

# KOUGAR 3

Technical *specifications*



## TECHNICAL SPECIFICATIONS

			16	18	20	23	25	28
<b>Cells</b>	Number		64	64	64	64	64	64
<b>Aspect ratio</b>	Flat		5,75	5,75	5,75	5,75	5,75	5,75
	Projected		4,50	4,50	4,50	4,50	4,50	4,50
<b>Area</b>	Flat	m <sup>2</sup>	16	18	20	22,50	25	28
	Projected	m <sup>2</sup>	13,90	15,65	17,38	19,55	21,73	24,34
<b>Span</b>	Flat	m	9,60	10,20	10,70	11,40	12	12,70
<b>Chord</b>	Max	m	2,06	2,18	2,30	2,44	2,57	2,72
<b>Lines</b>	Total	m	238	253	267	284	300	318
	Main		2+1/4/3/2	2+1/4/3/2	2+1/4/3/2	2+1/4/3/2	2+1/4/3/2	2+1/4/3/2
<b>Risers</b>	Number	3+1	A+A'/B/C'+C/D	A+A'/B/C'+C/D	A+A'/B/C'+C/D	A+A'/B/C'+C/D	A+A'/B/C'+C/D	A+A'/B/C'+C/D
	Speed-bar	mm	90	90	90	120	120	120
	Trimmers	mm	150	150	150	150	150	150
<b>Weight in flight</b>		kg	60-125	65-140	70-155	80-175	90-195	100-215
<b>Glider weight</b>	Min-Max	kg	4	4,30	4,60	5,00	5,40	5,80
<b>Certification</b>			DGAC	DGAC	DGAC	DGAC	DGAC	DGAC

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



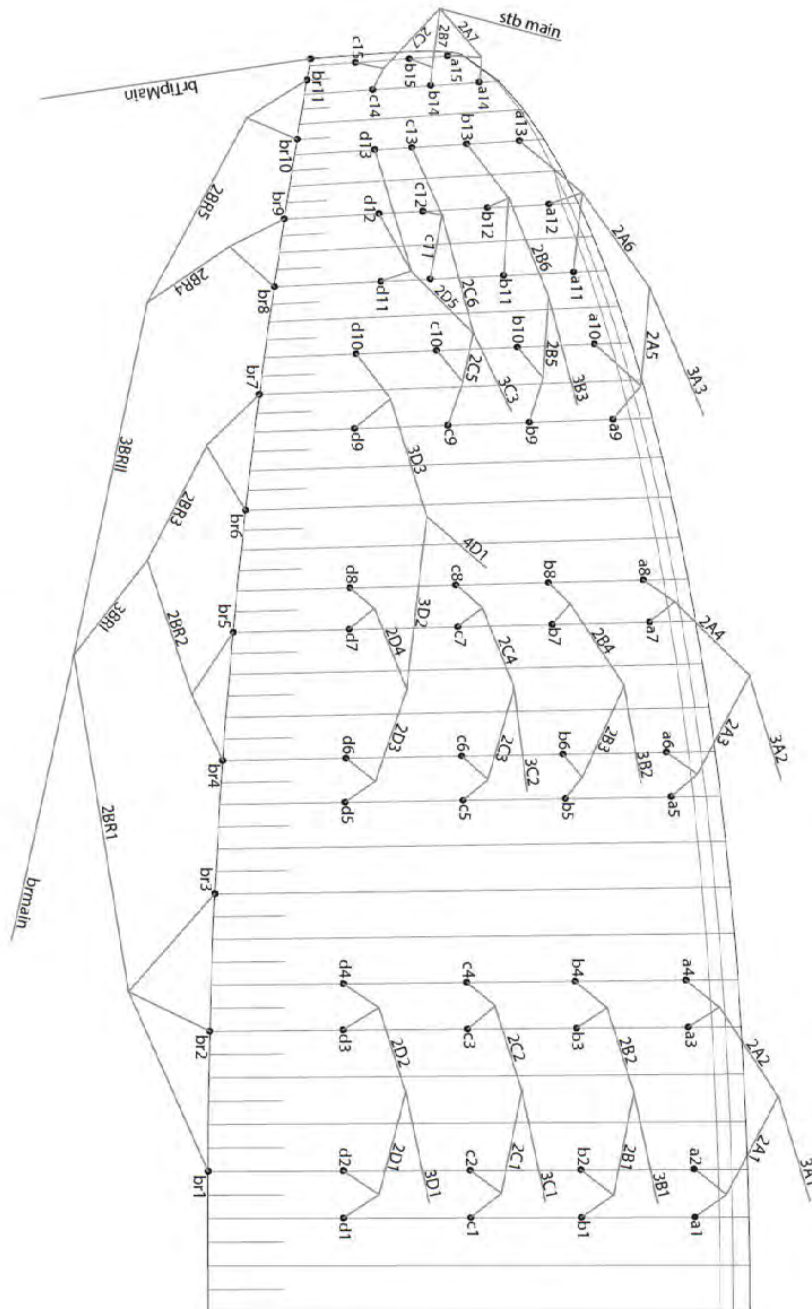
# MATERIALS

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-0.8 STICK	SPORTWARE CO.CHINA
THREAD	SERAFIL 60	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	A-8000/U 50	EDELRID (GERMANY)
UPPER CASCADES	A-8000/U 70	EDELRID (GERMANY)
UPPER CASCADES	A-8000/U 90	EDELRID (GERMANY)
MIDDLE CASCADES	A-8000/U 50	EDELRID (GERMANY)
MIDDLE CASCADES	A-8000/U 70	EDELRID (GERMANY)
MIDDLE CASCADES	A-8000/U 90	EDELRID (GERMANY)
MIDDLE CASCADES	A-8000/U 130	EDELRID (GERMANY)
MIDDLE CASCADES	A-8000/U 190	EDELRID (GERMANY)
MAIN	A-8000/U 90	EDELRID (GERMANY)
MAIN	A-8000/U 130	EDELRID (GERMANY)
MAIN	A-8000/U 190	EDELRID (GERMANY)
MAIN	A-8000/U 230	EDELRID (GERMANY)
MAIN	A-8000/U 360	EDELRID (GERMANY)
MAIN BREAK	TNL - 280	TEIJIM LIMITED (JAPAN)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	WD103	COUSIN (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

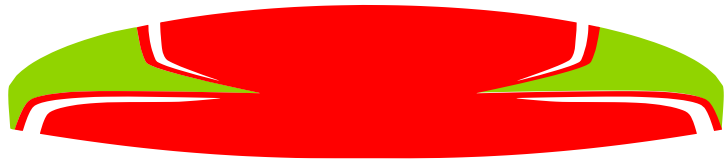
**A A' B C' C D**  
3A1 3A3 3B1 3C3 3C1 3D1  
3A2 3B2 3C2 4D1  
3B3  
stbmain



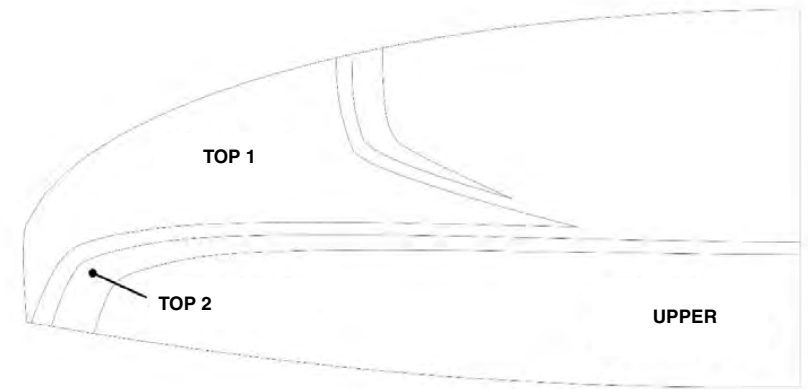
# COLORS



	UPPER	PURPLE	LOWER	WHITE
COSMOS	TOP 1	BLACK		
	TOP 2	LIME		



	UPPER	DRAGON RED	LOWER	WHITE
WILD	TOP 1	LIME		
	TOP 2	WHITE		



# LINES

KOUGAR 3										16														
REF.	MAT.	kg	COLOUR	mm	ref.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm
a1	8000/U	90	Natural	243	b1	8000/U	70	Natural	241	c1	8000/U	50	Natural	243	d1	8000/U	50	Natural	246	br1	8000/U	50	Natural	1411
a2	8000/U	90	Natural	213	b2	8000/U	70	Natural	211	c2	8000/U	50	Natural	205	d2	8000/U	50	Natural	202	br2	8000/U	50	Natural	1108
a3	8000/U	90	Natural	220	b3	8000/U	70	Natural	217	c3	8000/U	50	Natural	212	d3	8000/U	50	Natural	208	br3	8000/U	50	Natural	983
a4	8000/U	90	Natural	232	b4	8000/U	70	Natural	231	c4	8000/U	50	Natural	234	d4	8000/U	50	Natural	237	br4	8000/U	50	Natural	915
a5	8000/U	90	Natural	226	b5	8000/U	70	Natural	222	c5	8000/U	50	Natural	224	d5	8000/U	50	Natural	230	br5	8000/U	50	Natural	796
a6	8000/U	90	Natural	202	b6	8000/U	70	Natural	200	c6	8000/U	50	Natural	195	d6	8000/U	50	Natural	183	br6	8000/U	50	Natural	765
a7	8000/U	90	Natural	266	b7	8000/U	70	Natural	193	c7	8000/U	50	Natural	188	d7	8000/U	50	Natural	196	br7	8000/U	50	Natural	812
a8	8000/U	90	Natural	280	b8	8000/U	70	Natural	208	c8	8000/U	50	Natural	210	d8	8000/U	50	Natural	207	br8	8000/U	50	Natural	453
a9	8000/U	90	Natural	865	b9	8000/U	50	Natural	802	c10	8000/U	50	Natural	661	d9	8000/U	50	Natural	411	br9	8000/U	50	Natural	422
a10	8000/U	90	Natural	809	b10	8000/U	50	Natural	750	c11	8000/U	50	Natural	583	d10	8000/U	50	Natural	467	br10	8000/U	50	Natural	278
a11	8000/U	90	Natural	825	b11	8000/U	50	Natural	765	c12	8000/U	50	Natural	601	d11	8000/U	50	Natural	618	br11	8000/U	50	Natural	362
a12	8000/U	90	Natural	786	b12	8000/U	50	Natural	734	c13	8000/U	50	Natural	559	d12	8000/U	50	Natural	575					
a13	8000/U	90	Natural	809	b13	8000/U	50	Natural	763	c14	8000/U	50	Natural	596	d13	8000/U	50	Natural	608					
a14	8000/U	90	Natural	272	b14	8000/U	50	Natural	222	c15	8000/U	50	Natural	199										
a15	8000/U	90	Natural	245	b15	8000/U	50	Natural	214	c16	8000/U	50	Natural	205										
2A1	8000/U	190	Natural	1348	2B1	8000/U	190	Natural	1.333	2C1	8000/U	130	Natural	1062	2D1	8000/U	70	Natural	907	2BR1	8000/U	70	Natural	2.056
2A2	8000/U	190	Natural	1306	2B2	8000/U	190	Natural	1.295	2C2	8000/U	130	Natural	1024	2D2	8000/U	70	Natural	872	2BR2	8000/U	50	Natural	871
2A3	8000/U	190	Natural	1230	2B3	8000/U	190	Natural	1.207	2C3	8000/U	90	Natural	957	2D3	8000/U	70	Natural	909	2BR3	8000/U	50	Natural	856
2A4	8000/U	190	Natural	1134	2B4	8000/U	190	Natural	1.193	2C4	8000/U	90	Natural	944	2D4	8000/U	70	Natural	829	2BR4	8000/U	50	Natural	475
2A5	8000/U	90	Natural	834	2B5	8000/U	70	Natural	772	2C5	8000/U	70	Natural	620	2D5	8000/U	70	Natural	568	2BR5	8000/U	50	Natural	629
2A6	8000/U	90	Natural	780	2B6	8000/U	70	Natural	727	2C6	8000/U	70	Natural	552	3D2	8000/U	90	Natural	962	3BR1	8000/U	70	Natural	1.157
2A7	8000/U	90	Natural	632	2B7	8000/U	70	Natural	656	2C7	8000/U	70	Natural	720	3D3	8000/U	70	Natural	1565	3BR11	8000/U	70	Natural	1.821
3A1	8000/U	360	Natural	3709	3B1	8000/U	230	Natural	3651	3C1	8000/U	190	Natural	3950	3D1	8000/U	130	Natural	4192	br-main	TNL	280	Red	2896
3A2	8000/U	360	Natural	3740	3B2	8000/U	230	Natural	3703	3C2	8000/U	130	Natural	3976	4D1	8000/U	130	Natural	3190				knot point:	2696
3A3	8000/U	130	Natural	3375	3B3	8000/U	130	Natural	3461	3C3	8000/U	90	Natural	3809						brTip-Main	TNL	140	Red	4871
					stb main	8000/U	90	Natural	3889														knot point:	4721

# LINES

KOUGAR 3										18														
REF.	MAT.	kg	COLOUR	mm	ref.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm
a1	8000/U	90	Natural	258	b1	8000/U	70	Natural	255	c1	8000/U	50	Natural	258	d1	8000/U	50	Natural	260	br1	8000/U	50	Natural	1496
a2	8000/U	90	Natural	226	b2	8000/U	70	Natural	224	c2	8000/U	50	Natural	218	d2	8000/U	50	Natural	214	br2	8000/U	50	Natural	1177
a3	8000/U	90	Natural	233	b3	8000/U	70	Natural	230	c3	8000/U	50	Natural	225	d3	8000/U	50	Natural	220	br3	8000/U	50	Natural	1047
a4	8000/U	90	Natural	247	b4	8000/U	70	Natural	245	c4	8000/U	50	Natural	248	d4	8000/U	50	Natural	252	br4	8000/U	50	Natural	970
a5	8000/U	90	Natural	239	b5	8000/U	70	Natural	235	c5	8000/U	50	Natural	238	d5	8000/U	50	Natural	243	br5	8000/U	50	Natural	845
a6	8000/U	90	Natural	215	b6	8000/U	70	Natural	213	c6	8000/U	50	Natural	207	d6	8000/U	50	Natural	195	br6	8000/U	50	Natural	811
a7	8000/U	90	Natural	282	b7	8000/U	70	Natural	205	c7	8000/U	50	Natural	199	d7	8000/U	50	Natural	207	br7	8000/U	50	Natural	862
a8	8000/U	90	Natural	297	b8	8000/U	70	Natural	220	c8	8000/U	50	Natural	223	d8	8000/U	50	Natural	220	br8	8000/U	50	Natural	481
a9	8000/U	90	Natural	918	b9	8000/U	50	Natural	851	c9	8000/U	50	Natural	701	d9	8000/U	50	Natural	435	br9	8000/U	50	Natural	447
a10	8000/U	90	Natural	858	b10	8000/U	50	Natural	796	c10	8000/U	50	Natural	618	d10	8000/U	50	Natural	495	br10	8000/U	50	Natural	295
a11	8000/U	90	Natural	876	b11	8000/U	50	Natural	811	c11	8000/U	50	Natural	638	d11	8000/U	50	Natural	656	br11	8000/U	50	Natural	384
a12	8000/U	90	Natural	834	b12	8000/U	50	Natural	779	c12	8000/U	50	Natural	594	d12	8000/U	50	Natural	610					
a13	8000/U	90	Natural	858	b13	8000/U	50	Natural	810	c13	8000/U	50	Natural	633	d13	8000/U	50	Natural	645					
a14	8000/U	90	Natural	289	b14	8000/U	50	Natural	235	c14	8000/U	50	Natural	211										
a15	8000/U	90	Natural	260	b15	8000/U	50	Natural	227	c15	8000/U	50	Natural	217										
2A1	8000/U	190	Natural	1428	2B1	8000/U	190	Natural	1.413	2C1	8000/U	130	Natural	1125	2D1	8000/U	70	Natural	960	2BR1	8000/U	70	Natural	2.189
2A2	8000/U	190	Natural	1387	2B2	8000/U	190	Natural	1.376	2C2	8000/U	130	Natural	1088	2D2	8000/U	70	Natural	926	2BR2	8000/U	50	Natural	922
2A3	8000/U	190	Natural	1304	2B3	8000/U	190	Natural	1.280	2C3	8000/U	90	Natural	1014	2D3	8000/U	70	Natural	963	2BR3	8000/U	50	Natural	910
2A4	8000/U	190	Natural	1204	2B4	8000/U	190	Natural	1.267	2C4	8000/U	90	Natural	1003	2D4	8000/U	70	Natural	880	2BR4	8000/U	50	Natural	504
2A5	8000/U	90	Natural	885	2B5	8000/U	70	Natural	819	2C5	8000/U	70	Natural	657	2D5	8000/U	70	Natural	603	2BR5	8000/U	50	Natural	667
2A6	8000/U	90	Natural	828	2B6	8000/U	70	Natural	771	2C6	8000/U	70	Natural	586	3D2	8000/U	90	Natural	1019	3BR1	8000/U	70	Natural	1.243
2A7	8000/U	90	Natural	671	2B7	8000/U	70	Natural	696	2C7	8000/U	70	Natural	764	3D3	8000/U	70	Natural	1662	3BR11	8000/U	70	Natural	1.950
3A1	8000/U	360	Natural	3957	3B1	8000/U	230	Natural	3897	3C1	8000/U	190	Natural	4214	3D1	8000/U	130	Natural	4470	br-main	TNL	280	Red	3070
3A2	8000/U	360	Natural	3997	3B2	8000/U	230	Natural	3958	3C2	8000/U	130	Natural	4248	4D1	8000/U	130	Natural	3415				knot point:	2870
3A3	8000/U	130	Natural	3613	3B3	8000/U	130	Natural	3705	3C3	8000/U	90	Natural	4074						brTip-Main	TNL	140	Red	5200
					stb main	8000/U	90	Natural	4160														knot point:	5050

# LINES

KOUGAR 3										20														
REF.	MAT.	kg	COLOUR	mm	ref.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm
a1	8000/U	90	Natural	272	b1	8000/U	70	Natural	269	c1	8000/U	50	Natural	271	d1	8000/U	50	Natural	274	br1	8000/U	50	Natural	1576
a2	8000/U	90	Natural	239	b2	8000/U	70	Natural	237	c2	8000/U	50	Natural	230	d2	8000/U	50	Natural	226	br2	8000/U	50	Natural	1242
a3	8000/U	90	Natural	245	b3	8000/U	70	Natural	242	c3	8000/U	50	Natural	236	d3	8000/U	50	Natural	232	br3	8000/U	50	Natural	1107
a4	8000/U	90	Natural	261	b4	8000/U	70	Natural	258	c4	8000/U	50	Natural	262	d4	8000/U	50	Natural	266	br4	8000/U	50	Natural	1022
a5	8000/U	90	Natural	252	b5	8000/U	70	Natural	248	c5	8000/U	50	Natural	250	d5	8000/U	50	Natural	257	br5	8000/U	50	Natural	891
a6	8000/U	90	Natural	227	b6	8000/U	70	Natural	225	c6	8000/U	50	Natural	219	d6	8000/U	50	Natural	205	br6	8000/U	50	Natural	854
a7	8000/U	90	Natural	297	b7	8000/U	70	Natural	216	c7	8000/U	50	Natural	210	d7	8000/U	50	Natural	218	br7	8000/U	50	Natural	909
a8	8000/U	90	Natural	313	b8	8000/U	70	Natural	232	c8	8000/U	50	Natural	235	d8	8000/U	50	Natural	232	br8	8000/U	50	Natural	507
a9	8000/U	90	Natural	967	b9	8000/U	50	Natural	896	c9	8000/U	50	Natural	739	d9	8000/U	50	Natural	458	br9	8000/U	50	Natural	471
a10	8000/U	90	Natural	905	b10	8000/U	50	Natural	839	c10	8000/U	50	Natural	652	d10	8000/U	50	Natural	522	br10	8000/U	50	Natural	311
a11	8000/U	90	Natural	923	b11	8000/U	50	Natural	855	c11	8000/U	50	Natural	672	d11	8000/U	50	Natural	692	br11	8000/U	50	Natural	404
a12	8000/U	90	Natural	880	b12	8000/U	50	Natural	821	c12	8000/U	50	Natural	626	d12	8000/U	50	Natural	643					
a13	8000/U	90	Natural	906	b13	8000/U	50	Natural	855	c13	8000/U	50	Natural	668	d13	8000/U	50	Natural	681					
a14	8000/U	90	Natural	304	b14	8000/U	50	Natural	248	c14	8000/U	50	Natural	223										
a15	8000/U	90	Natural	274	b15	8000/U	50	Natural	239	c15	8000/U	50	Natural	229										
2A1	8000/U	190	Natural	1504	2B1	8000/U	190	Natural	1.488	2C1	8000/U	130	Natural	1185	2D1	8000/U	70	Natural	1011	2BR1	8000/U	70	Natural	2.314
2A2	8000/U	190	Natural	1464	2B2	8000/U	190	Natural	1.452	2C2	8000/U	130	Natural	1149	2D2	8000/U	70	Natural	978	2BR2	8000/U	50	Natural	971
2A3	8000/U	190	Natural	1374	2B3	8000/U	190	Natural	1.348	2C3	8000/U	90	Natural	1068	2D3	8000/U	70	Natural	1015	2BR3	8000/U	50	Natural	961
2A4	8000/U	190	Natural	1270	2B4	8000/U	190	Natural	1.336	2C4	8000/U	90	Natural	1058	2D4	8000/U	70	Natural	929	2BR4	8000/U	50	Natural	531
2A5	8000/U	90	Natural	932	2B5	8000/U	70	Natural	863	2C5	8000/U	70	Natural	693	2D5	8000/U	70	Natural	636	2BR5	8000/U	50	Natural	702
2A6	8000/U	90	Natural	873	2B6	8000/U	70	Natural	813	2C6	8000/U	70	Natural	618	3D2	8000/U	90	Natural	1072	3BR1	8000/U	70	Natural	1.324
2A7	8000/U	90	Natural	707	2B7	8000/U	70	Natural	733	2C7	8000/U	70	Natural	805	3D3	8000/U	70	Natural	1753	3BR11	8000/U	70	Natural	2.071
3A1	8000/U	360	Natural	4193	3B1	8000/U	230	Natural	4129	3C1	8000/U	190	Natural	4463	3D1	8000/U	130	Natural	4733	br-main	TNL	280	Red	3268
3A2	8000/U	360	Natural	4240	3B2	8000/U	230	Natural	4199	3C2	8000/U	130	Natural	4505	4D1	8000/U	130	Natural	3628				knot point:	3068
3A3	8000/U	130	Natural	3839	3B3	8000/U	130	Natural	3935	3C3	8000/U	90	Natural	4325						brTip-Main	TNL	140	Red	5538
					stb main	8000/U	90	Natural	4416														knot point:	5388

# LINES

KOUGAR 3					23																			
REF.	MAT.	kg	COLOUR	mm	ref.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm
a1	8000/U	90	Natural	288	b1	8000/U	70	Natural	285	c1	8000/U	50	Natural	288	d1	8000/U	50	Natural	291	br1	8000/U	50	Natural	1671
a2	8000/U	90	Natural	254	b2	8000/U	70	Natural	252	c2	8000/U	50	Natural	245	d2	8000/U	50	Natural	241	br2	8000/U	50	Natural	1319
a3	8000/U	90	Natural	260	b3	8000/U	70	Natural	257	c3	8000/U	50	Natural	250	d3	8000/U	50	Natural	245	br3	8000/U	50	Natural	1178
a4	8000/U	90	Natural	277	b4	8000/U	70	Natural	274	c4	8000/U	50	Natural	278	d4	8000/U	50	Natural	282	br4	8000/U	50	Natural	1084
a5	8000/U	90	Natural	267	b5	8000/U	70	Natural	263	c5	8000/U	50	Natural	265	d5	8000/U	50	Natural	272	br5	8000/U	50	Natural	947
a6	8000/U	90	Natural	241	b6	8000/U	70	Natural	239	c6	8000/U	50	Natural	232	d6	8000/U	50	Natural	218	br6	8000/U	50	Natural	905
a7	8000/U	90	Natural	314	b7	8000/U	70	Natural	229	c7	8000/U	50	Natural	222	d7	8000/U	50	Natural	231	br7	8000/U	50	Natural	964
a8	8000/U	90	Natural	332	b8	8000/U	70	Natural	247	c8	8000/U	50	Natural	249	d8	8000/U	50	Natural	246	br8	8000/U	50	Natural	537
a9	8000/U	90	Natural	1026	b9	8000/U	50	Natural	950	c9	8000/U	50	Natural	783	d9	8000/U	50	Natural	486	br9	8000/U	50	Natural	500
a10	8000/U	90	Natural	960	b10	8000/U	50	Natural	890	c10	8000/U	50	Natural	691	d10	8000/U	50	Natural	554	br10	8000/U	50	Natural	330
a11	8000/U	90	Natural	979	b11	8000/U	50	Natural	907	c11	8000/U	50	Natural	713	d11	8000/U	50	Natural	733	br11	8000/U	50	Natural	429
a12	8000/U	90	Natural	934	b12	8000/U	50	Natural	871	c12	8000/U	50	Natural	665	d12	8000/U	50	Natural	683					
a13	8000/U	90	Natural	962	b13	8000/U	50	Natural	907	c13	8000/U	50	Natural	710	d13	8000/U	50	Natural	723					
a14	8000/U	90	Natural	323	b14	8000/U	50	Natural	263	c14	8000/U	50	Natural	236										
a15	8000/U	90	Natural	291	b15	8000/U	50	Natural	254	c15	8000/U	50	Natural	243										
2A1	8000/U	190	Natural	1594	2B1	8000/U	190	Natural	1.577	2C1	8000/U	130	Natural	1255	2D1	8000/U	70	Natural	1071	2BR1	8000/U	70	Natural	2.462
2A2	8000/U	190	Natural	1555	2B2	8000/U	190	Natural	1.542	2C2	8000/U	130	Natural	1221	2D2	8000/U	70	Natural	1039	2BR2	8000/U	50	Natural	1.028
2A3	8000/U	190	Natural	1456	2B3	8000/U	190	Natural	1.429	2C3	8000/U	90	Natural	1132	2D3	8000/U	70	Natural	1076	2BR3	8000/U	50	Natural	1.021
2A4	8000/U	190	Natural	1349	2B4	8000/U	190	Natural	1.419	2C4	8000/U	90	Natural	1124	2D4	8000/U	70	Natural	986	2BR4	8000/U	50	Natural	564
2A5	8000/U	90	Natural	989	2B5	8000/U	70	Natural	916	2C5	8000/U	70	Natural	735	2D5	8000/U	70	Natural	675	2BR5	8000/U	50	Natural	745
2A6	8000/U	90	Natural	926	2B6	8000/U	70	Natural	863	2C6	8000/U	70	Natural	656	3D2	8000/U	90	Natural	1135	3BR1	8000/U	70	Natural	1.421
2A7	8000/U	90	Natural	751	2B7	8000/U	70	Natural	778	2C7	8000/U	70	Natural	853	3D3	8000/U	70	Natural	1861	3BR11	8000/U	70	Natural	2.215
3A1	8000/U	360	Natural	4471	3B1	8000/U	230	Natural	4403	3C1	8000/U	190	Natural	4757	3D1	8000/U	130	Natural	5045	br-main	TNL	280	Red	3394
3A2	8000/U	360	Natural	4528	3B2	8000/U	230	Natural	4484	3C2	8000/U	130	Natural	4808	4D1	8000/U	130	Natural	3880				knot point:	3194
3A3	8000/U	130	Natural	4105	3B3	8000/U	130	Natural	4208	3C3	8000/U	90	Natural	4621						brTip-Main	TNL	140	Red	5833
					stb main	8000/U	90	Natural	4719														knot point:	5683

# LINES

KOUGAR 3					25																			
REF.	MAT.	kg	COLOUR	mm	ref.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm
a1	8000/U	90	Natural	303	b1	8000/U	70	Natural	300	c1	8000/U	50	Natural	303	d1	8000/U	50	Natural	307	br1	8000/U	50	Natural	1761
a2	8000/U	90	Natural	268	b2	8000/U	70	Natural	266	c2	8000/U	50	Natural	258	d2	8000/U	50	Natural	254	br2	8000/U	50	Natural	1391
a3	8000/U	90	Natural	274	b3	8000/U	70	Natural	270	c3	8000/U	50	Natural	263	d3	8000/U	50	Natural	258	br3	8000/U	50	Natural	1245
a4	8000/U	90	Natural	292	b4	8000/U	70	Natural	289	c4	8000/U	50	Natural	293	d4	8000/U	50	Natural	297	br4	8000/U	50	Natural	1142
a5	8000/U	90	Natural	282	b5	8000/U	70	Natural	277	c5	8000/U	50	Natural	280	d5	8000/U	50	Natural	287	br5	8000/U	50	Natural	999
a6	8000/U	90	Natural	254	b6	8000/U	70	Natural	252	c6	8000/U	50	Natural	245	d6	8000/U	50	Natural	230	br6	8000/U	50	Natural	953
a7	8000/U	90	Natural	331	b7	8000/U	70	Natural	241	c7	8000/U	50	Natural	234	d7	8000/U	50	Natural	244	br7	8000/U	50	Natural	1016
a8	8000/U	90	Natural	350	b8	8000/U	70	Natural	260	c8	8000/U	50	Natural	263	d8	8000/U	50	Natural	260	br8	8000/U	50	Natural	566
a9	8000/U	90	Natural	1081	b9	8000/U	50	Natural	1002	c9	8000/U	50	Natural	826	d9	8000/U	50	Natural	511	br9	8000/U	50	Natural	527
a10	8000/U	90	Natural	1012	b10	8000/U	50	Natural	939	c10	8000/U	50	Natural	729	d10	8000/U	50	Natural	584	br10	8000/U	50	Natural	348
a11	8000/U	90	Natural	1032	b11	8000/U	50	Natural	956	c11	8000/U	50	Natural	752	d11	8000/U	50	Natural	773	br11	8000/U	50	Natural	452
a12	8000/U	90	Natural	985	b12	8000/U	50	Natural	919	c12	8000/U	50	Natural	701	d12	8000/U	50	Natural	720					
a13	8000/U	90	Natural	1014	b13	8000/U	50	Natural	957	c13	8000/U	50	Natural	749	d13	8000/U	50	Natural	762					
a14	8000/U	90	Natural	340	b14	8000/U	50	Natural	277	c14	8000/U	50	Natural	249										
a15	8000/U	90	Natural	306	b15	8000/U	50	Natural	268	c15	8000/U	50	Natural	256										
2A1	8000/U	190	Natural	1679	2B1	8000/U	190	Natural	1.661	2C1	8000/U	130	Natural	1322	2D1	8000/U	70	Natural	1127	2BR1	8000/U	70	Natural	2.602
2A2	8000/U	190	Natural	1641	2B2	8000/U	190	Natural	1.628	2C2	8000/U	130	Natural	1288	2D2	8000/U	70	Natural	1097	2BR2	8000/U	50	Natural	1.082
2A3	8000/U	190	Natural	1534	2B3	8000/U	190	Natural	1.505	2C3	8000/U	90	Natural	1192	2D3	8000/U	70	Natural	1133	2BR3	8000/U	50	Natural	1.078
2A4	8000/U	190	Natural	1423	2B4	8000/U	190	Natural	1.497	2C4	8000/U	90	Natural	1186	2D4	8000/U	70	Natural	1040	2BR4	8000/U	50	Natural	594
2A5	8000/U	90	Natural	1042	2B5	8000/U	70	Natural	965	2C5	8000/U	70	Natural	774	2D5	8000/U	70	Natural	712	2BR5	8000/U	50	Natural	785
2A6	8000/U	90	Natural	977	2B6	8000/U	70	Natural	910	2C6	8000/U	70	Natural	692	3D2	8000/U	90	Natural	1195	3BR1	8000/U	70	Natural	1.512
2A7	8000/U	90	Natural	791	2B7	8000/U	70	Natural	820	2C7	8000/U	70	Natural	900	3D3	8000/U	70	Natural	1963	3BR11	8000/U	70	Natural	2.351
3A1	8000/U	360	Natural	4734	3B1	8000/U	230	Natural	4663	3C1	8000/U	190	Natural	5036	3D1	8000/U	130	Natural	5340	br-main	TNL	280	Red	3590
3A2	8000/U	360	Natural	4800	3B2	8000/U	230	Natural	4754	3C2	8000/U	130	Natural	5095	4D1	8000/U	130	Natural	4119				knot point:	3390
3A3	8000/U	130	Natural	4358	3B3	8000/U	130	Natural	4465	3C3	8000/U	90	Natural	4901						brTip-Main	TNL	140	Red	6171
					stb main	8000/U	90	Natural	5005														knot point:	6021

# LINES

KOUGAR 3					28																			
REF.	MAT.	kg	COLOUR	mm	ref.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm	REF.	MAT.	kg	COLOUR	mm
a1	8000/U	90	Natural	321	b1	8000/U	70	Natural	317	c1	8000/U	50	Natural	321	d1	8000/U	50	Natural	324	br1	8000/U	50	Natural	1863
a2	8000/U	90	Natural	284	b2	8000/U	70	Natural	282	c2	8000/U	50	Natural	274	d2	8000/U	50	Natural	269	br2	8000/U	50	Natural	1474
a3	8000/U	90	Natural	289	b3	8000/U	70	Natural	285	c3	8000/U	50	Natural	278	d3	8000/U	50	Natural	273	br3	8000/U	50	Natural	1321
a4	8000/U	90	Natural	309	b4	8000/U	70	Natural	307	c4	8000/U	50	Natural	310	d4	8000/U	50	Natural	315	br4	8000/U	50	Natural	1209
a5	8000/U	90	Natural	298	b5	8000/U	70	Natural	293	c5	8000/U	50	Natural	296	d5	8000/U	50	Natural	303	br5	8000/U	50	Natural	1058
a6	8000/U	90	Natural	269	b6	8000/U	70	Natural	267	c6	8000/U	50	Natural	260	d6	8000/U	50	Natural	244	br6	8000/U	50	Natural	1008
a7	8000/U	90	Natural	350	b7	8000/U	70	Natural	255	c7	8000/U	50	Natural	247	d7	8000/U	50	Natural	258	br7	8000/U	50	Natural	1076
a8	8000/U	90	Natural	371	b8	8000/U	70	Natural	275	c8	8000/U	50	Natural	278	d8	8000/U	50	Natural	275	br8	8000/U	50	Natural	599
a9	8000/U	90	Natural	1144	b9	8000/U	50	Natural	1060	c9	8000/U	50	Natural	873	d9	8000/U	50	Natural	541	br9	8000/U	50	Natural	557
a10	8000/U	90	Natural	1071	b10	8000/U	50	Natural	993	c10	8000/U	50	Natural	771	d10	8000/U	50	Natural	618	br10	8000/U	50	Natural	368
a11	8000/U	90	Natural	1093	b11	8000/U	50	Natural	1012	c11	8000/U	50	Natural	795	d11	8000/U	50	Natural	818	br11	8000/U	50	Natural	478
a12	8000/U	90	Natural	1042	b12	8000/U	50	Natural	973	c12	8000/U	50	Natural	742	d12	8000/U	50	Natural	762					
a13	8000/U	90	Natural	1074	b13	8000/U	50	Natural	1014	c13	8000/U	50	Natural	793	d13	8000/U	50	Natural	808					
a14	8000/U	90	Natural	360	b14	8000/U	50	Natural	293	c14	8000/U	50	Natural	264										
a15	8000/U	90	Natural	324	b15	8000/U	50	Natural	283	c15	8000/U	50	Natural	271										
2A1	8000/U	190	Natural	1775	2B1	8000/U	190	Natural	1.756	2C1	8000/U	130	Natural	1397	2D1	8000/U	70	Natural	1192	2BR1	8000/U	70	Natural	2.762
2A2	8000/U	190	Natural	1739	2B2	8000/U	190	Natural	1.724	2C2	8000/U	130	Natural	1365	2D2	8000/U	70	Natural	1163	2BR2	8000/U	50	Natural	1.144
2A3	8000/U	190	Natural	1622	2B3	8000/U	190	Natural	1.592	2C3	8000/U	90	Natural	1260	2D3	8000/U	70	Natural	1199	2BR3	8000/U	50	Natural	1.143
2A4	8000/U	190	Natural	1507	2B4	8000/U	190	Natural	1.585	2C4	8000/U	90	Natural	1256	2D4	8000/U	70	Natural	1102	2BR4	8000/U	50	Natural	629
2A5	8000/U	90	Natural	1103	2B5	8000/U	70	Natural	1.021	2C5	8000/U	70	Natural	819	2D5	8000/U	70	Natural	754	2BR5	8000/U	50	Natural	830
2A6	8000/U	90	Natural	1034	2B6	8000/U	70	Natural	964	2C6	8000/U	70	Natural	733	3D2	8000/U	90	Natural	1263	3BR1	8000/U	70	Natural	1.616
2A7	8000/U	90	Natural	838	2B7	8000/U	70	Natural	868	2C7	8000/U	70	Natural	952	3D3	8000/U	70	Natural	2079	3BR11	8000/U	70	Natural	2.505
3A1	8000/U	360	Natural	5033	3B1	8000/U	230	Natural	4958	3C1	8000/U	190	Natural	5353	3D1	8000/U	130	Natural	5674	br-main	TNL	280	Red	3764
3A2	8000/U	360	Natural	5109	3B2	8000/U	230	Natural	5061	3C2	8000/U	130	Natural	5422	4D1	8000/U	130	Natural	4390				knot point:	3564
3A3	8000/U	130	Natural	4644	3B3	8000/U	130	Natural	4758	3C3	8000/U	90	Natural	5220						brTip-Main	TNL	140	Red	6558
					stb main	8000/U	90	Natural	5330														knot point:	6408

# LINE MEASUREMENTS

## KOUGAR 3 - 16

LINES HEIGHT mm

	A	B	C	D	BR
1	5285	5210	5241	5329	6148
2	5254	5180	5203	5285	5845
3	5220	5149	5171	5256	5720
4	5232	5162	5193	5285	5624
5	5181	5118	5142	5275	5505
6	5157	5096	5113	5229	5459
7	5124	5075	5094	5161	5506
8	5138	5089	5115	5173	5430
9	5059	5021	5075	5151	5399
10	5002	4969	4996	5207	5409
11	4965	4938	4948	4981	5493
12	4925	4907	4906	4937	4706
13	4948	4936	4943	4970	
14	4779	4752	4794		
15	4752	4744	4799		

RISERS LENGHT mm

	A	B	C	D	
	500	500	500	500	STANDARD
	500	540	580	668	TRIMMER OPENED
	372	435	500	598	ACCELERATED
	372	475	580	708	TRIMMERS OPENES + ACCELERATED

## KOUGAR 3 - 18

LINES HEIGHT mm

	A	B	C	D	BR
1	5628	5549	5582	5676	6540
2	5597	5518	5542	5630	6221
3	5563	5488	5511	5602	6091
4	5577	5502	5535	5633	5990
5	5525	5458	5484	5625	5865
6	5500	5436	5454	5576	5819
7	5467	5415	5435	5506	5870
8	5482	5430	5458	5519	5790
9	5401	5359	5417	5497	5756
10	5341	5305	5334	5557	5767
11	5301	5273	5283	5318	5856
12	5260	5240	5239	5272	5035
13	5284	5271	5279	5307	
14	5104	5076	5120		
15	5076	5068	5126		

RISERS LENGHT mm

	A	B	C	D	
	500	500	500	500	STANDARD
	500	545	590	668	TRIMMER OPENED
	372	435	500	598	ACCELERATED
	372	480	590	733	TRIMMERS OPENES + ACCELERATED

## KOUGAR 3 - 20

LINES HEIGHT mm

	A	B	C	D	BR
1	5953	5870	5904	6004	6943
2	5921	5838	5863	5956	6609
3	5887	5808	5833	5928	6474
4	5902	5824	5858	5962	6370
5	5851	5780	5808	5957	6239
6	5825	5757	5776	5905	6192
7	5792	5737	5758	5832	6247
8	5808	5753	5783	5846	6162
9	5723	5680	5741	5825	6126
10	5661	5623	5654	5888	6137
11	5620	5589	5600	5637	6230
12	5576	5555	5554	5589	5373
13	5602	5588	5596	5627	
14	5413	5382	5429		
15	5382	5374	5435		

RISERS LENGHT mm

	A	B	C	D	
	500	500	500	500	STANDARD
	500	545	590	668	TRIMMER OPENED
	372	435	500	598	ACCELERATED
	372	480	590	733	TRIMMERS OPENES + ACCELERATED

## KOUGAR 3 - 23

LINES HEIGHT mm

	A	B	C	D	BR
1	6337	6249	6285	6392	7312
2	6303	6216	6242	6341	6960
3	6271	6187	6213	6315	6819
4	6288	6205	6241	6351	6712
5	6236	6161	6190	6348	6575
6	6209	6137	6157	6294	6526
7	6176	6117	6139	6218	6585
8	6193	6135	6166	6233	6495
9	6105	6059	6124	6212	6458
10	6039	5998	6032	6280	6469
11	5996	5963	5975	6015	6568
12	5950	5927	5927	5964	5668
13	5978	5963	5972	6004	
14	5777	5744	5793		
15	5745	5735	5800		

RISERS LENGHT mm

	A	B	C	D	
	500	500	500	500	STANDARD
	500	560	620	713	TRIMMER OPENED
	370	435	500	598	ACCELERATED
	370	495	620	778	TRIMMERS OPENES + ACCELERATED

## KOUGAR 3 - 25

LINES HEIGHT mm

	A	B	C	D	BR
1	6701	6608	6646	6759	7738
2	6666	6574	6601	6706	7368
3	6634	6545	6572	6680	7222
4	6652	6565	6602	6719	7111
5	6600	6521	6552	6719	6968
6	6572	6496	6517	6662	6918
7	6538	6476	6500	6583	6981
8	6558	6496	6529	6599	6886
9	6466	6417	6486	6579	6847
10	6397	6354	6389	6651	6859
11	6352	6317	6330	6372	6963
12	6304	6280	6279	6318	6006
13	6334	6318	6327	6361	
14	6122	6087	6139		
15	6088	6078	6146		

RISERS LENGHT mm

	A	B	C	D	
	500	500	500	500	STANDARD
	500	560	620	713	TRIMMER OPENED
	370	435	500	598	ACCELERATED
	370	495	620	778	TRIMMERS OPENES + ACCELERATED

## KOUGAR 3 - 28

LINES HEIGHT mm

	A	B	C	D	BR
1	7114	7016	7055	7175	8174
2	7077	6980	7009	7120	7785
3	7046	6952	6981	7095	7632
4	7066	6974	7013	7137	7518
5	7014	6930	6963	7140	7367
6	6985	6904	6927	7080	7316
7	6951	6885	6910	6997	7384
8	6972	6906	6941	7014	7282
9	6876	6824	6898	6995	7240
10	6803	6758	6796	7072	7252
11	6756	6719	6733	6777	7362
12	6706	6680	6680	6721	6393
13	6738	6720	6731	6766	
14	6513	6477	6531		
15	6477	6466	6538		

RISERS LENGHT mm

	A	B	C	D	
	500	500	500	500	STANDARD
	500	560	620	713	TRIMMER OPENED
	370	435	500	598	ACCELERATED
	370	495	620	778	TRIMMERS OPENES + ACCELERATED

## SUSPENSION LINES – MINIMUM STRENGTH

LINE REFERENCE	SIZE					
	16	18	20	23	25	28
<b>8001U-50</b>	18	20	22	25	27	30
<b>8001U-70</b>	20	22	25	28	31	35
<b>8001U-90</b>	34	38	42	47	53	58
<b>8001U-130</b>	40	45	49	56	62	69
<b>8001U-190</b>	70	79	87	99	110	121
<b>8001U-230</b>	82	92	101	114	128	141
<b>8001U-340</b>	129	144	160	181	201	222

Minimum resistance values in daN

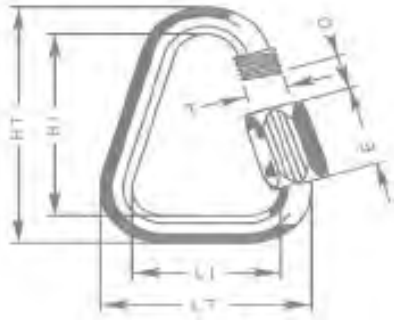
Based on the original experimental resistance values of each suspension line material obtained in certification tests, a correction factor is applied depending on the material and its aging, resulting in the reference values shown in the table.

## MAILLON & PULLEY

### DESCRIPTION

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

### TECHNICAL SPECIFICATIONS



DIMENSIONS	mm
L.T.	28
L.I.	20
H.T.	38
H.I.	30
O	4
E	11
T	4
LOAD	KG
WORKING LIMIT	150
BREAKING	750

### MATERIAL

AISI 304 STAINLESS STEEL STANDARD

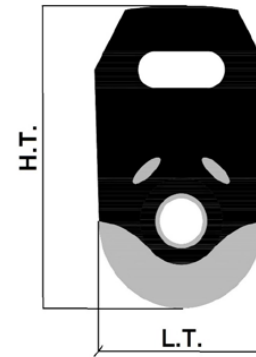
CLOSING APPLIED BY MANUAL & ENTIRE SCREWING OF THE NUT  
TO GUARANTEE THE HIGHEST SAFETY (NO THREAD SHOULD BE OBVIOUS)

SYSTEMATIC CONTROL OF MAILLON QUICK-LINKS BEFORE EVERY FLIGHT

### DESCRIPTION

MAILLON	20 MM
CODE	ID018041
MATERIAL	STAINLESS STEEL
SIZE	NYLON
WEIGHT	CARBON ACETAL
QUANTITY	DELRIN®
INSERTS	14 G/PIECE

### TECHNICAL SPECIFICATIONS



DIMENSIONS	mm
L.T.	20
H.T.	33
Ø	5 MAX
LOAD	KG
WORKING LIMIT	200
BREAKING	400



## Niviuk Paragliders

C/ Del Ter 6 - nave D

17165 La Cellera de Ter - Girona - Spain

+34 972 422 878 | [info@niviuk.com](mailto:info@niviuk.com)

[niviuk.com](http://niviuk.com)