

BI ROLLER 2

Technical *specifications*

PIVIUK BEYOND
THE GLIDE

TECHNICAL SPECIFICATIONS

			30	34
Cells	Number		37	37
Aspect ratio	Flat		4,5	4,5
	Projected		3,67	3,67
Area	Flat	m2	30,5	34
	Projected	m2	26,83	29,91
Span	Flat	m	11,72	12,37
Chord	Max	m	3,13	3,31
Lines	Total	m	200	205
	Main		3/4/3	3/4/3
Risers	Number	3	A/B/C	A/B/C
	Trimmers	mm	110	110
Glider weight		kg	6,15	6,67
Total weight in flight	Min-Max	kg	90-180	100-210
Certification			EN/LTF B	EN/LTF B

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

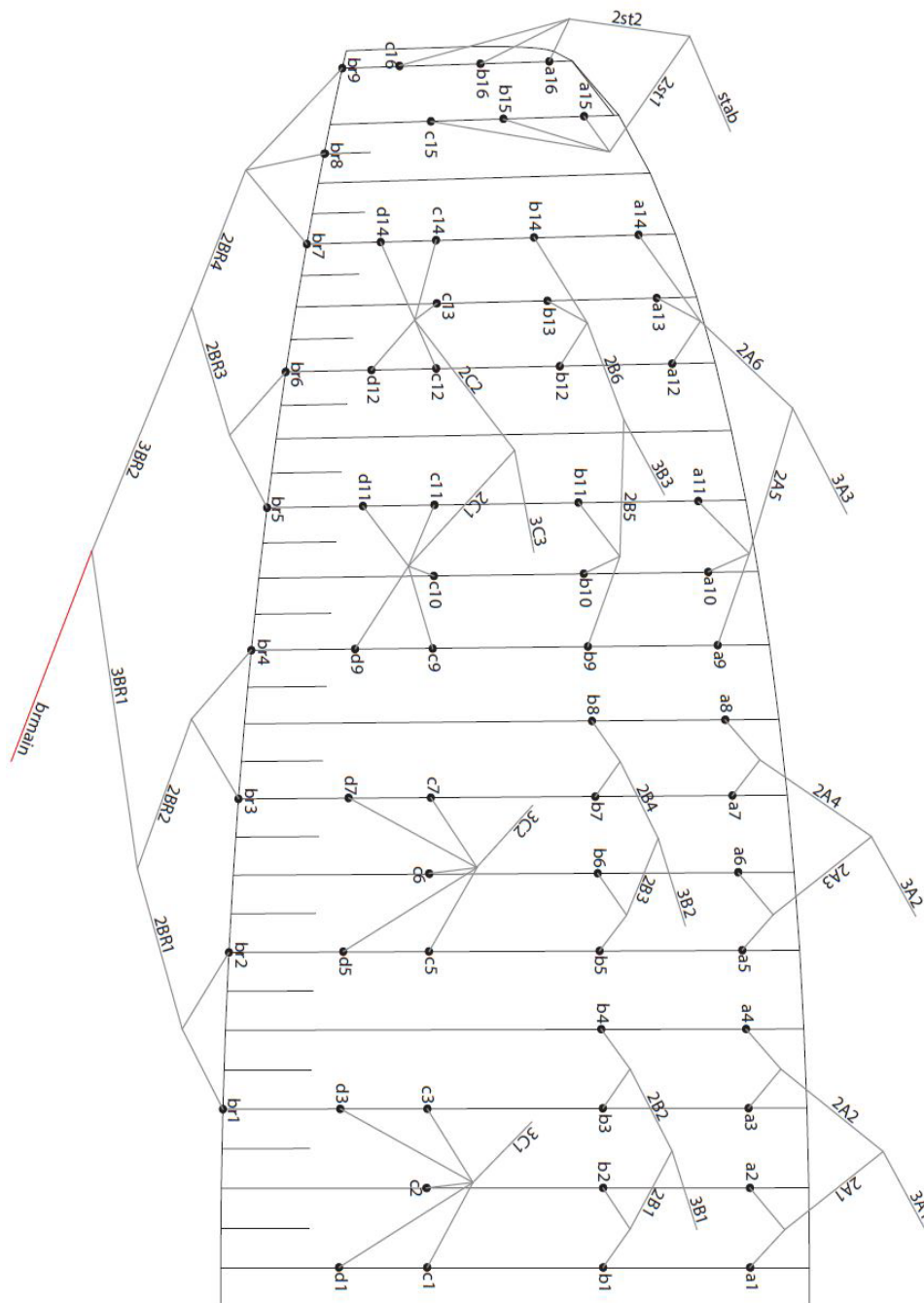
MATERIALS

CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	30 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	RIPSTOP FABRIC	DOMINICO TEX CO (KOREA)
TRAILING EDGE REINFORCEMENT	MYLAR	D-P (GERMANY)
RIBS REINFORCEMENT	LTN-0.8/1 STICK	SPORTWARE CO.CHINA
THREAD	SERAFIL 60	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	PPSL - 120	LIROS GMHB (GERMANY)
UPPER CASCADES	MATRIX - 80	EDELRIID (GERMANY)
MIDDLE CASCADES	PPSL - 200	LIROS GMHB (GERMANY)
MIDDLE CASCADES	PPSL - 120	LIROS GMHB (GERMANY)
MIDDLE CASCADES	TNL - 140	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 400	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 280	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 140	TEIJIM LIMITED (JAPAN)
MAIN BREAK	TARAX-240	EDELRIID (GERMANY)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	G-R 22	TECNI SANGLES (FRANCE)
COLOR INDICATOR	210D	TECNI SANGLES (FRANCE)
THREAD	V138	COATS (ENGLAND)
MAILLONS	MRI4	ANSUNG PRECISION (KOREA)
PULLEYS	RF25109	RONSTAN (AUSTRALIA)

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.

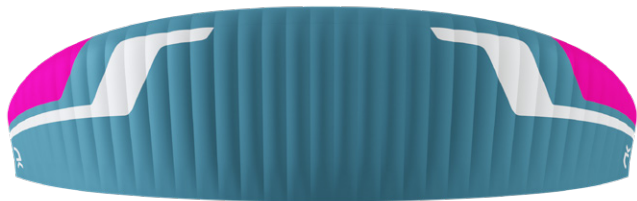
RISER PLAN



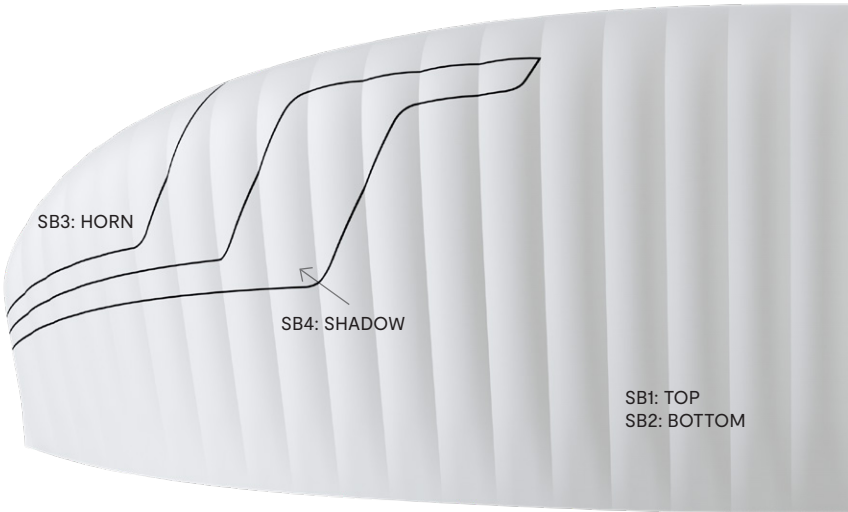
COLORS



KRYSTALL	SB1	SPECTRA GREEN	TOP	REF: 5335
	SB2	WHITE	BOTTOM - ALL WHITE	REF: 001
	SB3	BLACK	HORN	REF: 102
	SB4	WHITE	SHADOW	REF: 001



KYANITE	SB1	SLATE BLUE	TOP	REF: 317
	SB2	WHITE	BOTTOM - ALL WHITE	REF: 001
	SB3	PINK	HORN	REF: 19-2047
	SB4	WHITE	SHADOW	REF: 001



WING LOAD

BI ROLLER 2

30		
P.T.V.		KG/M2
90	=	2,95
95	=	3,11
100	=	3,28
105	=	3,44
110	=	3,61
115	=	3,77
120	=	3,93
125	=	4,10
130	=	4,26
135	=	4,43
140	=	4,59
145	=	4,75
150	=	4,92
155	=	5,08
160	=	5,25
165	=	5,41
170	=	5,57
175	=	5,74
180	=	5,90

34		
P.T.V.		KG/M2
100	=	2,94
105	=	3,09
110	=	3,24
115	=	3,38
120	=	3,53
125	=	3,68
130	=	3,82
135	=	3,97
140	=	4,12
145	=	4,26
150	=	4,41
155	=	4,56
160	=	4,71
165	=	4,85
170	=	5,00
175	=	5,15
180	=	5,29
185	=	5,44
190	=	5,59
195	=	5,74
200	=	5,88
205	=	6,03
210	=	6,18

LINES

BI ROLLER 2 30

REF.	MAT.	kg	COLOR	mm
A				
a1	PPSL	120	YELLOW	830
a2	PPSL	120	YELLOW	757
a3	PPSL	120	YELLOW	773
a4	PPSL	120	YELLOW	819
a5	PPSL	120	YELLOW	801
a6	PPSL	120	YELLOW	752
a7	PPSL	120	YELLOW	733
a8	PPSL	120	YELLOW	777
a9	PPSL	120	YELLOW	1610
a10	MATRIX	80	YELLOW	1525
a11	MATRIX	80	YELLOW	1484
a12	MATRIX	80	YELLOW	1473
a13	MATRIX	80	YELLOW	1424
a14	MATRIX	80	YELLOW	1412
a15	MATRIX	80	YELLOW	1865
a16	MATRIX	80	YELLOW	1779
2A1	PPSL	200	YELLOW	1100
2A2	PPSL	200	YELLOW	1071
2A3	PPSL	200	YELLOW	1035
2A4	PPSL	200	YELLOW	1052
2A5	PPSL	200	YELLOW	1641
2A6	PPSL	200	YELLOW	1566
2ST1	PPSL	120	RED	592
2ST2	PPSL	120	RED	602
3A1	TNL	400	GREEN	5076
3A2	TNL	400	GREEN	5127
3A3	TNL	400	GREEN	3229
3A3'	TNL	400	GREEN	500

REF.	MAT.	kg	COLOR	mm
B				
b1	PPSL	120	YELLOW	827
b2	PPSL	120	YELLOW	756
b3	PPSL	120	YELLOW	768
b4	PPSL	120	YELLOW	816
b5	PPSL	120	YELLOW	795
b6	PPSL	120	YELLOW	750
b7	PPSL	120	YELLOW	722
b8	PPSL	120	YELLOW	771
b9	PPSL	120	YELLOW	1583
b10	MATRIX	80	YELLOW	1505
b11	MATRIX	80	YELLOW	1471
b12	MATRIX	80	YELLOW	1432
b13	MATRIX	80	YELLOW	1393
b14	MATRIX	80	YELLOW	1390
b15	MATRIX	80	YELLOW	1826
b16	MATRIX	80	YELLOW	1765
2B1	PPSL	200	BLUE	1094
2B2	PPSL	200	BLUE	1070
2B3	PPSL	200	BLUE	1020
2B4	PPSL	200	BLUE	1051
2B5	PPSL	200	BLUE	1593
2B6	PPSL	200	BLUE	1562
3B1	TNL	400	BLUE	4989
3B2	TNL	400	BLUE	5062
3B3	TNL	400	BLUE	3726
STAB	TNL	140	RED	4016

REF.	MAT.	kg	COLOR	mm
C				
c1	PPSL	200	YELLOW	1759
c2	PPSL	120	YELLOW	1701
c3	PPSL	120	YELLOW	1709
c5	PPSL	200	YELLOW	1685
c6	PPSL	120	YELLOW	1660
c7	PPSL	120	YELLOW	1688
c9	PPSL	120	YELLOW	1581
c10	MATRIX	80	YELLOW	1488
c11	MATRIX	80	YELLOW	1441
c12	MATRIX	80	YELLOW	1377
c13	MATRIX	80	YELLOW	1347
c14	MATRIX	80	YELLOW	1354
c15	MATRIX	80	YELLOW	1900
c16	MATRIX	80	YELLOW	1873
2C1	PPSL	200	BLUE	967
2C2	PPSL	120	BLUE	957
3C1	TNL	400	BLUE	5226
3C2	TNL	400	BLUE	5252
3C3	TNL	280	BLUE	4466

REF.	MAT.	kg	COLOR	mm
D				
d1	MATRIX	80	YELLOW	1859
d3	MATRIX	80	YELLOW	1808
d5	MATRIX	80	YELLOW	1782
d7	MATRIX	80	YELLOW	1775
d9	MATRIX	80	YELLOW	1663
df1	MATRIX	80	YELLOW	1513
d12	MATRIX	80	YELLOW	1438
d14	MATRIX	80	YELLOW	1399

REF.	MAT.	kg	COLOR	mm
BRAKE				
br1	TNL	80	RED	1123
br2	TNL	80	RED	647
br3	TNL	80	RED	994
br4	TNL	80	RED	1031
br5	TNL	80	RED	970
br6	TNL	80	RED	866
br7	TNL	80	RED	945
br8	TNL	80	RED	987
br9	TNL	80	RED	1164
2BR1	TNL	140	RED	1369
2BR2	TNL	140	RED	863
2BR3	TNL	140	RED	1056
2BR4	TNL	140	RED	940
3BR1	TNL	140	RED	1909
3BR2	TNL	140	RED	1627

BRMAIN	TARAX	240	RED	3805
POINT AT:				3605

LINES

BI ROLLER 2 34

REF.	MAT.	kg	COLOR	mm
A				
a1	PPSL	120	YELLOW	876
a2	PPSL	120	YELLOW	801
a3	PPSL	120	YELLOW	815
a4	PPSL	120	YELLOW	865
a5	PPSL	120	YELLOW	846
a6	PPSL	120	YELLOW	795
a7	PPSL	120	YELLOW	773
a8	PPSL	120	YELLOW	821
a9	PPSL	120	YELLOW	1700
a10	MATRIX	80	YELLOW	1610
a11	MATRIX	80	YELLOW	1568
a12	MATRIX	80	YELLOW	1555
a13	MATRIX	80	YELLOW	1504
a14	MATRIX	80	YELLOW	1491
a15	MATRIX	80	YELLOW	1969
a16	MATRIX	80	YELLOW	1879
2A1	PPSL	200	YELLOW	1159
2A2	PPSL	200	YELLOW	1133
2A3	PPSL	200	YELLOW	1092
2A4	PPSL	200	YELLOW	1113
2A5	PPSL	200	YELLOW	1731
2A6	PPSL	200	YELLOW	1655
2ST1	PPSL	120	RED	625
2ST2	PPSL	120	RED	636
3A1	TNL	400	GREEN	5380
3A2	TNL	400	GREEN	5439
3A3	TNL	400	GREEN	3467
3A3'	TNL	400	GREEN	500

REF.	MAT.	kg	COLOR	mm
B				
b1	PPSL	120	YELLOW	874
b2	PPSL	120	YELLOW	799
b3	PPSL	120	YELLOW	810
b4	PPSL	120	YELLOW	862
b5	PPSL	120	YELLOW	839
b6	PPSL	120	YELLOW	792
b7	PPSL	120	YELLOW	761
b8	PPSL	120	YELLOW	814
b9	PPSL	120	YELLOW	1672
b10	MATRIX	80	YELLOW	1589
b11	MATRIX	80	YELLOW	1554
b12	MATRIX	80	YELLOW	1512
b13	MATRIX	80	YELLOW	1470
b14	MATRIX	80	YELLOW	1469
b15	MATRIX	80	YELLOW	1928
b16	MATRIX	80	YELLOW	1863
2B1	PPSL	200	BLUE	1154
2B2	PPSL	200	BLUE	1132
2B3	PPSL	200	BLUE	1075
2B4	PPSL	200	BLUE	1111
2B5	PPSL	200	BLUE	1680
2B6	PPSL	200	BLUE	1651
3B1	TNL	400	BLUE	5289
3B2	TNL	400	BLUE	5371
3B3	TNL	400	BLUE	3964
STAB	TNL	140	RED	4273

REF.	MAT.	kg	COLOR	mm
C				
c1	PPSL	200	YELLOW	1856
c2	PPSL	120	YELLOW	1795
c3	PPSL	120	YELLOW	1805
c5	PPSL	200	YELLOW	1778
c6	PPSL	120	YELLOW	1753
c7	PPSL	120	YELLOW	1784
c9	PPSL	120	YELLOW	1670
c10	MATRIX	80	YELLOW	1572
c11	MATRIX	80	YELLOW	1522
c12	MATRIX	80	YELLOW	1454
c13	MATRIX	80	YELLOW	1423
c14	MATRIX	80	YELLOW	1430
c15	MATRIX	80	YELLOW	2006
c16	MATRIX	80	YELLOW	1978
2C1	PPSL	200	BLUE	1020
2C2	PPSL	120	BLUE	1011
3C1	TNL	400	BLUE	5539
3C2	TNL	400	BLUE	5571
3C3	TNL	280	BLUE	4746

REF.	MAT.	kg	COLOR	mm
D				
d1	MATRIX	80	YELLOW	1962
d3	MATRIX	80	YELLOW	1910
d5	MATRIX	80	YELLOW	1881
d7	MATRIX	80	YELLOW	1876
d9	MATRIX	80	YELLOW	1756
df1	MATRIX	80	YELLOW	1599
d12	MATRIX	80	YELLOW	1518
d14	MATRIX	80	YELLOW	1477

REF.	MAT.	kg	COLOR	mm
BRAKE				
br1	TNL	80	RED	1186
br2	TNL	80	RED	685
br3	TNL	80	RED	1048
br4	TNL	80	RED	1089
br5	TNL	80	RED	1023
br6	TNL	80	RED	915
br7	TNL	80	RED	996
br8	TNL	80	RED	1042
br9	TNL	80	RED	1230
2BR1	TNL	140	RED	1442
2BR2	TNL	140	RED	913
2BR3	TNL	140	RED	1113
2BR4	TNL	140	RED	995
3BR1	TNL	140	RED	2013
3BR2	TNL	140	RED	1723
BRMAIN	TARAX	240	RED	4030
POINT AT:				3830

LINE MEASUREMENTS

BI ROLLER 2 - 30

LINES HEIGHT MM					
	A	B	C	D	br
1	7382	7290	7376	7475	8045
2	7309	7219	7318	7424	7569
3	7296	7207	7326	7424	7410
4	7342	7255	7326	7417	7447
5	7340	7255	7301	7480	7297
6	7291	7210	7329	7330	7193
7	7289	7213	7397	7245	7156
8	7333	7262	7304	7206	7198
9	7342	7278	7257		7308
10	7257	7200	7183		
11	7216	7166	7153		
12	7130	7096	7160		
13	7081	7057	6889		
14	7069	7054	6872		
15	6852	6814			
16	6776	6763			
RISERS LENGHT MM					
A	A'	B	C		
380	380	380	380	STANDARD	
380	380	425	490	ACCELERATED	

BI ROLLER 2 - 34

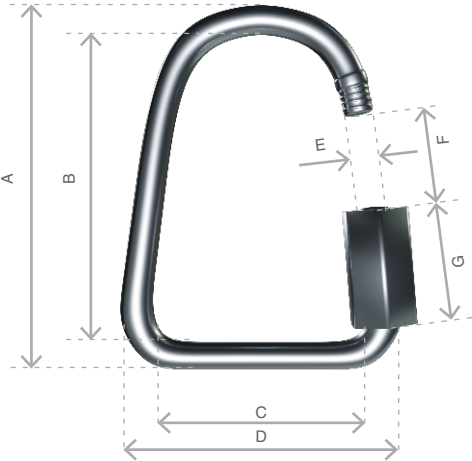
LINES HEIGHT MM					
	A	B	C	D	br
1	7797	7700	7783	7888	8510
2	7722	7625	7722	7836	8009
3	7710	7614	7732	7839	7843
4	7760	7666	7735	7834	7884
5	7760	7666	7710	7903	7728
6	7709	7619	7741	7746	7620
7	7708	7624	7816	7656	7583
8	7756	7677	7718	7615	7629
9	7763	7695	7668		7750
10	7673	7612	7591		
11	7631	7577	7560		
12	7542	7506	7567		
13	7491	7464	7282		
14	7478	7463	7265		
15	7249	7209			
16	7170	7155			
RISERS LENGHT MM					
A	A'	B	C		
380	380	380	380	STANDARD	
380	380	425	490	ACCELERATED	

SUSPENSION

MATERIAL CODE		TNL	TNL	TNL	TNL	PPSL	PPSL	MATRIX	TARAX
STRENGTH CODE		140	220	280	400	120	200	80	240
DIAMETER m/m	ø	1,4	1,6	1,8	2,3	1,15	1,42	0,9	1,9
CORE MATERIAL		Technora	Technora	Technora	Technora	Dyneema	Dyneema	Dyneema	Dyneema
SLEEVE MATERIAL		Polyester	Polyester	Polyester	Polyester	Polyester	Polyester	Polyester	Polyester
WEIGHT G/M	TOTAL	1,2	1,6	2,7	4	1	1,6	0,7	2,3
BREAKING STRENGTH daN	MINIMUM	140	220	280	460	120	200	80	240
	MAXIMUM	160	250	320	470	159	241		
STRENGTH AFTER 5.000 BENDING CYCLES	TEST EN	76,1	114,2	134,7	160,1	135	191		
ELONGATION AT	5 daN en %	0,2	0,2	0,2	0,05			0,1-0,4	0,1-0,3
	10 daN en %	0,3	0,3	0,3	0,1	0,2	0,24		0,2-0,4
	15 daN en %	0,5	0,5	0,4	0,2				0,2-0,6
	20 daN en %	0,6	0,6	0,4	0,2				0,3-0,7
	25 daN en %	0,8	0,7	0,5	0,3			0,8-1	0,4-0,8
	30 daN en %	1,5	1,2	0,9	0,6	0,6	0,55		
	75 daN en %	2,3	1,8	1,3	0,8			2,5-2,8	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 %		3	2,3	1,7				1,5-2,1
	175 daN en %		3,3	2,7	2				
	200 daN en %		3,8	2,8	2,2				2-2,8
ELONGATION MAX. BREAKING STRENGTH %		3,4	4	4,1	4,6	2			

MAILLON & PULLEY

DESCRIPTION		
MAILLON	DELTA	
CODE	3.5	
MATERIAL	STAINLESS STEEL	
SIZE	3 m/m	
WEIGHT	5 G/PIECE	
QUANTITY	8 PIECES	
INSERTS	4 GREEN / 4 BLACK	

TECHNICAL SPECIFICATIONS	
	DIMENSIONS
	m/m
	A
	37
	B
	29
	C
	14
	D
	22
	E
	4
	F
	5
	G
	12
	LOAD
	KG
	WORKING LIMIT
	110
	BREAKING
	550

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

WING 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%

PROPIETIES 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

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 22
MATERIAL	POLYESTER
WIDTH	22 M/M
THICKNESS	1,52 M/M
BREAKING STRENGTH	1100 DAN
ELONGATION	MAX. 15%
WEIGHT	25 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



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