

# LINK 3

Technical *specifications*



## TECHNICAL SPECIFICATIONS

			22	24	26	28
<b>Cells</b>	Number		46	46	46	46
<b>Aspect ratio</b>	Flat		5	5	5	5
	Projected		3,85	3,85	3,85	3,85
<b>Area</b>	Flat	m <sup>2</sup>	22	24	26	28
	Projected	m <sup>2</sup>	19,05	20,79	22,52	24,25
<b>Span</b>	Flat	m	10,89	10,95	11,40	11,83
<b>Chord</b>	Max	m	2,63	2,75	2,86	2,97
<b>Lines</b>	Total	m	272	285	297	308
	Main		2+1/4/3	2+1/4/3	2+1/4/3	2+1/4/3
<b>Risers</b>	Number	3+1	A+A'/B/C	A+A'/B/C	A+A'/B/C	A+A'/B/C
	Speed-bar	mm	80	80	80	80
	Trimmers	mm	190	190	190	190
<b>Glider weight</b>		kg	4,74	4,95	5,30	5,64
<b>Total weight in flight</b>	Min-Max	kg	55-100	70-120	90-145	105-170
<b>Certification</b>			DGAC/EN 926-1	DGAC/EN 926-1	DGAC/EN 926-1	DGAC/EN 926-1

The total weight of the wing may differ ±2% due to variations in the weight of the fabric supplied by the manufacturers.



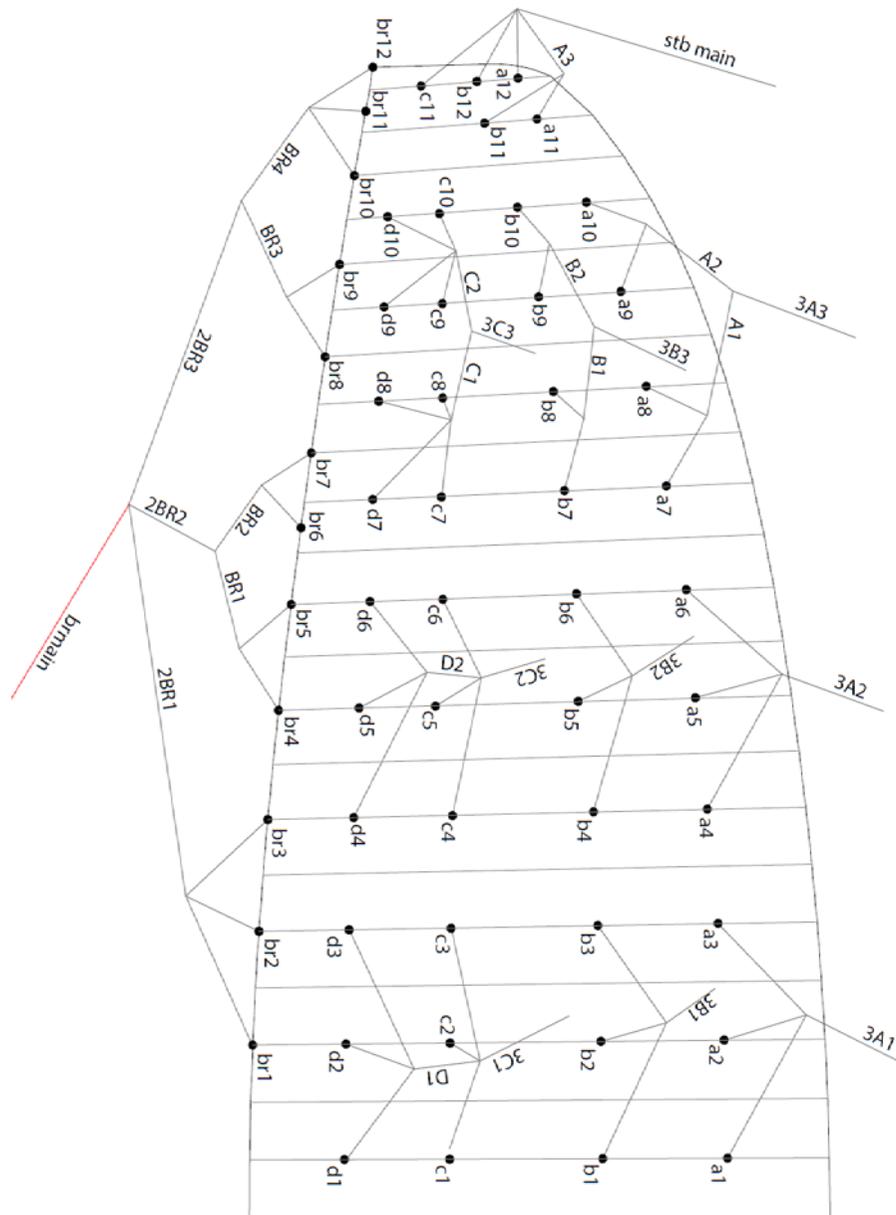
# MATERIALS

CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	N20 DMF	DOMINICO TEX CO (KOREA)
BOTTOM SURFACE	N20 DMF	DOMINICO TEX CO (KOREA)
PROFILES	30 DFM	DOMINICO TEX CO (KOREA)
DIAGONALS	30 DFM	DOMINICO TEX CO (KOREA)
LOOPS	LKI - 10	KOLON IND. (KOREA)
REINFORCEMENT LOOPS	W-420	D-P (GERMANY)
TRAILING EDGE REINFORCEMENT	MYLAR	D-P (GERMANY)
RIBS REINFORCEMENT	LTN-0.5/0.8 STICK	SPORTWARE CO.CHINA
THREAD	SERAFIL 60	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	TNL - 80	TEIJIM LIMITED (JAPAN)
UPPER CASCADES	TNL - 140	TEIJIM LIMITED (JAPAN)
MIDDLE CASCADES	TNL - 80	TEIJIM LIMITED (JAPAN)
MIDDLE CASCADES	TNL - 140	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 140	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 220	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 280	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 400	TEIJIM LIMITED (JAPAN)
MAIN BREAK	TNL - 240	TEIJIM LIMITED (JAPAN)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	WD103	COUSIN (FRANCE)
COLOR INDICATOR	PAD	TECNI SANGLES (FRANCE)
THREAD	V138	COATS (ENGLAND)
MAILLONS	MRI4	ANSUNG PRECISION (KOREA)

# LINE PLAN



## LINE REPLACEMENT

The use of new high performance materials in modern wings is now common. The advantages of using these materials in terms of performance are widely acknowledged as part of our sport's evolution. However, along with those technological advances come additional responsibilities which cannot be avoided. As a result, line inspection and replacement must be carried out more frequently. That increased frequency appears to be encouraging some pilots to try to perform line replacement themselves.

**WE STRONGLY RECOMMEND ANY LINE REPLACEMENT IS PERFORMED BY AN AUTHORISED SPECIALIST ONLY.**

Ultimately, if the pilot decides to perform any line replacement without professional oversight they therefore assume all responsibility. In this case, these guidelines will have to be followed.

### BEFORE REMOVING ANY LINES, CHECK:

- That the line plan is correct according to the glider model and size.
- That the line kit is complete and correct. Never assume but always check each individual line for the correct specification.

### AFTER CONFIRMING THAT ALL LINES ARE CORRECT:

- Fit the new line(s) WITHOUT removing the label.
- Once replaced, measure each line length to confirm the correct measurement.
- Inflate the wing to check for any irregularities.
- The line labels may then be removed but NOT BEFORE completion of the line replacement.

*Niviuk strongly recommends for any line replacement to be carried out by an authorised professional only, and will not accept responsibility for any damage or injury caused as a result of incorrect re-assembly.*

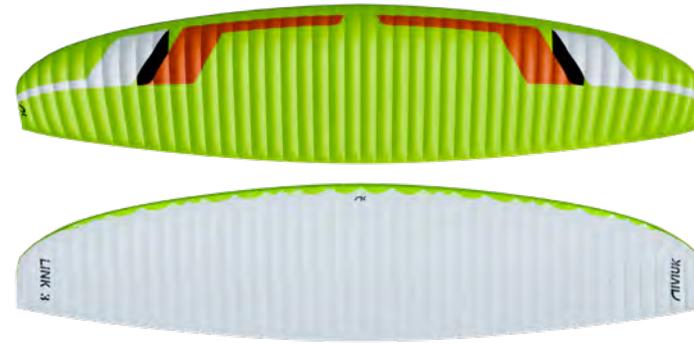
# RISER PLAN



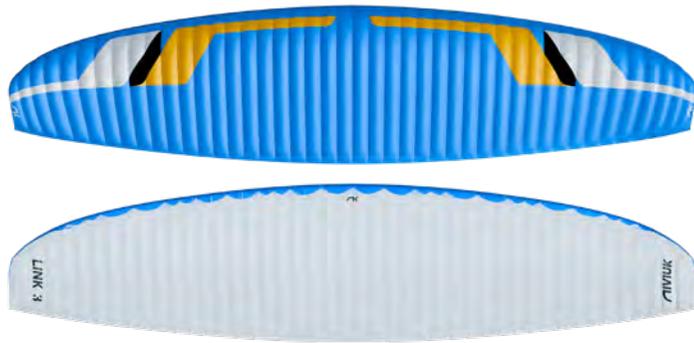
# COLORS



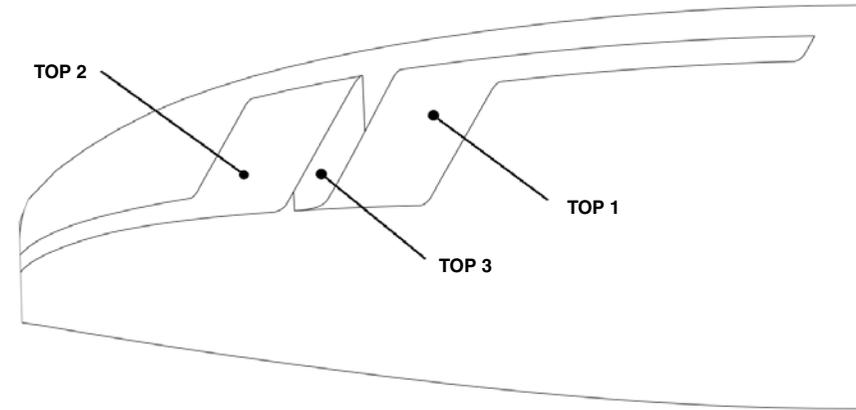
<b>PITAYA</b>	<b>UPPER</b>	PINK	<b>LOWER</b>	WHITE
	<b>TOP 1</b>	WHITE		
	<b>TOP 2</b>	LIME		
	<b>TOP 3</b>	BLACK		



<b>AGAPORNIS</b>	<b>UPPER</b>	LIME	<b>LOWER</b>	WHITE
	<b>TOP 1</b>	DARK BRICK		
	<b>TOP 2</b>	WHITE		
	<b>TOP 3</b>	BLACK		



<b>BREEZE</b>	<b>UPPER</b>	ROYAL BLUE	<b>LOWER</b>	WHITE
	<b>TOP 1</b>	GOLD		
	<b>TOP 2</b>	WHITE		
	<b>TOP 3</b>	BLACK		



# WING LOAD

## LINK 3

<b>22</b>		<b>24</b>		<b>26</b>		<b>28</b>	
P.T.V.	KG/M2	P.T.V.	KG/M2	P.T.V.	KG/M2	P.T.V.	KG/M2
55	= 2,50	70	= 2,92	90	= 3,46	105	= 3,75
60	= 2,73	75	= 3,13	95	= 3,65	110	= 3,93
65	= 2,95	80	= 3,33	100	= 3,85	115	= 4,11
70	= 3,18	85	= 3,54	105	= 4,04	120	= 4,29
75	= 3,41	90	= 3,75	110	= 4,23	125	= 4,46
80	= 3,64	95	= 3,96	115	= 4,42	130	= 4,64
85	= 3,86	100	= 4,17	120	= 4,62	135	= 4,82
90	= 4,09	105	= 4,38	125	= 4,81	140	= 5,00
95	= 4,32	110	= 4,58	130	= 5,00	145	= 5,18
100	= 4,55	115	= 4,79	135	= 5,19	150	= 5,36
		120	= 5,00	140	= 5,38	155	= 5,54
				145	= 5,58	160	= 5,71
						165	= 5,89
						170	= 6,07









# LINE MEASUREMENTS

## LINK 3 - 22

LINES HEIGHT + RISER mm

	A	B	C	D	br
1	5900	5753	5846	5993	6677
2	5825	5684	5762	5888	6478
3	5836	5702	5783	5925	6408
4	5799	5690	5749	5884	6322
5	5741	5645	5706	5798	6134
6	5764	5689	5744	5845	6098
7	5744	5659	5776	5849	6141
8	5630	5593	5661	5727	6129
9	5549	5532	5597	5657	5911
10	5494	5472	5586	5628	5722
11	5359	5359	5377		5506
12	5265	5287			5444

RISERS LENGHT mm

	A	B	C	
	480	480	480	STANDARD
	480	517	590	TRIMMER OPENED
	400	464	590	ACCELERATED

## LINK 3 - 24

LINES HEIGHT + RISER mm

	A	B	C	D	br
1	6183	6030	6126	6279	6970
2	6106	5959	6040	6171	6762
3	6120	5980	6064	6211	6691
4	6083	5968	6031	6171	6603
5	6023	5922	5986	6082	6407
6	6048	5968	6027	6132	6370
7	6029	5940	6062	6139	6416
8	5911	5872	5942	6011	6405
9	5827	5808	5876	5938	6178
10	5770	5745	5865	5908	5981
11	5626	5625	5644		5756
12	5528	5550			5692

RISERS LENGHT mm

	A	B	C	
	480	480	480	STANDARD
	480	517	590	TRIMMER OPENED
	400	464	590	ACCELERATED

## LINK 3 - 26

LINES HEIGHT + RISER mm

	A	B	C	D	br
1	6455	6296	6395	6554	7294
2	6376	6223	6307	6443	7078
3	6392	6246	6333	6486	7005
4	6355	6235	6300	6447	6914
5	6293	6188	6255	6355	6711
6	6320	6237	6299	6408	6674
7	6303	6208	6336	6416	6722
8	6181	6138	6211	6284	6711
9	6094	6072	6144	6208	6476
10	6035	6007	6132	6177	6272
11	5882	5881	5901		6038
12	5779	5802			5971

RISERS LENGHT mm

	A	B	C	
	480	480	480	STANDARD
	480	517	590	TRIMMER OPENED
	400	464	590	ACCELERATED

## LINK 3 - 28

LINES HEIGHT + RISER mm

	A	B	C	D	br
1	6716	6552	6654	6819	7584
2	6636	6478	6563	6705	7361
3	6654	6503	6593	6751	7286
4	6616	6492	6560	6712	7193
5	6553	6444	6514	6617	6983
6	6582	6495	6560	6673	6945
7	6566	6467	6600	6683	6996
8	6440	6395	6471	6546	6986
9	6350	6327	6401	6468	6742
10	6289	6260	6389	6436	6531
11	6128	6126	6147		6289
12	6022	6045			6219

RISERS LENGHT mm

A	B	C	
480	480	480	STANDARD
480	517	590	TRIMMER OPENED
400	464	590	ACCELERATED

# SUSPENSION

MATERIAL CODE		TNL	TNL	TNL	TNL	TNL	TARAX
STRENGTH CODE		080	140	220	280	400	240
DIAMETER mm	∅	1,1	1,4	1,6	1,8	2,3	1,9
CORE MATERIAL		TECHNORA	TECHNORA	TECHNORA	TECHNORA	TECHNORA	DYNEEMA
SLEEVE MATERIAL		POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER
WEIGHT g/m	TOTAL	1,1	1,2	1,6	2,7	4	2,3
BREAKING STRENGTH daN	MINIMUM	80	140	220	280	460	240
	MAXIMUM	92	160	250	320	470	
STRENGTH AFTER							
5.000 BENDING	TEST EN	36,7	76,1	114,2	134,7	160,1	
CYCLES							
ELONGATION AT	5 daN en %	0,3	0,2	0,2	0,2	0,05	0,1-0,3
	10 daN en %	0,5	0,3	0,3	0,3	0,1	0,2-0,4
	15 daN en %	0,7	0,5	0,5	0,4	0,2	0,2-0,6
	20 daN en %	1	0,6	0,6	0,4	0,2	0,3-0,7
	25 daN en %	1,3	0,8	0,7	0,5	0,3	0,4-0,8
	30 daN en %	2,3	1,5	1,2	0,9	0,6	
	75 daN en %	2,8	2,3	1,8	1,3	0,8	0,9-1,2
	100 daN en %		2,7	2,2	1,7	1,1	1,1-1,5
	125 daN en %		3,2	2,7	2	1,4	
	150 daN en %			<b>3</b>	2,3	1,7	1,5-2,1
	175 daN en %			<b>3,3</b>	2,7	2	
	200 daN en %			<b>3,8</b>	2,8	2,2	2-2,8
ELONGATION MAX. BREAKING STRENGTH %		3	3,4	4	4,1	4,6	

# MAILLON & PULLEY

## DESCRIPTION MAILLON

MAILLON	DELTA
CODE	MRI4
MATERIAL	STAINLESS STEEL
SIZE	4,3 mm
WEIGHT	12 g/piece
QUANTITY	10 piece
INSERTS	2 GREEN / 8 BLACK

## TECHNICAL SPECIFICATIONS



DIMENSIONS	mm
A	28
B	20
C	38
D	30
E	4
F	11
G	4
LOAD	KG
WORKING LIMIT	150
BREAKING	750

## DESCRIPTION MAILLON

MATERIAL	
AISI 304 STAINLESS STEEL	STANDARD

CLOSING APPLIED BY MANUAL & ENTIRE SCREWING OF THE NUT TO  
GUARANTEE THE HIGHEST SAFETY (NO THREAD SHOULD BE OBVIOUS)

SYSTEMATIC CONTROL OF MAILLON QUICK-LINKS BEFORE EVERY FLIGHT

## THREAD

### SAIL MAKING

NAME	SERAFIL
N° OF REFERENCE	60
MATERIAL	POLYESTER
TYPE OF FINISH	SILK
LINEAR DENSITY	NM 61 / 3 (DTEX 163 * 3)
BREAKING STRENGTH	3,000 CN
ELONGATION	17,00%

### QUALITIES SERAFIL

SOLIDITY ARTIFICIAL LIGTH	ISO 105 B02 > 5 - 6
SOLIDITY SWEAT	ISO 105 E04 > 4
SOLIDITY WASHING	ISO 105 C04 > 3
SOLIDITY GRAZE IN DRY	ISO 105 X12 > 4
SOLIDITY WASHING IN DRY	ISO 105 D01 > 3 - 4

TREATMENT WATER REPELLENT	WR
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### RISERS MAKING

NAME	COATS BONDED C.F.P.
N° OF REFERENCE	V138
MATERIAL	POLYESTER
TYPE OF FINISH	SILK
BREAKING STRENGTH	9,5 KG
ELONGATION	19%

## RISERS

### RISERS

N° OF REFERENCE	G-R 19
MATERIAL	POLYESTER
WIDTH	19 MM
THICKNESS	1,6 MM
BREAKING STRENGTH	850 KG
ELONGATION	MAX. 12%
WEIGHT	23 G/M
COLOR	BLACK

### COLOR INDICATOR

N° OF REFERENCE	IC-G 1-2
MATERIAL	POLYESTER
WIDTH	70 M/M
THICKNESS	0,80 M/M
BREAKING STRENGTH	130 DN
ELONGATION	35 %
WEIGHT	32 G * L.M.
COLOR	GREEN

### LOOPS

N° OF REFERENCE	LKI - 10
MATERIAL	NYLON
WIDTH	10 M/M
BREAKING STRENGTH	84 KG
ELONGATION	30 %
WEIGHT	5,5 G/M
COLOR	WHITE



## Niviuk Paragliders

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