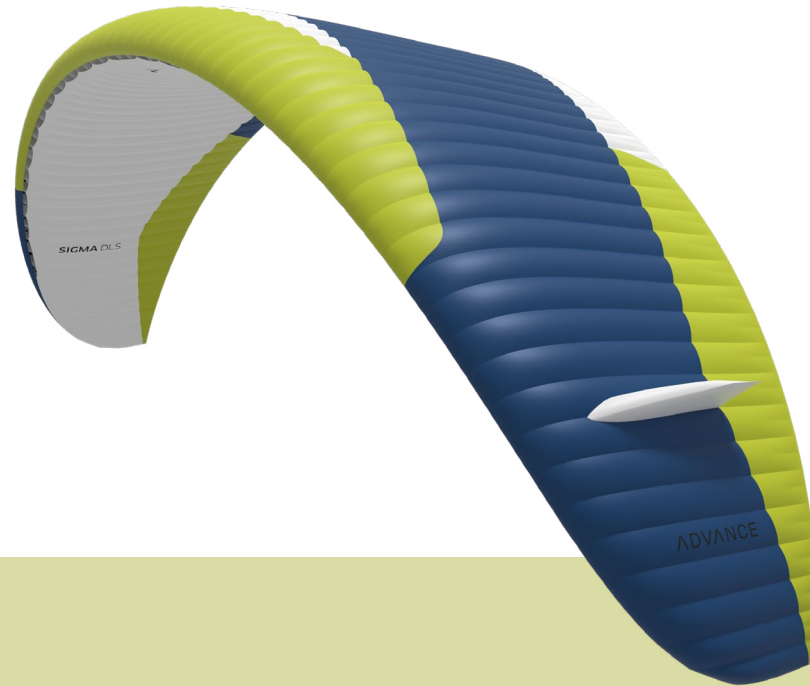
Enable our ideas to fly, that's what we do. For more than 30 years, ADVANCE have kept the needs and wishes of our pilots at the forefront. With Swiss precision we refine model after model. Highest quality and absolute reliability have our top priority, in the air and in our customer service. So from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





SIGMA DLS

Ambitious Cross Country



PERFORMING



SPORTY



HIGH-TECH



SIGMA DLS

Quick facts

- **A lightweight cross-country sportster starting at 3.70 kg**, perfectly balancing lightness and robustness through its construction.
- **Significant performance boost from leading edge mini ribs with nitinol wires.**
- **Fun flying experience when thermalling**, with pleasant, precise and direct handling.
- **Excellent performance-to-demand ratio**, with a forgiving character and safety reserves.
- **Material optimizations** in the internal structure from DLS technology.



SIGMA DLS

Pilot requirements

The SIGMA DLS has EN/LTF C certification and is intended, exclusively, for capable cross country pilots with several years of flying experience who fly regularly (70 hours or more per year).

An active flying style using brakes, speed system and/or riser control (C-Handles) is required. As the pilot you 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 you must be fully familiar with the normal fast descent techniques and be capable of using them when required.



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.

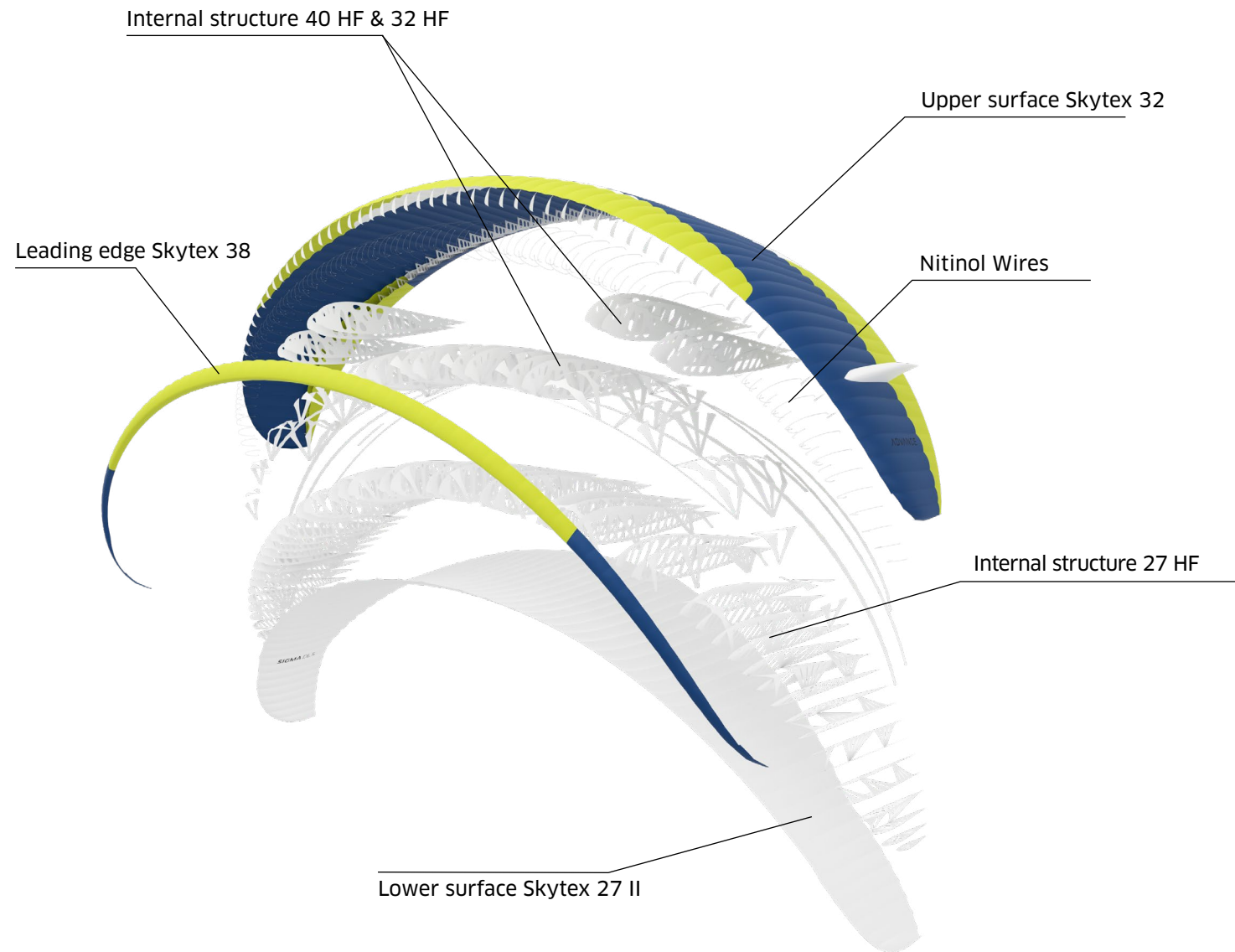


SIGMA DLS

DLS Philosophy

A SMART MIXTURE OF FABRICS

Highly stressed components such as the leading edge, wing upper surface and more stressed profiles are made of a robust, low-stretch material mix. A relatively lighter material is used for less stressed areas, such as the wing's lower surface. The super-elastic nitinol wires round off the product.



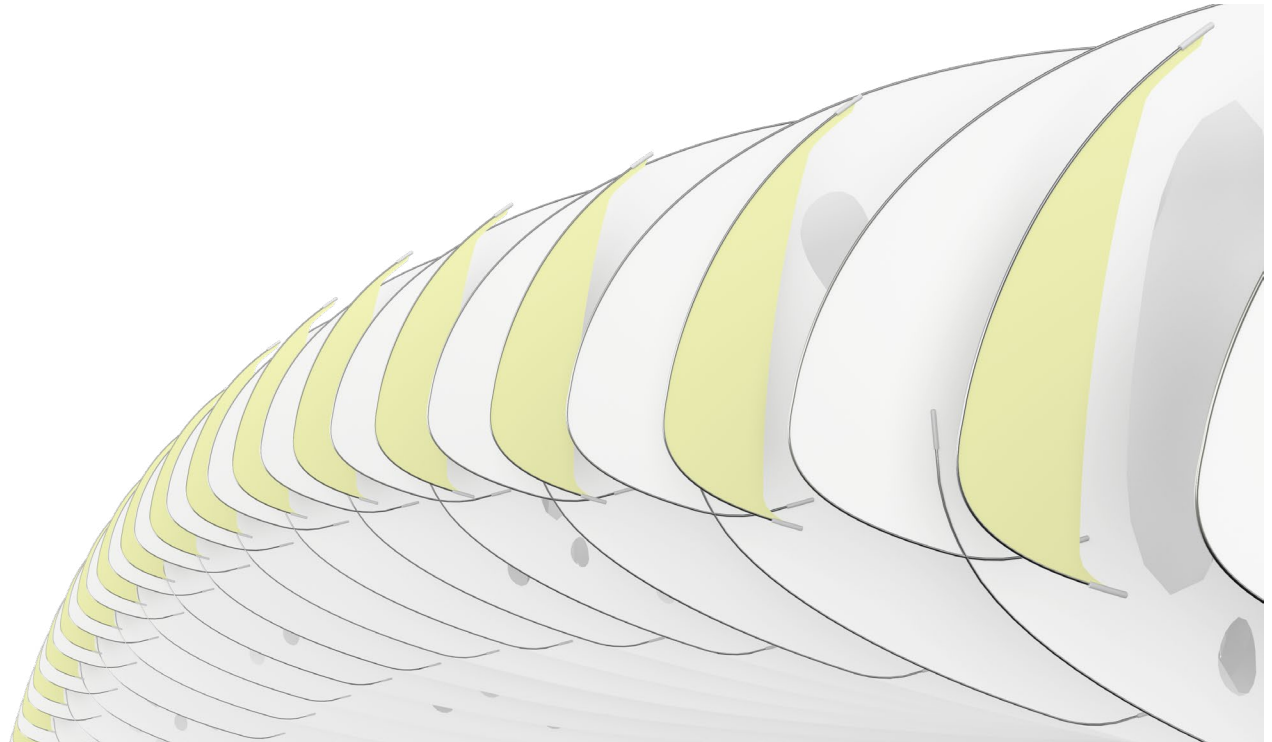


SIGMA DLS

Features

NITINOL FRONT MINI RIBS

The additional front mini ribs ensure that the canopy maintains its precise shape, especially at the aerodynamically crucial leading edge. Detailed calculations of the mini ribs enable optimal profile fidelity in every flight condition. This is a key factor that enables the high performance of the SIGMA DLS. The mini ribs are reinforced with weight-efficient nitinol wires, and the internal stitching ensures clean edges without exposed threads that could be damaged during launch or ground handling.



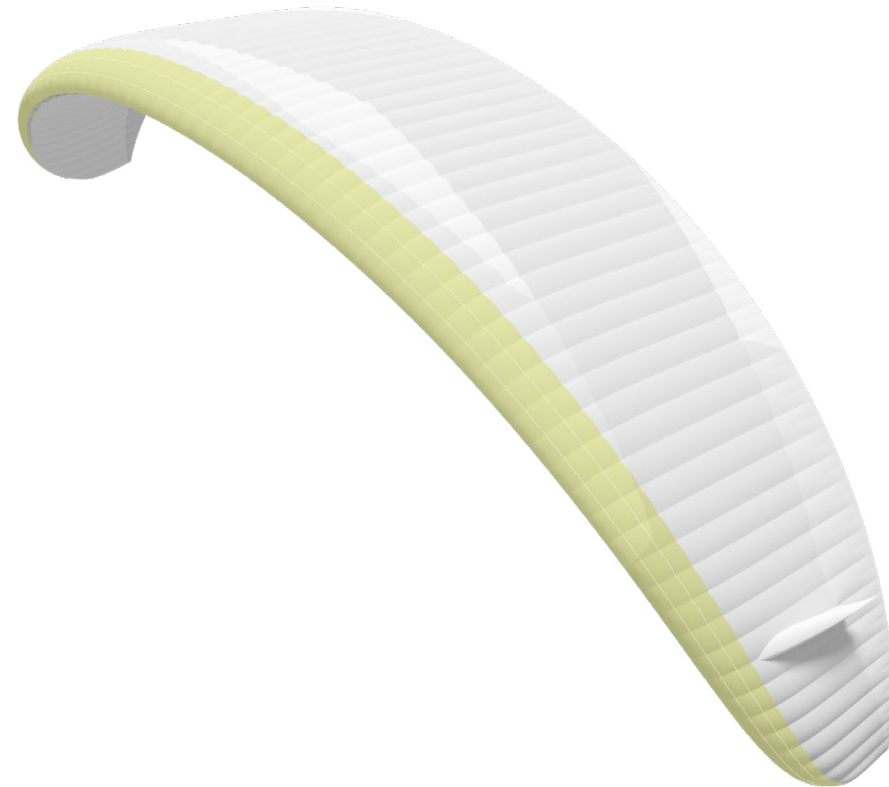


SIGMA DLS

Features

3X3D-SHAPING

The strongly curved and flow-sensitive area of the leading edge is now integrated by a triple graduation of 3D shaping. The result: a crease-free leading edge and smooth upper wing surface for clean airflow and more performance.





SIGMA DLS & LIGHTNESS 4

The Perfect Match

THE LIGHTNESS 4 AND THE SIGMA DLS FORM A UNIT, THE TWO PRODUCTS ARE PERFECTLY BALANCED FOR CROSS-COUNTRY FLYING.





SIGMA DLS

Features

EFFICIENT PITCH-CONTROL-SYSTEM WITH C HANDLES

The SIGMA 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.





SIGMA DLS

Features

STATE-OF-THE-ART EDELRID PRO DRY LINES

SIGMA DLS lines are extremely stable in length and have an above-average ultimate strength, even after long use. The colour-differentiated Pro Dry lines demonstrate 60% higher water repellency.







SIGMA DLS

Developer's note



"WITH THE SIGMA DLS,
WE REMAIN TRUE TO THE
PROVEN CONCEPT WHILE
DELIVERING A NOTICEABLE
LEAP IN PERFORMANCE AND
A FUN FLYING EXPERIENCE
IN THERMALS."

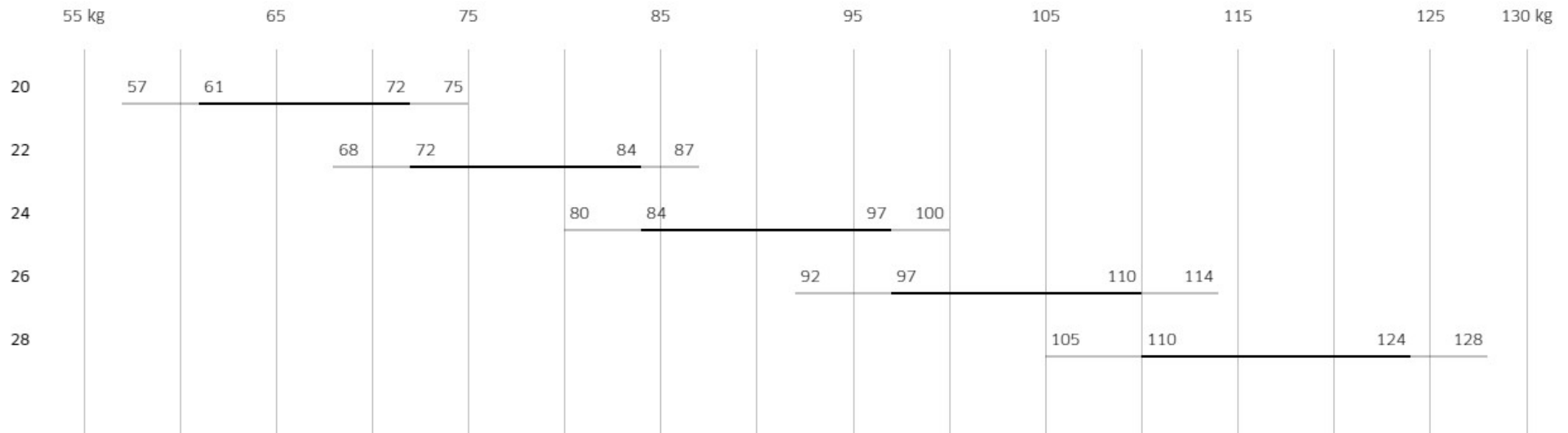
MICHAEL MAURER
Lead Test Pilot ADVANCE R&D Team



SIGMA DLS

Seamless Weight Ranges

The Seamless Weight Ranges of the SIGMA DLS make a clear transition from one wing size to the next, so that any pilot suits only one ideal take-off weight range. In this way, the SIGMA DLS guarantees the optimum balance of useful airspeed and climb performance in all flying conditions.



— Certified takeoff weight — Ideal weight range



SIGMA DLS

Scope of delivery



COMPRESSBAG DLS



REPAIR KIT



MINI WINDSOCK



GETTING STARTED

Options



LIGHTPACK DLS

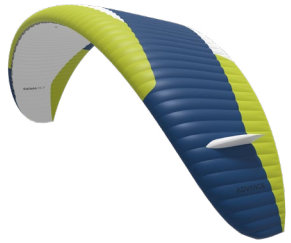


FLATBAG DLS

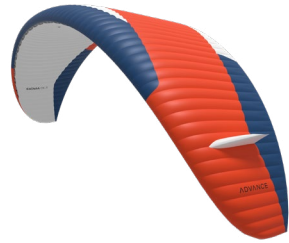


SIGMA DLS

Colours



Petrol



Fire



Spectra



SIGMA DLS

Technical data

SIGMA DLS		20	22	24	26	28
Flat surface	m ²	*20.36	21.96	23.53	25.47	27.34
Projected surface	m ²	*17.35	18.71	20.05	21.70	23.30
Ideal weight range	kg	*57-75	68-87	80-100	92-114	105-128
Certified takeoff weight	kg	*61-72	72-84	84-97	97-110	110-124
Weight	kg	*3.70	3.90	4.10	4.35	4.60
Flat span	m	*11.14	11.57	11.98	12.46	12.91
Projected span	m	*8.84	9.18	9.50	9.88	10.24
Aspect ratio		6.1	6.1	6.1	6.1	6.1
Projected aspect ratio		4.5	4.5	4.5	4.5	4.5
Max. chord	m	*2.30	2.39	2.47	2.57	2.66
Number of cells		65	65	65	65	65
Certification		*TBC	EN/LTF C	EN/LTF C	EN/LTF C	EN/LTF C



SIGMA DLS

Materials

Leading edge	Skytex 38 universal
Upper surface	Skytex 32 universal
Lower surface	Skytex 27 classic II
Tension tapes	Skytex 40 hard finish
Profiles	Skytex 40 hard finish Skytex 32 hard finish Skytex 27 hard finish
Unsuspected profiles	Skytex 27 hard finish
Diagonals	Skytex 40 hard finish Skytex 27 hard finish

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
Stabilo	PPSLS 125
Risers	PES / Technora 12 mm
Quick links	MR Delta 3.5mm / S12

