

TECHNICAL SPECIFICATIONS



F-GRAVITY

TECHNICAL DATA

F-GRAVITY			20	22
CELLS	NUMBER		59	59
	CLOSED		12	12
	BOX		21	21
FLAT	AREA	M2	20	22
	SPAN	M	10,4	10,9
	ASPECT RATIO		5,4	5,4
PROJECTED	AREA	M2	17,38	18,85
	SPAN	M	8,53	8,94
	ASPECT RATIO		4,18	4,18
FLATTENING		%	14	14
CORD	MAXIMUM	M	2,25	2,45
	MINIMUM	M	0,37	0,4
	AVERAGE		1,92	2,01
LINES	TOTAL METERS	M	354	371
	HEIGHT	M	6,9	7,3
	NUMBER		202	202
	MAIN		3/4/3/3	3/4/3/3
RISERS	NUMBER	4	A/B/C/D	A/B/C/D
	TRIMS		NO	NO
TOTAL WEIGHT	MINIMUM	KG	60	80
IN FLIGHT	MAXIMUM	KG	90	110
GLIDER WEIGHT		KG	4,3	4,6
CERTIFICATION			EN-926-1	EN-926-1

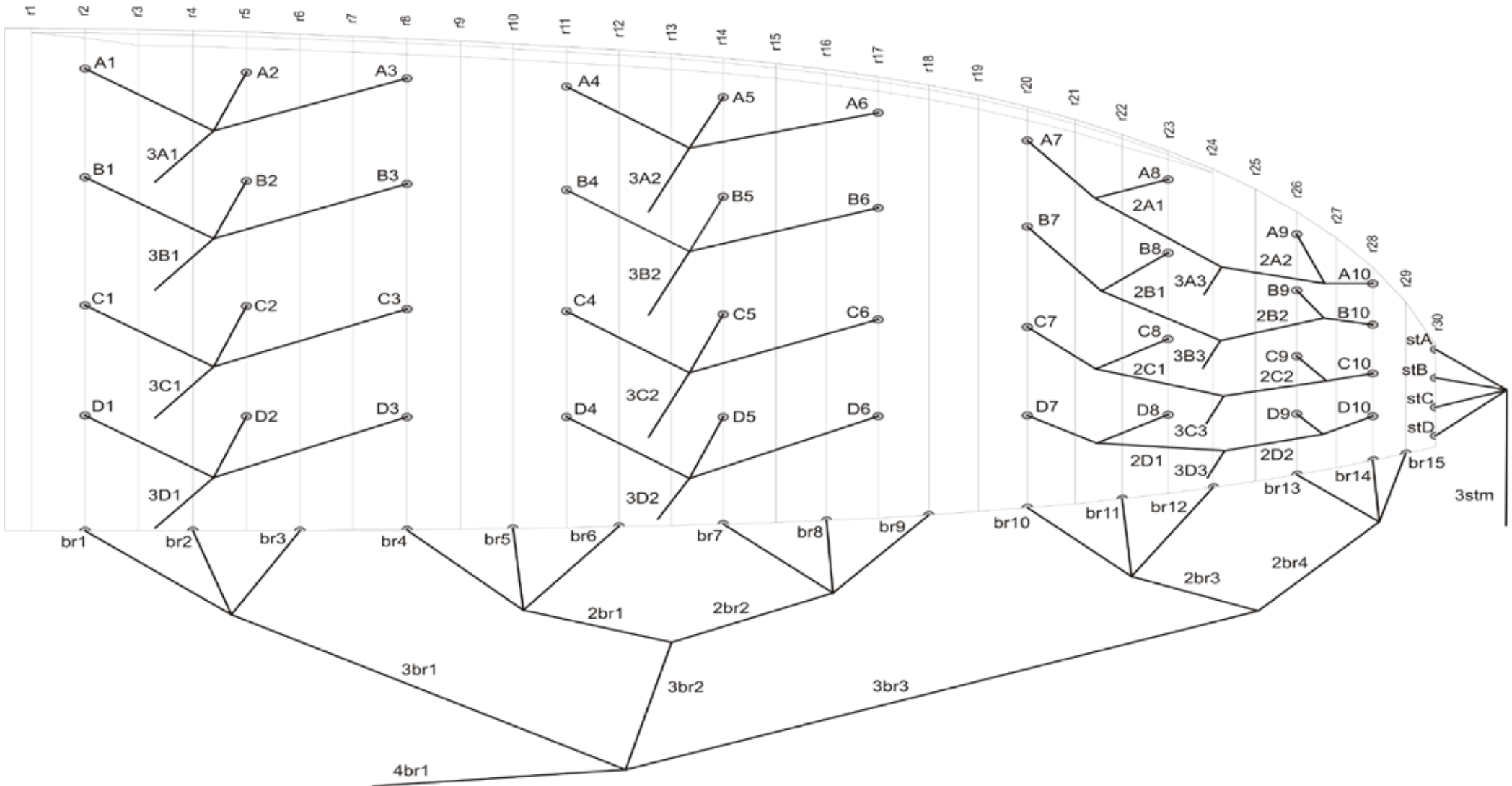
MATERIALS DESCRIPTION

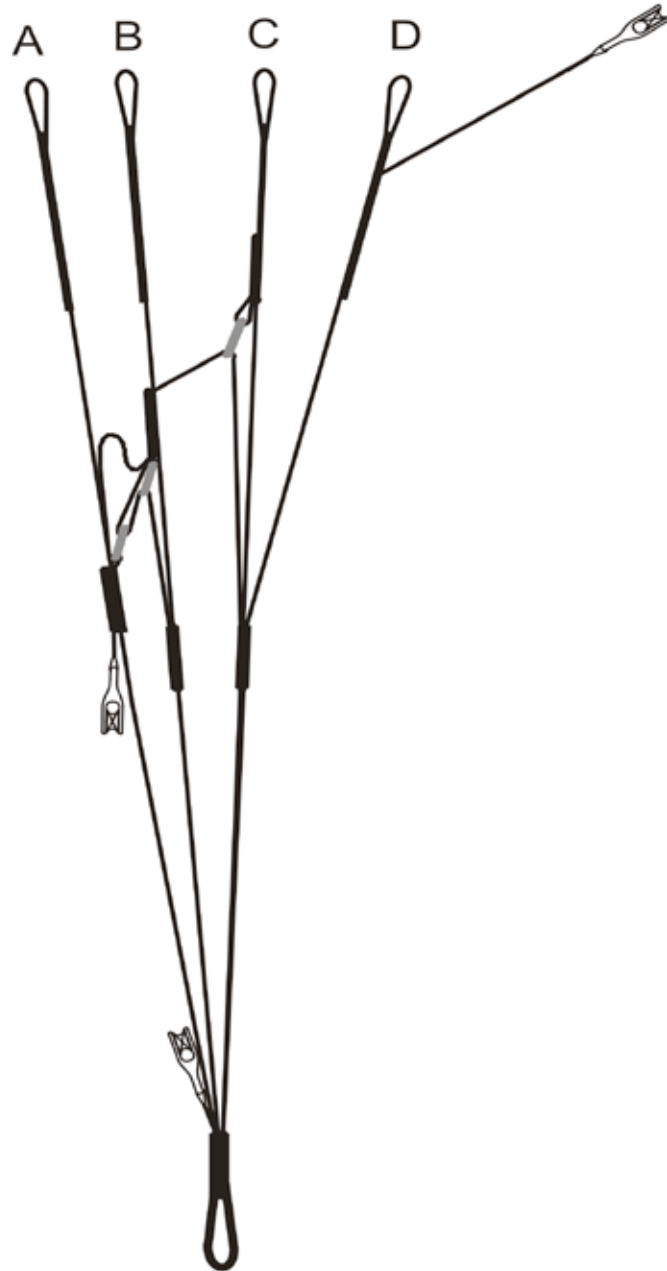
CANOPY	FABRIC CODE	SUPPLIER
UPPER SURFACE	SKYTEX 40 9017 E77A	NCV (FRANCE)
BOTTOM SURFACE	SKYTEX 40 9017 E38A	NCV (FRANCE)
PROFILES	SKYTEX 40 9092 E29A	NCV (FRANCE)
DIAGONALS	SKYTEX 40 9092 E29A	NCV (FRANCE)
LOOPS	LKI - 13 / LKI - 10	KOLON INDUSTRIAL (KOREA)
REINFORCEMENT LOOPS	W-420	D-P (GERMANY)
TRAILING EDGE REINFORCEMENT	MYLAR 25 M/M	D-P (GERMANY)
RIBS REINFORCEMENTS	W-420	D-P (GERMANY)
THREAD	SERAFIL 40	AMAN (GERMANY)

SUSPENSION LINES	FABRIC CODE	SUPPLIER
UPPER CASCADES	DSL - 070	LIROS (GERMANY)
MIDDLE CASCADES	TNL - 080	TEIJIN LIMITED (JAPAN)
MIDDLE CASCADES	TNL - 140	TEIJIN LIMITED (JAPAN)
MAIN	TNL - 140	TEIJIN LIMITED (JAPAN)
MAIN	TNL - 220	TEIJIN LIMITED (JAPAN)
MAIN	TNL - 280	TEIJIN LIMITED (JAPAN)
MAIN BREAK	TNL - 400	TEIJIN LIMITED (JAPAN)
THREAD	SERAFIL 60	AMAN (GERMANY)

RISERS	FABRIC CODE	SUPPLIER
MATERIAL	G-R 25	TECHNI SANGLES (FRANCE)
COLOR INDICATOR	PAD	TECHNI SANGLES (FRANCE)
THREAD	N/F-66	YOUNG CHANG T&C LTD
MAILLONS	MRI4	ANSUNG PRECISION (KOREA)
PULLEYS	PY-1304 - 2	ANSUNG PRECISION (KOREA)

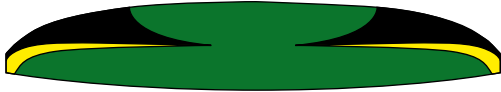
SUSPENSION PLAN



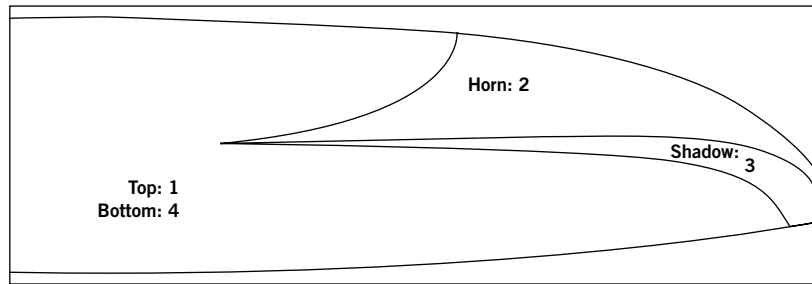


COLORS TECHNICAL DATA

RASTA	1	GREEN	TOP COLOR	REF: 551
	4	GREEN	BOTTOM COLOR	REF: 551
	2	BLACK	HORN	REF: 120
	3	SUNFLOWER	SHADOW	REF: 921



SPIDER	1	DRAGON RED	TOP COLOR	REF: 636
	4	DRAGON RED	BOTTOM COLOR	REF: 636
	2	DEEP BLUE	HORN	REF: 354
	3	GREY	SHADOW	REF: 120



WING LOAD TECHNICAL DATA

F-GRAVITY		22	20	
P.T.V.		KG/M2	P.T.V.	KG/M2
110	=	5	90	= 4,50
109	=	4,95	89	= 4,45
108	=	4,91	88	= 4,40
107	=	4,86	87	= 4,35
106	=	4,82	86	= 4,30
105	=	4,77	85	= 4,25
104	=	4,73	84	= 4,20
103	=	4,68	83	= 4,15
102	=	4,64	82	= 4,10
101	=	4,59	81	= 4,05
100	=	4,55	80	= 4
99	=	4,50	79	= 3,95
98	=	4,45	78	= 3,90
97	=	4,41	77	= 3,85
96	=	4,36	76	= 3,80
95	=	4,32	75	= 3,75
94	=	4,27	74	= 3,70
93	=	4,23	73	= 3,65
92	=	4,18	72	= 3,60
91	=	4,14	71	= 3,55
90	=	4,09	70	= 3,50
			69	= 3,45
			68	= 3,40
			67	= 3,35
			66	= 3,30
			65	= 3,25
			64	= 3,20
			63	= 3,15
			62	= 3,10
			61	= 3,05
			60	= 3

LINES TECHNICAL DATA

F-GRAVITY 20

REF.	CODE	CM.	REF.	CODE	CM.	REF.	CODE	CM.	REF.	CODE	CM.	REF.	CODE	CM.
A			B			C			D			BRAKE		
A1	DSL-070-30	256	B1	DSL-070-34	253,5	C1	DSL-070-34	255,5	D1	DSL-070-34	211,5	BR1	DSL-070-35	172,5
A2	DSL-070-30	249	B2	DSL-070-34	246,5	C2	DSL-070-34	248,5	D2	DSL-070-34	203	BR2	DSL-070-35	159
A3	DSL-070-30	249	B3	DSL-070-34	246,5	C3	DSL-070-34	249	D3	DSL-070-34	205	BR3	DSL-070-35	147,5
A4	DSL-070-30	251	B4	DSL-070-34	248	C4	DSL-070-34	249	D4	DSL-070-34	206,5	BR4	DSL-070-35	163
A5	DSL-070-30	242	B5	DSL-070-34	239,5	C5	DSL-070-34	240,5	D5	DSL-070-34	196	BR5	DSL-070-35	149,5
A6	DSL-070-30	241	B6	DSL-070-34	239	C6	DSL-070-34	240	D6	DSL-070-34	197	BR6	DSL-070-35	142,5
A7	DSL-070-30	119	B7	DSL-070-34	113,5	C7	DSL-070-34	111,5	D7	DSL-070-34	113	BR7	DSL-070-35	152
A8	DSL-070-30	107	B8	DSL-070-34	102	C8	DSL-070-34	100	D8	DSL-070-34	99,5	BR8	DSL-070-35	148
A9	DSL-070-30	78,5	B9	DSL-070-34	69	C9	DSL-070-34	62	D9	DSL-070-34	60,5	BR9	DSL-070-35	150,5
A10	DSL-070-30	76	B10	DSL-070-34	67	C10	DSL-070-34	58,5	D10	DSL-070-34	55	BR10	DSL-070-35	130,5
STA	DSL-070-35	110,5	STB	DSL-070-35	107,5	STC	DSL-070-35	106	STD	DSL-070-35	107	BR11	DSL-070-35	122,5
												BR12	DSL-070-35	119
												BR13	DSL-070-35	73,5
												BR14	DSL-070-35	67,5
												BR15	DSL-070-35	67
2A1	TNL-140-30	136,5	2B1	TNL-140-34	123,5	2C1	TNL-080-34	116	2D1	TNL-080-34	115	2 BR1	TNL-080-35	148,5
2A2	TNL-140-30	151,5	2B2	TNL-140-34	145,5	2C2	TNL-080-34	141,5	2D2	TNL-080-34	139,5	2 BR2	TNL-080-35	132
												2 BR3	TNL-080-35	95,5
												2 BR4	TNL-080-35	136
3 A1	TNL-280-30	429,5	3 B1	TNL-280-30	424	3 C1	TNL-280-30	428	3 D1	TNL-220-34	485,5	3 BR1	TNL-140-35	327,5
3 A2	TNL-280-30	424	3 B2	TNL-280-30	419,5	3 C2	TNL-220-30	423,5	3 D2	TNL-140-34	478,5	3 BR2	TNL-140-35	154,5
3 A3	TNL-220-30	401,5	3 B3	TNL-220-30	414,5	3 C3	TNL-140-30	428	3 D3	TNL-140-34	436,5	3 BR3	TNL-140-35	204
			3STM	TNL-140-35	497							4 BR1	TNL-400-35	277
												POINT AT:		257

LINES TECHNICAL DATA

F-GRAVITY 22

REF.	CODE	CM.	REF.	CODE	CM.	REF.	CODE	CM.	REF.	CODE	CM.	REF.	CODE	CM.
A			B			C			D			BRAKE		
A1	DSL-070-30	268,5	B1	DSL-070-34	266	C1	DSL-070-34	268	D1	DSL-070-34	222	BR1	DSL-070-35	181
A2	DSL-070-30	261	B2	DSL-070-34	258,5	C2	DSL-070-34	260,5	D2	DSL-070-34	213	BR2	DSL-070-35	166
A3	DSL-070-30	261	B3	DSL-070-34	258,5	C3	DSL-070-34	261	D3	DSL-070-34	215	BR3	DSL-070-35	154,5
A4	DSL-070-30	263,5	B4	DSL-070-34	260	C4	DSL-070-34	261,5	D4	DSL-070-34	216,5	BR4	DSL-070-35	171
A5	DSL-070-30	254	B5	DSL-070-34	251,5	C5	DSL-070-34	252,5	D5	DSL-070-34	206	BR5	DSL-070-35	156,5
A6	DSL-070-30	252,5	B6	DSL-070-34	250,5	C6	DSL-070-34	252	D6	DSL-070-34	206,5	BR6	DSL-070-35	149,5
A7	DSL-070-30	125	B7	DSL-070-34	119	C7	DSL-070-34	117	D7	DSL-070-34	118,5	BR7	DSL-070-35	159,5
A8	DSL-070-30	112	B8	DSL-070-34	107	C8	DSL-070-34	104,5	D8	DSL-070-34	104,5	BR8	DSL-070-35	155
A9	DSL-070-30	82	B9	DSL-070-34	72	C9	DSL-070-34	65	D9	DSL-070-34	63,5	BR9	DSL-070-35	158
A10	DSL-070-30	79,5	B10	DSL-070-34	70	C10	DSL-070-34	61,5	D10	DSL-070-34	57,5	BR10	DSL-070-35	137
STA	DSL-070-35	116,5	STB	DSL-070-35	113,5	STC	DSL-070-35	112	STD	DSL-070-35	112,5	BR11	DSL-070-35	128,5
												BR12	DSL-070-35	124,5
												BR13	DSL-070-35	77,5
												BR14	DSL-070-35	71
												BR15	DSL-070-35	70
2A1	TNL-140-30	143	2B1	TNL-140-34	129,5	2C1	TNL-080-34	121,5	2D1	TNL-080-34	120,5	2 BR1	TNL-080-35	155
2A2	TNL-140-30	159	2B2	TNL-140-34	152,5	2C2	TNL-080-34	148	2D2	TNL-080-34	146,5	2 BR2	TNL-080-35	138,5
												2 BR3	TNL-080-35	100
												2 BR4	TNL-080-35	142,5
3 A1	TNL-280-30	451	3 B1	TNL-280-30	445	3 C1	TNL-280-30	449	3 D1	TNL-220-34	509,5	3 BR1	TNL-140-35	345
3 A2	TNL-280-30	445	3 B2	TNL-280-30	440	3 C2	TNL-220-30	444,5	3 D2	TNL-140-34	501,5	3 BR2	TNL-140-35	162
3 A3	TNL-220-30	421	3 B3	TNL-220-30	434,5	3 C3	TNL-140-30	449	3 D3	TNL-140-34	457,5	3 BR3	TNL-140-35	213,5
			3STM	TNL-140-35	521							4 BR1	TNL-400-35	288,5
												POINT AT:		268,5

NIVIUK F-GRAVITY 22

LINES HEIGHT CM.				
A	B	C	D	BR
718	709,5	715,5	730	790
710,5	702	708	721	775
710,5	702	708,5	723	763,5
707	698,5	704,5	716,5	752,5
697,5	690	695,5	706	738
696	689	695	706,5	731
685,5	679,5	684	693	724
672,5	667,5	671,5	679	719,5
658,5	655,5	658,5	664	722,5
656	653,5	655	658	714,5
636	633	631,5	632	706
				702
				697,5
				691
				690
RISERS LENGTH CM.				
A	B	C	D	
50	50	50	50	STANDARD
35	37,5	43	50	ACCELERATED

NIVIUK F-GRAVITY 20

LINES HEIGHT CM.				
A	B	C	D	BR
684	676	682	695,5	752,5
677	669	675	687	739
677	669	675,5	689	727,5
673,5	666	671	683,5	718,5
664,5	657,5	662,5	673	705
663,5	657	662	674	698
653,5	648	652	661	691
641,5	636,5	640,5	647,5	687
628,2	625,5	628	633	689,5
625,5	623,5	624,5	627,5	682,5
606	603	601,5	602,5	674,5
				671
				666
				660
				659,5
RISERS LENGTH CM.				
A	B	C	D	
47	47	47	47	STANDARD
35	37,5	43	50	ACCELERATED

SUSPENSION TECHNICAL DATA

CODE MATERIAL		DSL	TNL	TNL	TNL	TNL	TNL
CODE STRENGTH	KG	70	80	140	220	280	400
CODE COLOR	YLW	30		30	30	30	
	BLU	34	34	34	34	34	
	RED	35		35			35
DIAMETER IN M/M	Ø	0,95	1,1	1,4	1,6	1,8	2,3
MATERIAL CORE		DYNEEMA	TECHNORA	TECHNORA	TECHNORA	TECHNORA	TECHNORA
MATERIAL SLEEVE		POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER
WEIGHT METER G/M	TOTAL	0,67	1,1	1,96	2,35	2,7	4
	CORE	0,29	0,45	0,76	1,22	1,55	2,23
	SLEEVE	0,38	0,65	1,2	1,13	1,15	1,77
BREAKING STRENGTH	MIN	DAN	70	80	140	220	280
	MAX	DAN	92	105	165	243	305
	SINGLE KNOT	DAN	28				
STRENGTH AFTER							
5.000 BENDING	TEST DHV	DAN	85	36	76	114	134
CYCLES							
ELONGATION AT	5 DAN EN %		0,3	0,2	0,2	0,2	0,05
	10 DAN EN %	0,36	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 %	1	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 %		2,8	3	3,4	4	4,1	4,6
1 DAN = 10 N = CA. 1 KG.							

FABRIC TECHNICAL DATA UPPER SURFACE

DESCRIPTION

SKYTEX 40 REPELLANT	REF. : F09017 - E77A
FABRIC	9017
TYPE OF FINISH	SIDE COATED (POLYURETHANE)
TYPE OF YARN	POLYAMIDE 6.6 HIGH TENACITY - 33 DTEX
WIDTH	158 CM
PATTERN	RIP STOP

TECHNICAL SPECIFICATIONS

COATED FABRIC'S WEIGHT	G/SQM	ISO 2286-2	40 +/- 2
TEAR STRENGTH - WARP	DAN	ISO 4674	1,5 MINI
TEAR STRENGTH - WEFT	DAN	ISO 4674	1,5 MINI
ELONGATION ON BIAS 3 LBS	% INTERNAL METHOD NCV 044		6,5 MAX
ELONGATION ON BIAS 5 LBS	% INTERNAL METHOD NCV 044		15 MAX
ELONGATION ON BIAS 10 LBS	% INTERNAL METHOD NCV 044		27 MAX
BREAK STRENGTH	DAN	ISO 1421	38 MINI
WARP DIRECTION			
BREAK STRENGTH WEFT DIRECTION	DAN	ISO 1421	33 MINI
AIR POROSITY	1/SQM/MN	2000 PA	40 MAX
	* UNDER	100 CM2	
	SURFACE		

TECHNICAL SPECIFICATIONS COLOR

DEEP BLUE	REF. 354	UV 5-6
GREEN	REF. 551	UV 5
GOLD	REF. 939	UV 5-6
SUNFLOWER	REF. 921	UV 5-6
ORANGE	REF. 744	UV 5
DRAGON RED	REF. 636	UV 5-6
WHITE	REF. 001	UV 4
GREY	REF. 120	UV 5
DARK GREY	REF. 121	UV 5-6
BLACK	REF. 102	UV 5-6

FABRIC TECHNICAL DATA BOTTOM SURFACE

DESCRIPTION

SKYTEX 40 CLASSIC	REF. : F09017 - E38A
FABRIC	9017
TYPE OF FINISH	SIDE COATED (POLYURETHANE)
TYPE OF YARN	POLYAMIDE 6.6 HIGH TENACITY - 33 DTEX
WIDTH	158 CM
PATTERN	RIP STOP

TECHNICAL SPECIFICATIONS

COATED FABRIC'S WEIGHT	G/SQM	ISO 2286-2	40 +/- 2
TEAR STRENGTH - WARP	DAN	ISO 4674	2,8 +/-1
TEAR STRENGTH - WEFT	DAN	ISO 4674	2,8 +/-1
ELONGATION ON BIAS 3 LBS	% INTERNAL METHOD NCV 044		5 +/-3
ELONGATION ON BIAS 5 LBS	% INTERNAL METHOD NCV 044		12,5 +/-4
ELONGATION ON BIAS 10 LBS	% INTERNAL METHOD NCV 044		24 +/-4
BREAK STRENGTH	DAN/5 CM	ISO 1421	38 MINI
WARP DIRECTION			
BREAK STRENGTH WEFT DIRECTION	DAN/5 CM	ISO 1421	33 MINI
AIR POROSITY	1/SQM/MN	2000 PA	40 MAXI
	* UNDER	100 CM2	
	SURFACE		

TECHNICAL SPECIFICATIONS COLOR

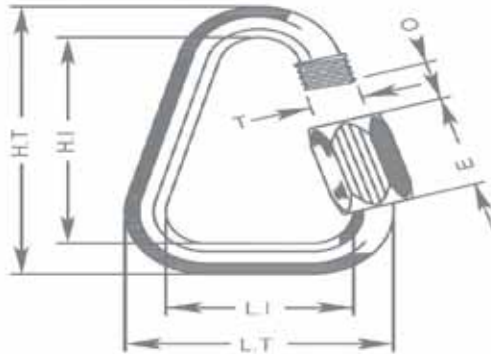
DEEP BLUE	REF. 354	UV 5-6
GREEN	REF. 551	UV 5
GOLD	REF. 939	UV 5-6
SUNFLOWER	REF. 921	UV 5-6
ORANGE	REF. 744	UV 5
DRAGON RED	REF. 636	UV 5-6
WHITE	REF. 001	UV 4
GREY	REF. 120	UV 5
DARK GREY	REF. 121	UV 5-6
BLACK	REF. 102	UV 5-6

MAILLON TECHNICAL DATA

DESCRIPTION

MAILLON	DELTA
CODE	MR14
MATERIAL	ACERO INOX
SIZE	4,3 M/M
WEIGHT	12 G/PC

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

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 TECHNICAL DATA

NAME	SERAFIL
N° OF REFERENCE	40
MATERIAL	POLYESTER
TYPE OF FINISH	SILK
LINEAR DENSITY	NM 41 / 3 (DTEX 244 * 3)
BREAKING STRENGTH	4.500 CN
ELONGATION	17,00%

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%

PROPRIETIES SERAFIL

SOLIDITY ARTIFICIAL LIGHT	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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NAME	BONDED NYLON
N° OF REFERENCE	N/F-66
MATERIAL	NYLON
TYPE OF FINISH	SILK
LINEAR DENSITY	210D / 6
BREAKING STRENGTH	9,7 KG
ELONGATION	25/30%

RISERS TECHNICAL DATA**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	MAX 35%
WEIGHT	32 G/M

LOOPS

N° OF REFERENCE	LKI - 13
MATERIAL	NYLON
WIDTH	13 M/M
BREAKING STRENGTH	110 KG
ELONGATION	25/35%
WEIGHT	7,2 G/M
COLOR	WHITE

N° OF REFERENCE	LKI - 10
MATERIAL	NYLON
WIDTH	10 M/M
BREAKING STRENGTH	84 KG
ELONGATION	25/35%
WEIGHT	3 G/M
COLOR	WHITE

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The importance of small details