

TECHNICAL SPECIFICATIONS

F-GRAVITY 2



DATOS TÉCNICOS

FREE-GRAVITY 2			20	22	24
CELLS	NUMBER		50	50	50
	CLOSED		8	8	8
	BOX		25	25	25
FLAT	AREA	M2	20	22	24
	SPAM	M	10,3	10,8	11,28
	ASPECT RATIO		5,3	5,3	5,3
PROJECTED	AREA	M2	17,44	19,18	20,92
	SPAM		8,56	8,97	9,37
	ASPECT RATIO		4,2	4,2	4,2
FLATTENING		%	14	14	14
CORD	MAXIMUM	M	2,36	2,48	2,59
	MINIMUM	M	0,52	0,55	0,57
	AVERAGE		1,94	2,03	2,12
LINES	TOTAL METERS	M	317	333	362
	HEIGHT	M	7,36	7,72	8,06
	NUMBER		190	190	190
RISERS	MAIN		3/3/4/3	3/3/4/3	3/3/4/3
	NUMBER	4	A/B/C/E	A/B/C/E	A/B/C/E
	TRIMS		NO	NO	NO
	ACCELERATOR	m/m	150	150	150
TOTAL WEIGHT	MINIMUM	KG	70	90	110
IN FLIGHT	MAXIMUM	KG	90	110	130
GLIDER WEIGHT		KG	5,5	5,8	6,1
CERTIFICATION		EN	926-1	926-1	926-1

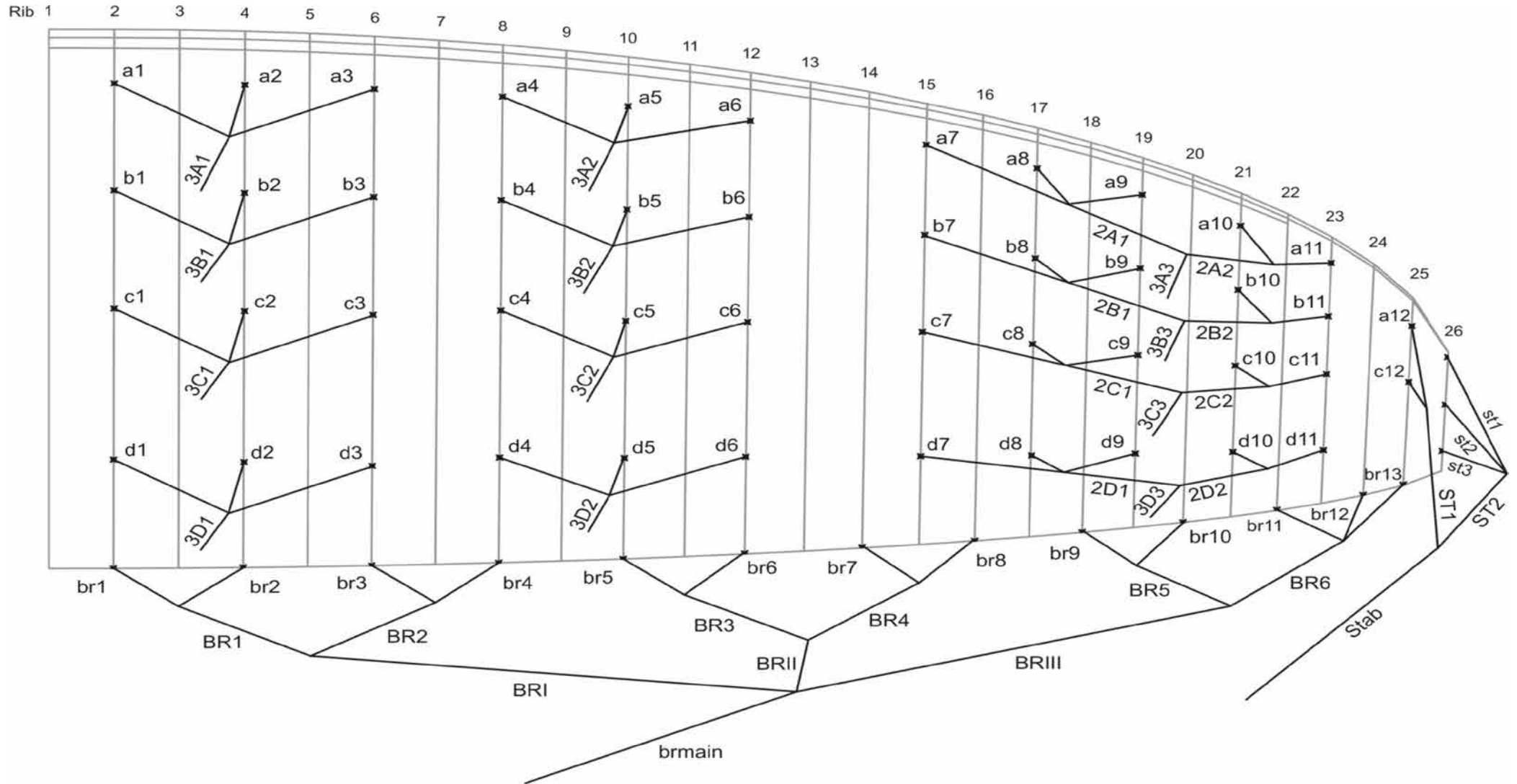
MATERIALS TECHNICAL DATA

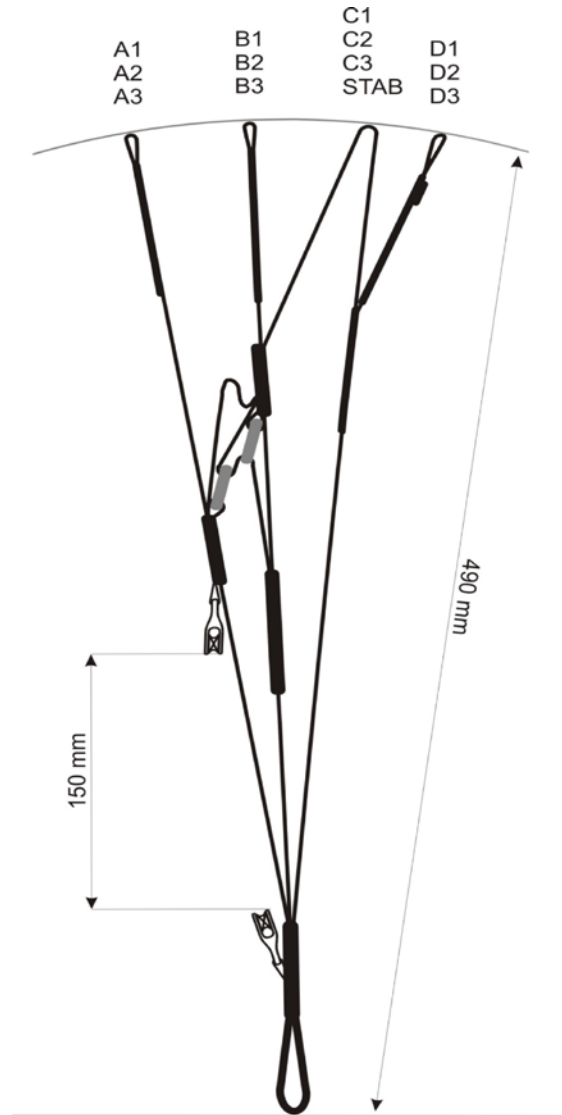
CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	N30DMF	DOMINICO TEX CO (KOREA)
BOTTOM SURFACE	N30DMF	DOMINICO TEX CO (KOREA)
PROFILES	30DFM	DOMINICO TEX CO (KOREA)
DIAGONALS	30DFM	DOMINICO TEX CO (KOREA)
LOOPS	LKI - 10	KOLON IND. (KOREA)
REINFORCEMENT LOOPS	W-420	D-P (GERMANY)
TRAILING EDGE REINFORCEMENT	MYLAR	D-P (GERMANY)
REINFORCEMENT RIBS	NYLON STICK	R.P.CHINA
THREAD	SERAFIL 60	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	TNL - 080	TEIJIM LIMITED (JAPAN)
UPPER CASCADES	TNL - 140	TEIJIM LIMITED (JAPAN)
MIDDLE CASCADES	TNL - 080	TEIJIM LIMITED (JAPAN)
MIDDLE CASCADES	TNL - 140	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 080	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 220	TEIJIM LIMITED (JAPAN)
MAIN	TNL - 280	TEIJIM LIMITED (JAPAN)
MAIN BREAK	TNL - 400	TEIJIM LIMITED (JAPAN)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	G-R 22	TECNI SANGLES (FRANCE)
COLOR INDICATOR	PAD	TECNI SANGLES (FRANCE)
THREAD	V138	COATS (ENGLAND)
MAILLONS	MRI4	ANSUNG PRECISION (KOREA)
PULLEYS	PY - 1304-2	ANSUNG PRECISION (KOREA)

SUSPENSION PLAN





COLORS TECHNICAL DATA

JAMAICA	1	BLACK	MAIN TOP	REF: 102
	2	LIMA	HORNS	REF: NK375
	3	SUNFLOWER	SHADOW	REF: 921
	4	BLACK	MAIN BOTTOM	REF: 102
	5	SUNFLOWER	VOLUME SHADOW	REF: 921



LIMA	1	LIMA	MAIN TOP	REF: NK375
	2	GREY BLUE	HORNS	REF: NK5405
	3	WHITE	SHADOW	REF: 001
	4	LIMA	MAIN BOTTOM	REF: NK375
	5	WHITE	VOLUME SHADOW	REF: 001



WING LOAD TECHNICAL DATA

FREE-GRAVITY 2	20		22		24	
	P.T.V.	KG/M2	P.T.V.	KG/M2	P.T.V.	KG/M2
	70	= 3,50	90	= 4,09	110	= 4,58
	71	= 3,55	91	= 4,14	111	= 4,63
	72	= 3,60	92	= 4,18	112	= 4,67
	73	= 3,65	93	= 4,23	113	= 4,71
	74	= 3,70	94	= 4,27	114	= 4,75
	75	= 3,75	95	= 4,32	115	= 4,79
	76	= 3,80	96	= 4,36	116	= 4,83
	77	= 3,85	97	= 4,41	117	= 4,88
	78	= 3,90	98	= 4,45	118	= 4,92
	79	= 3,95	99	= 4,50	119	= 4,96
	80	= 4,00	100	= 4,55	120	= 5,00
	81	= 4,05	101	= 4,59	121	= 5,04
	82	= 4,10	102	= 4,64	122	= 5,08
	83	= 4,15	103	= 4,68	123	= 5,13
	84	= 4,20	104	= 4,73	124	= 5,17
	85	= 4,25	105	= 4,77	125	= 5,21
	86	= 4,30	106	= 4,82	126	= 5,25
	87	= 4,35	107	= 4,86	127	= 5,29
	88	= 4,40	108	= 4,91	128	= 5,33
	89	= 4,45	109	= 4,95	129	= 5,38
	90	= 4,50	110	= 5,00	130	= 5,42

LINES TECHNICAL DATA

FREE-GRAVITY 2

20

REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m
A			B			C			D			BRAKE		
a1	TNL-140-green	1.836	b1	TNL-140-blue	1.818	c1	TNL-080-blue	1.577	d1	TNL-080-blue	1.415	br1	TNL-080-red	897
a2	TNL-140-green	1.761	b2	TNL-140-blue	1.743	c2	TNL-080-blue	1.492	d2	TNL-080-blue	1.320	br2	TNL-080-red	632
a3	TNL-140-green	1.767	b3	TNL-140-blue	1.751	c3	TNL-080-blue	1.510	d3	TNL-080-blue	1.348	br3	TNL-080-red	814
a4	TNL-140-green	1.765	b4	TNL-140-blue	1.746	c4	TNL-080-blue	1.518	d4	TNL-080-blue	1.367	br4	TNL-080-red	786
a5	TNL-140-green	1.668	b5	TNL-140-blue	1.652	c5	TNL-080-blue	1.414	d5	TNL-080-blue	1.250	br5	TNL-080-red	792
a6	TNL-140-green	1.654	b6	TNL-140-blue	1.642	c6	TNL-080-blue	1.412	d6	TNL-080-blue	1.253	br6	TNL-080-red	658
a7	TNL-140-green	1.555	b7	TNL-080-blue	1.534	c7	TNL-080-blue	1.340	d7	TNL-080-blue	1.213	br7	TNL-080-red	679
a8	TNL-080-green	1.438	b8	TNL-080-blue	1.425	c8	TNL-080-blue	1.210	d8	TNL-080-blue	1.065	br8	TNL-080-red	708
a9	TNL-080-green	1.398	b9	TNL-080-blue	1.390	c9	TNL-080-blue	1.169	d9	TNL-080-blue	1.021	br9	TNL-080-red	578
a10	TNL-080-green	764	b10	TNL-080-blue	755	c10	TNL-080-blue	526	d10	TNL-080-blue	458	br10	TNL-080-red	492
a11	TNL-080-green	758	b11	TNL-080-blue	749	c11	TNL-080-blue	558	d11	TNL-080-blue	497	br11	TNL-080-red	546
a12	TNL-080-green	830				c12	TNL-080-blue	835	st3	TNL-080-red	1.279	br12	TNL-080-red	514
st1	TNL-080-red	1.224				st2	TNL-080-red	1.234				br13	TNL-080-red	548
2A1	TNL-140-green	775	2B1	TNL-140-blue	762	2C1	TNL-140-blue	374	2D1	TNL-140-blue	353	BR1	TNL-080-red	1.258
2A2	TNL-140-green	1.354	2B2	TNL-140-blue	1.347	2C2	TNL-140-blue	996	2D2	TNL-140-blue	894	BR2	TNL-080-red	898
						ST1	TNL-080-red	823				BR3	TNL-080-red	1.017
						ST2	TNL-080-red	395				BR4	TNL-080-red	946
												BR5	TNL-080-red	964
												BR6	TNL-080-red	850
3A1	TNL-280-green	4.971	3B1	TNL-280-blue	4.926	3C1	TNL-280-blue	5.212	3D1	TNL-220-blue	5.506	BRI	TNL-140-red	3.615
3A2	TNL-280-green	4.924	3B2	TNL-280-blue	4.885	3C2	TNL-280-blue	5.156	3D2	TNL-220-blue	5.435	BRII	TNL-140-red	3.361
3A3	TNL-280-green	4.176	3B3	TNL-280-blue	4.165	3C3	TNL-220-blue	4.798	3D3	TNL-280-blue	5.059	BRIII	TNL-140-red	3.403
						stab	TNL-080-red	4.352				brmain	TNL-400-red	1.915
													Point a:	1.715

LINES TECHNICAL DATA

FREE-GRAVITY 2

22

REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m
A			B			C			D			BRAKE		
a1	TNL-140-green	1.925	b1	TNL-140-blue	1.906	c1	TNL-080-blue	1.654	d1	TNL-080-blue	1.483	br1	TNL-080-red	940
a2	TNL-140-green	1.847	b2	TNL-140-blue	1.828	c2	TNL-080-blue	1.565	d2	TNL-080-blue	1.385	br2	TNL-080-red	663
a3	TNL-140-green	1.854	b3	TNL-140-blue	1.837	c3	TNL-080-blue	1.585	d3	TNL-080-blue	1.415	br3	TNL-080-red	853
a4	TNL-140-green	1.851	b4	TNL-140-blue	1.831	c4	TNL-080-blue	1.592	d4	TNL-080-blue	1.433	br4	TNL-080-red	825
a5	TNL-140-green	1.750	b5	TNL-140-blue	1.733	c5	TNL-080-blue	1.483	d5	TNL-080-blue	1.311	br5	TNL-080-red	831
a6	TNL-140-green	1.736	b6	TNL-140-blue	1.723	c6	TNL-080-blue	1.481	d6	TNL-080-blue	1.315	br6	TNL-080-red	691
a7	TNL-140-green	1.631	b7	TNL-080-blue	1.609	c7	TNL-080-blue	1.405	d7	TNL-080-blue	1.272	br7	TNL-080-red	712
a8	TNL-080-green	1.509	b8	TNL-080-blue	1.495	c8	TNL-080-blue	1.269	d8	TNL-080-blue	1.117	br8	TNL-080-red	743
a9	TNL-080-green	1.466	b9	TNL-080-blue	1.458	c9	TNL-080-blue	1.227	d9	TNL-080-blue	1.071	br9	TNL-080-red	606
a10	TNL-080-green	801	b10	TNL-080-blue	791	c10	TNL-080-blue	552	d10	TNL-080-blue	480	br10	TNL-080-red	517
a11	TNL-080-green	795	b11	TNL-080-blue	786	c11	TNL-080-blue	585	d11	TNL-080-blue	521	br11	TNL-080-red	572
a12	TNL-080-green	870				c12	TNL-080-blue	876	st3	TNL-080-red	1.341	br12	TNL-080-red	539
st1	TNL-080-red					st2	TNL-080-red					br13	TNL-080-red	575
2A1	TNL-140-green	813	2B1	TNL-140-blue	799	2C1	TNL-140-blue	392	2D1	TNL-140-blue	370	BR1	TNL-080-red	1.319
2A2	TNL-140-green	1.420	2B2	TNL-140-blue	1.414	2C2	TNL-140-blue	1.046	2D2	TNL-140-blue	938	BR2	TNL-080-red	944
						ST1	TNL-080-red	863				BR3	TNL-080-red	1.067
						ST2	TNL-080-red	415				BR4	TNL-080-red	993
												BR5	TNL-080-red	1.010
												BR6	TNL-080-red	892
3A1	TNL-280-green	5.238	3B1	TNL-280-blue	5.191	3C1	TNL-280-blue	5.491	3D1	TNL-220-blue	5.799	BRI	TNL-140-red	3.789
3A2	TNL-280-green	5.191	3B2	TNL-280-blue	5.150	3C2	TNL-280-blue	5.434	3D2	TNL-220-blue	5.727	BRII	TNL-140-red	3.526
3A3	TNL-280-green	4.397	3B3	TNL-280-blue	4.391	3C3	TNL-280-blue	5.062	3D3	TNL-280-blue	5.335	BRIII	TNL-140-red	3.574
						stab	TNL-080-red	4.595				brmain	TNL-400-red	2.025
													Point a:	1.825

LINES TECHNICAL DATA

FREE-GRAVITY 2

24

REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m	REF.	CODE	m/m
A			B			C			D			BRAKE		
a1	TNL-140-green	2.009	b1	TNL-140-blue	1.990	c1	TNL-080-blue	1.726	d1	TNL-080-blue	1.548	br1	TNL-080-red	981
a2	TNL-140-green	1.929	b2	TNL-140-blue	1.910	c2	TNL-080-blue	1.635	d2	TNL-080-blue	1.447	br2	TNL-080-red	693
a3	TNL-140-green	1.938	b3	TNL-140-blue	1.920	c3	TNL-080-blue	1.657	d3	TNL-080-blue	1.479	br3	TNL-080-red	890
a4	TNL-140-green	1.933	b4	TNL-140-blue	1.912	c4	TNL-080-blue	1.662	d4	TNL-080-blue	1.496	br4	TNL-080-red	862
a5	TNL-140-green	1.828	b5	TNL-140-blue	1.811	c5	TNL-080-blue	1.549	d5	TNL-080-blue	1.369	br5	TNL-080-red	868
a6	TNL-140-green	1.814	b6	TNL-140-blue	1.800	c6	TNL-080-blue	1.548	d6	TNL-080-blue	1.374	br6	TNL-080-red	722
a7	TNL-140-green	1.703	b7	TNL-080-blue	1.680	c7	TNL-080-blue	1.468	d7	TNL-080-blue	1.329	br7	TNL-080-red	743
a8	TNL-080-green	1.576	b8	TNL-080-blue	1.561	c8	TNL-080-blue	1.326	d8	TNL-080-blue	1.167	br8	TNL-080-red	776
a9	TNL-080-green	1.532	b9	TNL-080-blue	1.524	c9	TNL-080-blue	1.282	d9	TNL-080-blue	1.119	br9	TNL-080-red	633
a10	TNL-080-green	837	b10	TNL-080-blue	826	c10	TNL-080-blue	576	d10	TNL-080-blue	501	br10	TNL-080-red	540
a11	TNL-080-green	831	b11	TNL-080-blue	821	c11	TNL-080-blue	611	d11	TNL-080-blue	545	br11	TNL-080-red	597
a12	TNL-080-green	909				c12	TNL-080-blue	915	st3	TNL-080-red		br12	TNL-080-red	563
st1	TNL-080-red	1.340				st2	TNL-080-red	1.352				br13	TNL-080-red	601
2A1	TNL-140-green	849	2B1	TNL-140-blue	834	2C1	TNL-140-blue	409	2D1	TNL-140-blue	386	BR1	TNL-080-red	1.377
2A2	TNL-140-green	1.484	2B2	TNL-140-blue	1.477	2C2	TNL-140-blue	1.092	2D2	TNL-140-blue	980	BR2	TNL-080-red	988
						ST1	TNL-080-red	902				BR3	TNL-080-red	1.114
						ST2	TNL-080-red	434				BR4	TNL-080-red	1.039
												BR5	TNL-080-red	1.053
												BR6	TNL-080-red	931
3A1	TNL-280-green	5.493	3B1	TNL-280-blue	5.444	3C1	TNL-280-blue	5.757	3D1	TNL-220-blue	6.079	BRI	TNL-140-red	3.955
3A2	TNL-280-green	5.447	3B2	TNL-280-blue	5.404	3C2	TNL-280-blue	5.701	3D2	TNL-220-blue	6.007	BRII	TNL-140-red	3.685
3A3	TNL-280-green	4.620	3B3	TNL-280-blue	4.614	3C3	TNL-220-blue	5.314	3D3	TNL-280-blue	5.599	BRIII	TNL-140-red	3.737
						stab	TNL-080-red	4.828				brmain	TNL-400-red	2.130
													Point a:	1.930

NIVIUK FREE-GRAVITY 2 20

LINES HEIGHT m/m					
	A	B	C	D	br
1	6812	6749	6794	6926	7465
2	6737	6674	6709	6831	7200
3	6743	6682	6727	6859	7022
4	6694	6636	6679	6807	6994
5	6597	6542	6575	6690	6865
6	6583	6532	6573	6693	6731
7	6511	6466	6517	6630	6681
8	6394	6357	6387	6482	6710
9	6354	6322	6346	6438	6640
10	6299	6272	6325	6416	6554
11	6293	6266	6357	6455	6494
12	6010		6015		6462
13	5970		5980	6026	6496

RISERS LENGHT m/m					
	A	B	C	D	
	490	490	490	490	STANDARD
	340	380	430	490	ACCELERATED

NIVIUK FREE-GRAVITY 2 22

LINES HEIGHT m/m					
	A	B	C	D	br
1	7170	7100	7153	7290	7870
2	7086	7018	7062	7187	7590
3	7100	7030	7081	7220	7410
4	7045	6980	7031	7160	7380
5	6950	6880	6923	7044	7250
6	6935	6870	6920	7449	7110
7	9850	6800	6857	6986	7063
8	6727	6685	6720	6834	7090
9	6686	6650	6681	6785	7020
10	6631	6597	6662	6760	6930
11	6222	6590	6685	6795	6865
12	6335		6344		6835
13	6305		6310	6355	6868

RISERS LENGHT m/m					
	A	B	C	D	
	490	490	490	490	STANDARD
	340	380	430	490	ACCELERATED

LINES HEIGHT m/m

	A	B	C	D	br
1	7507	7439	7488	7632	8243
2	7427	7355	7397	7525	7955
3	7436	7369	7419	7558	7763
4	7385	7321	7368	7508	7735
5	7280	7220	7255	7375	7597
6	7266	7209	7254	7386	7451
7	7177	7129	7190	7319	7397
8	7050	7010	7054	7157	7430
9	7006	6970	7010	7109	7353
10	6946	6918	6983	7085	7260
11	6940	6910	7022	7129	7195
12	6644		6650		7161
13	6607		6619	6668	7199

RISERS LENGHT m/m

	A	B	C	D	
	490	490	490	490	STANDARD
	340	380	430	490	ACCELERATED

SUSPENSION TECHNICAL

FREE-GRAVITY 2

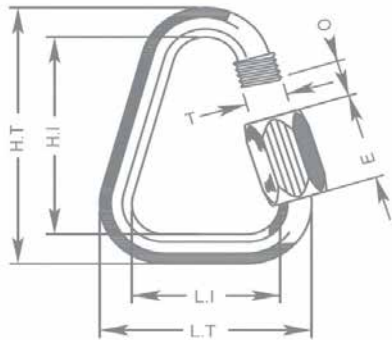
MATERIAL CODE		TNL	TNL	TNL	TNL	TNL
STRENGTH CODE		080	140	220	280	400
DIAMETER m/m	∅	1,1	1,4	1,6	1,8	2,3
CORE MATERIAL		Technora	Technora	Technora	Technora	Technora
SLEEVE MATERIAL		Polyester	Polyester	Polyester	Polyester	Polyester
WEIGHT G/M	TOTAL	1,1	1,96	2,35	2,7	4
BREAKING STRENGTH	MINIMUM	80	140	220	280	460
	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
	10 daN en %	0,5	0,3	0,3	0,3	0,1
	15 daN en %	0,7	0,5	0,5	0,4	0,2
	20 daN en %	1	0,6	0,6	0,4	0,2
	25 daN en %	1,3	0,8	0,7	0,5	0,3
	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
	100 daN en %		2,7	2,2	1,7	1,1
	125 daN en %		3,2	2,7	2	1,4
	150 daN en %			3	2,3	1,7
	175 daN en %			3,3	2,7	2
	200 daN en %			3,8	2,8	2,2
ELONGATION MAX. BREAKING STRENGTH %		3	3,4	4	4,1	4,6

MAILLON & PULLEY TECHNICAL DATA

DESCRIPTION

MAILLON	DELTA
CODE	MRI4
MATERIAL	STAINLESS STEEL
SIZE	4,3 m/m
WEIGHT	12 G/PIECE

TECHNICAL SPECIFICATIONS



DIMENSIONS	m/m
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

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 TECHNICAL DATA

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%

SERAFIL PROPERTIES

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 TECHNICAL DATA**RISERS**

N° OF REFERENCE	G-R 22
MATERIAL	POLYESTER
WIDTH	22 M/M
THICKNESS	1,52 M/M
BREAKING STRENGTH	1,100DAN
ELONGATION	MAX. 15%
WEIGHT	25 G* L.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

