



VERVE



SERVICE MANUAL



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OVERALL LINE LENGTHS

Verve 21 (S)

Center	Collaps	Aa	Ab	B	C	BR
1	7542	7248	7229	7233	7326	7462
2	7500	7206	7186	7189	7284	7301
3	7443	7168	7146	7157	7233	7087
4	7461	7185	7167	7170	7242	7062
5	7383	7173	7156	7153	7223	6900
6	7330	7122	7101	7101	7167	6819
7	7218	7027	7010	6999	7059	6737
8	7204	7015	6997	6985	7043	6781
9	7190	7009	6992	6980	7033	6669
10	7203	7020	7013	6996	7040	6654
11	7047	6843	6824	6821		6628
12	6869	6696		6686		6660
13	6767	6595		6605		
14	6602	6471		6491		
15		6436		6471		
16		6434		6471		

Verve 23 (M)

Center	Collaps	Aa	Ab	B	C	BR
1	7938	7626	7611	7609	7703	7904
2	7894	7584	7564	7563	7660	7734
3	7829	7543	7520	7519	7607	7513
4	7847	7559	7542	7538	7613	7497
5	7779	7551	7532	7528	7599	7335
6	7723	7498	7477	7471	7543	7250
7	7604	7399	7381	7371	7433	7165
8	7589	7384	7368	7354	7416	7209
9	7575	7376	7357	7342	7398	7089
10	7588	7390	7380	7360	7405	7067
11	7414	7207	7187	7177		7042
12	7224	7048		7034		7075
13	7112	6941		6944		
14	6932	6805		6823		
15		6768		6807		
16		6765		6805		

Verve 25 (L)

Center	Collaps	Aa	Ab	B	C	BR
1	8278	7965	7944	7956	8042	8241
2	8232	7921	7897	7906	7996	8075
3	8168	7867	7844	7851	7940	7850
4	8187	7886	7867	7867	7946	7831
5	8108	7870	7854	7859	7928	7646
6	8050	7812	7795	7800	7870	7575
7	7923	7712	7693	7689	7751	7480
8	7907	7694	7681	7674	7728	7524
9	7893	7687	7669	7662	7714	7394
10	7907	7701	7689	7680	7718	7379
11	7729	7523	7507	7501		7351
12	7534	7359		7352		7385
13	7412	7248		7261		
14	7222	7098		7118		
15		7057		7100		
16		7057		7098		

Verve 27 (XL)

Center	Collaps	Aa	Ab	B	C	BR
1	8575	8253	8230	8234	8341	8638
2	8529	8204	8179	8183	8292	8469
3	8462	8160	8135	8136	8231	8220
4	8480	8179	8159	8158	8244	8201
5	8400	8164	8146	8146	8222	8023
6	8340	8105	8085	8081	8160	7930
7	8206	7998	7978	7970	8045	7831
8	8190	7981	7965	7954	8024	7881
9	8175	7973	7954	7940	8001	7760
10	8190	7989	7979	7961	8012	7727
11	8002	7788	7766	7766		7710
12	7802	7618		7607		7743
13	7610	7500		7513		
14	7480	7357		7375		
15		7316		7359		
16		7312		7360		

Verve 30 (XXL)

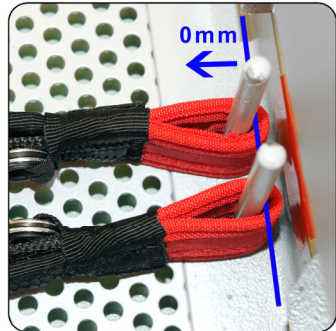
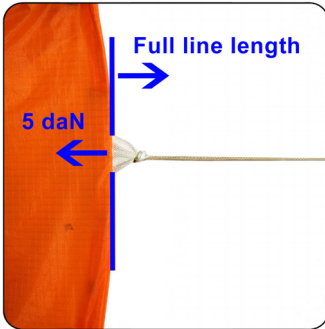
Center	Collaps	Aa	Ab	B	C	BR
1	9030	8704	8679	8682	8797	9094
2	8979	8652	8628	8629	8745	8907
3	8908	8607	8578	8580	8685	8650
4	8929	8625	8603	8601	8693	8623
5	8849	8610	8588	8578	8666	8437
6	8785	8547	8525	8514	8602	8344
7	8643	8430	8411	8396	8477	8241
8	8626	8415	8397	8378	8455	8295
9	8611	8405	8387	8364	8433	8148
10	8627	8420	8409	8384	8441	8135
11	8432	8213	8190	8183		8092
12	8219	8033		8012		8126
13	8080	7909		7921		
14	7880	7761		7787		
15		7718		7766		
16		7713		7764		

All overall lengths are measured from riser's main attachment point up to the tissue of canopy on attachment points. Brake lines are measured from the Swivel on brake handle up to the trailing edge.



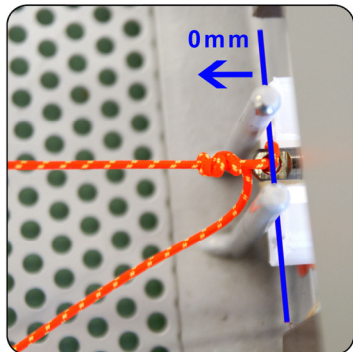
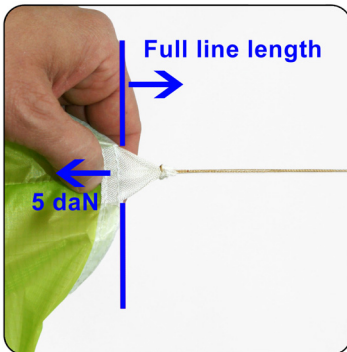
MEASURING FULL LINE LENGTHS

Main lines

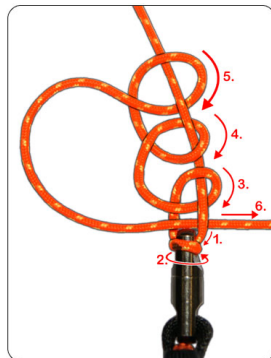
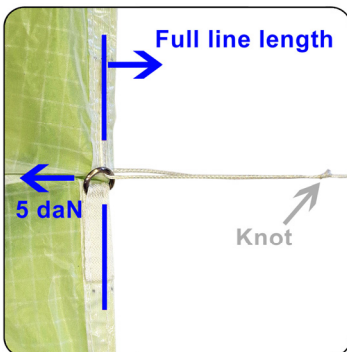


Brakes line

Standard system



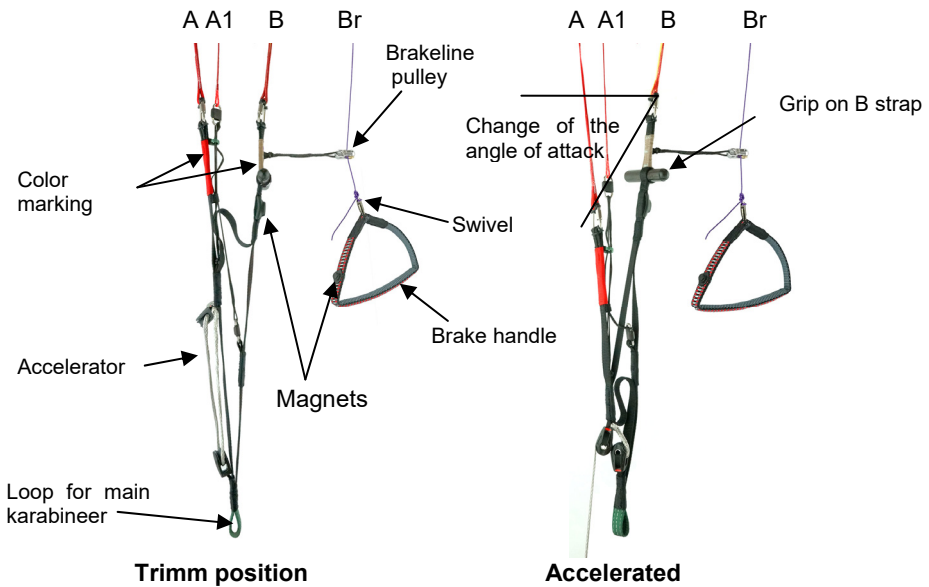
Raff system





RISER

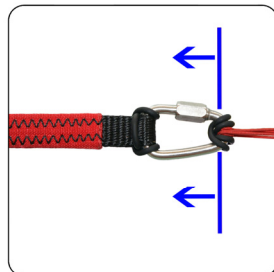
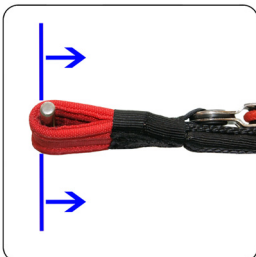
Riser



Riser lengths Verve

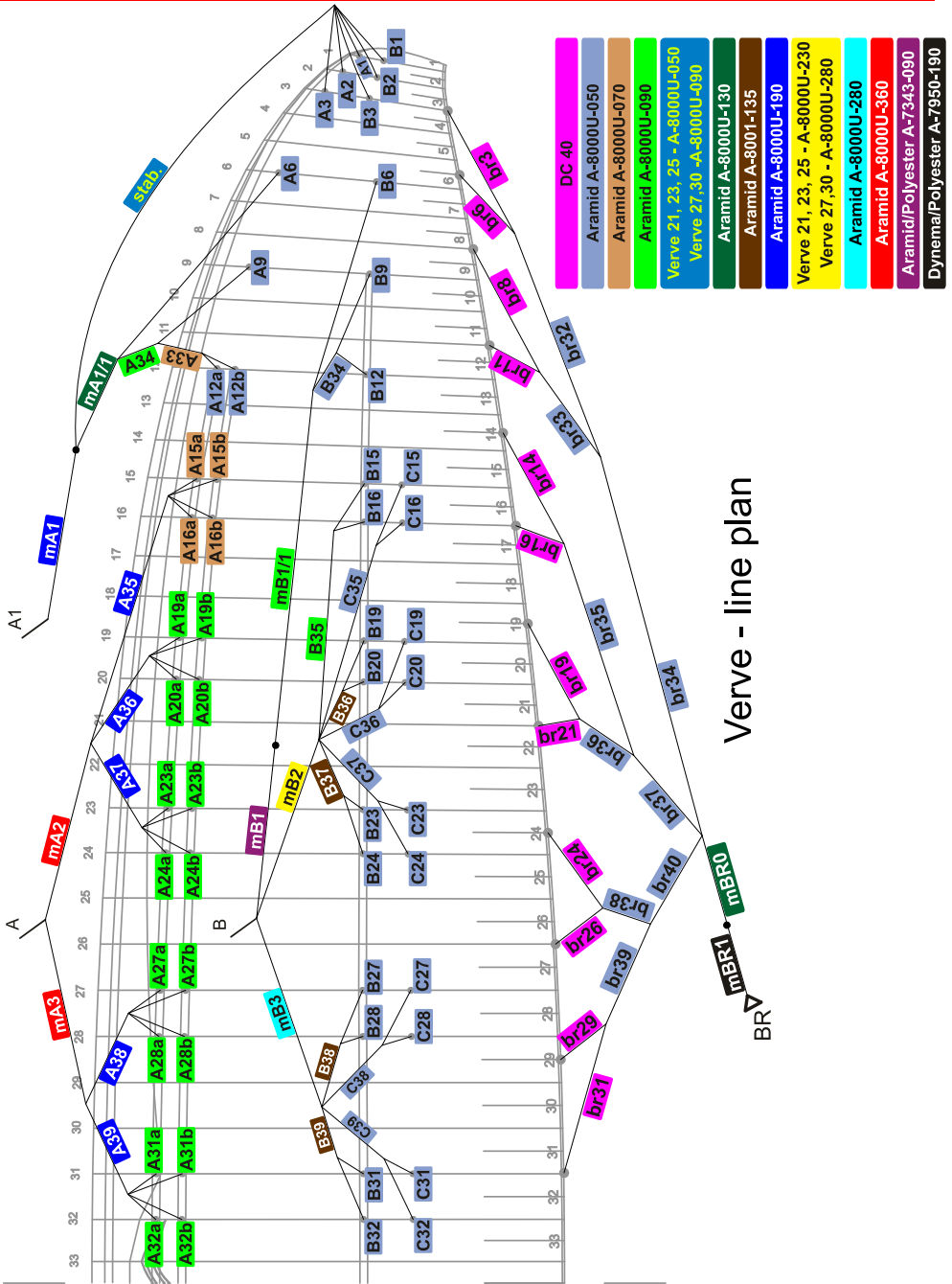
	A	A1	B
Trim-position	530	530	530
Accelerated	370	420	530

The lengths are measured from the main attachment point to the lower edge of rapid links.





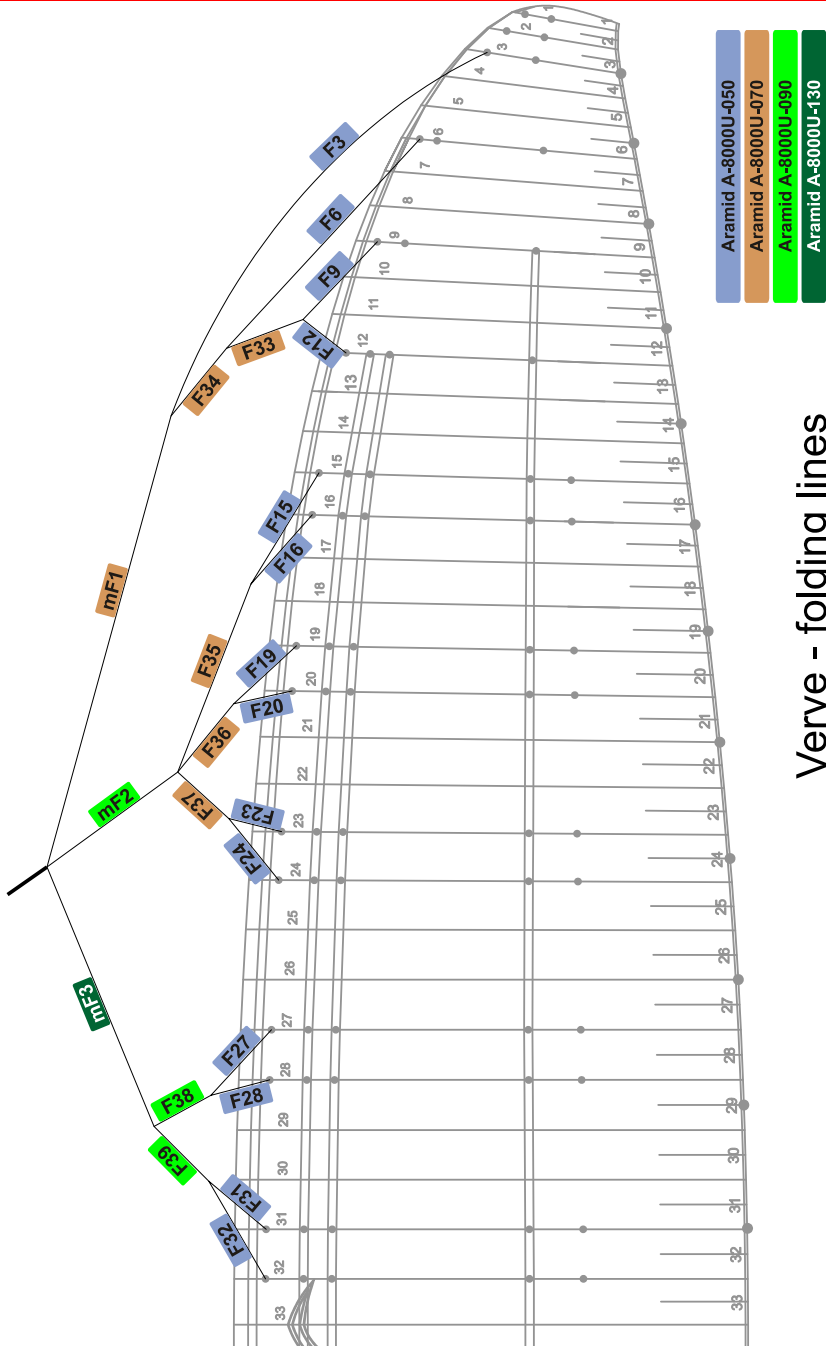
LINE PLAN VERVE



Verve - line plan



FOLDING LINE PLAN VERVE





MATERIALS

Canopy Fabric

PORCHER SPORT

Upper surface leading edge - SKYTEX 32 Universal
Upper surface trailing edge - SKYTEX 27 Classic II
Bottom surface leading edge - SKYTEX 32 Universal
Bottom surface trailing edge - SKYTEX 27 Classic II
Main ribs, Diagonals - SKYTEX 27,32 HARD

Lines

EDELRID

Upper Galery A,B,C, steer. lines, Stabilser - Aramid 8000/U-050, Breaking Load 50 kg
Upper Galery A - Aramid 8000/U-070, Breaking Load 70 kg
Verve 27,30 = Stabilser - Aramid 8000/U-090, Breaking Load 90 kg
Upper Galery A - Aramid 8000/U-090, Breaking Load 90 kg
mA1/1 ,mBR0- Aramid 8000/U-130 , Breaking Load 130 kg
Middle Galery B - Aramid 8001-135 , Breaking Load 135 kg
Middle Galery A, mA1 - Aramid 8000/U-190 , Breaking Load 190 kg
Verve 21, 23, 25 = Main line mB2 - Aramid 8000/U-230 , Breaking Load 230 kg
Verve 27,30 = Main line mB2- Aramid 8000/U-280, Breaking Load 280 kg
Main line mB3 - Aramid 8000/U-280 , Breaking Load 280 kg
Main line mA2, mA3 - Aramid 8000/U-360 , Breaking Load 360 kg
Main steering lines - Dynema / Polyester 7950-190 , Breaking Load 190 kg

LIROS

Top galery steering lines - DC40 , Breaking Load 40 kg

Attachment straps (Canopy)

POLYESTERBRIDLE 13 mm

Risers

Aramid-Polyester 3455 12 mm

Threads

SERAFIL 60, SYNTON 20

Quick links

NIRO TRIANGLE 200

Rigifoils

Rigifoils - Nitinol 0,6 mm, 0,8 mm



LENGTH OF LINE

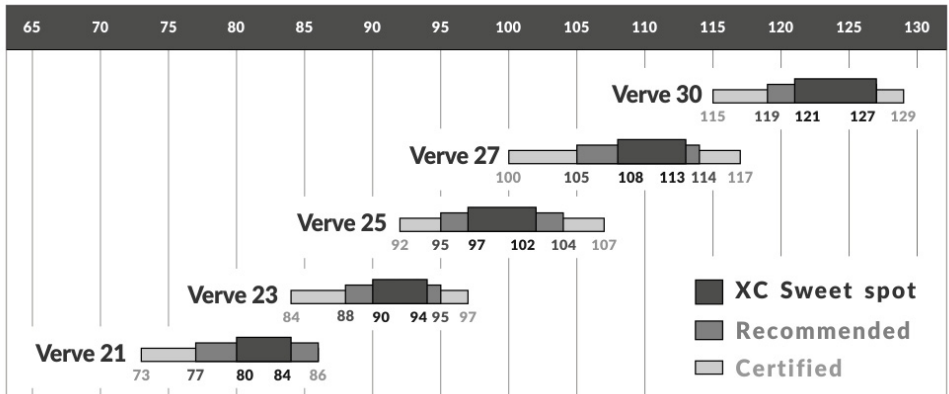
Mentioned line lengths are marked on stretched lines that are pulled under 5 kg.
When replacing a line always compare the symmetry with opposite side.

	21	23	25	27	30
A1	40,8	42,3	44,6	46,7	48,8
A2	40,9	42,5	44,8	46,9	49,0
A3	44,5	46,2	48,7	50,9	53,3
A6	156,5	165,0	170,0	176,8	187,0
A9	91,6	96,6	101,2	105,4	111,3
A12a	27,3	28,2	29,5	30,4	32,3
A15a	37,4	39,2	41,5	43,2	45,3
A16a	36,1	37,9	40,1	41,7	43,7
A19a	36,8	38,7	40,9	42,5	44,7
A20a	38,3	40,2	42,5	44,2	46,4
A23a	35,6	37,1	38,8	41,0	42,7
A24a	40,9	42,6	44,6	47,0	49,1
A27a	39,7	41,3	43,5	44,9	48,1
A28a	37,9	39,5	41,6	43,0	46,0
A31a	35,9	38,8	40,0	41,5	43,8
A32a	40,1	43,2	44,6	46,3	48,9
A12b	25,6	26,4	27,6	28,4	30,2
A15b	36,2	38,0	40,2	41,8	43,8
A16b	34,2	35,9	38,0	39,5	41,4
A19b	35,1	36,9	39,0	40,6	42,6
A20b	36,2	38,0	40,2	41,8	43,9
A23b	33,6	35,0	36,6	38,7	40,3
A24b	38,9	40,5	42,4	44,7	46,6
A27b	37,8	39,3	41,4	42,8	45,7
A28b	35,8	37,2	39,2	40,5	43,3
A31b	33,6	36,4	37,5	38,9	41,1
A32b	38,1	41,1	42,4	44,0	46,4
A33	79,0	84,0	88,0	92,0	97,0
A34	75,0	79,0	80,0	83,0	88,0
A35	207,0	216,0	226,0	238,0	249,0
A36	207,0	216,0	226,0	238,0	249,0
A37	219,0	229,0	240,0	252,0	264,0
A38	161,0	171,0	177,0	185,0	196,0
A39	167,0	176,0	183,0	191,0	203,0
B1	44,6	46,3	48,8	51,1	53,4
B2	44,7	46,5	49,0	51,3	53,6
B3	46,3	48,1	50,7	53,0	55,5
B6	156,4	164,9	170,0	176,8	186,9
B9	86,7	90,7	95,3	99,5	105,1
B12	100,1	105,0	110,6	115,4	122,0
B15	34,5	36,1	38,3	39,8	41,6
B16	32,7	34,3	36,4	37,9	39,5
B19	33,6	35,6	37,8	39,3	41,0
B20	35,1	37,1	39,4	41,0	42,8
B23	33,2	34,4	36,1	38,1	39,6
B24	38,6	40,1	42,1	44,4	46,2
B27	37,8	39,3	41,4	42,8	45,7
B28	36,0	37,4	39,4	40,7	43,5
B31	34,0	36,8	37,9	39,3	41,5
B32	38,4	41,5	42,8	44,4	46,9
B34	78,0	83,0	84,0	87,0	92,0
B35	207,0	216,0	226,0	238,0	249,0
B36	207,0	216,0	226,0	238,0	249,0
B37	219,0	229,0	240,0	252,0	264,0
B38	161,0	171,0	177,0	185,0	196,0
B39	167,0	176,0	183,0	191,0	203,0

	21	23	25	27	30
C15	35,9	37,7	39,1	40,9	42,8
C16	35,3	37,2	38,5	40,2	42,2
C19	36,5	38,8	40,4	42,2	44,2
C20	38,3	40,7	42,4	44,3	46,4
C23	33,9	35,5	37,5	38,8	41,7
C24	39,5	41,3	43,6	45,1	48,4
C27	38,1	40,0	41,4	43,1	45,4
C28	37,3	39,3	40,6	42,2	44,6
C31	35,5	37,6	39,2	41,0	42,7
C32	39,8	42,2	44,0	46,0	48,0
C35	209,0	218,0	229,0	241,0	252,0
C36	209,0	218,0	229,0	241,0	252,0
C37	224,0	234,0	245,0	258,0	269,0
C38	167,0	177,0	184,0	192,0	204,0
C39	174,0	184,0	191,0	199,0	212,0
br3	45,0	48,0	49,5	51,5	54,0
br6	42,0	45,0	46,5	48,5	51,0
br8	50,5	52,5	55,0	57,0	60,5
br11	52,0	54,5	57,0	59,5	62,5
br14	53,5	56,5	58,5	61,0	64,5
br16	49,0	51,5	53,5	56,0	59,0
br19	54,5	57,5	60,0	63,0	66,5
br21	62,5	66,0	68,5	71,5	76,0
br24	60,5	63,0	65,5	68,5	72,5
br26	63,5	66,0	68,0	71,0	75,0
br29	57,5	58,5	61,0	64,0	67,5
br31	73,5	75,0	77,5	81,0	86,0
br32	95	100	106	109	116
br33	89	95	100	103	110
br34	213	225	235	245	258
br35	117	124	130	135	143
br36	120	127	133	138	146
br37	195	206	216	224	237
br38	120	127	133	138	146
br39	147	156	163	169	179
br40	213	225	236	245	259
mA1/1	170	180	190	200	210
mA1	280	295	310	320	340
mA2	405,0	430,0	450,0	465,0	495,0
mA3	465,0	490,0	515,0	535,0	565,0
mB1/1	390,0	415,0	440,0	460,0	490,0
mB1	60,0	60,0	60,0	60,0	60,0
mB2	406,0	431,0	451,0	466,0	496,0
mB3	466,0	491,0	516,0	536,0	566,0
stab.	269,0	285,0	297,0	311,0	328,0
mBR0	188,0	205,0	220,0	235,0	255,0
mBR1	121,5+15	121,5+15	121,5+15	121,5+15	121,5+15



RECOMMENDED WEIGHT RANGE



TECHNICAL SPECIFICATIONS

High Performance EN-C Size		Verve 21(S)	Verve 23 (M)	Verve 25 (L)	Verve 27 (XL)	Verve 30 (XXL)
Zoom flat	[%]	90,5	95,5	100	104	110
Area flat	[m ²]	20,73	22,84	25,31	27,38	30,63
Area projected	[m ²]	17,72	19,53	21,64	23,41	26,18
Span flat	[m]	11,71	12,29	12,94	13,46	14,23
Aspect ratio flat	-	6,6	6,6	6,6	6,6	6,6
Root cord	[m]	2,24	2,35	2,47	2,57	2,72
Cells	-	67	67	67	67	67
Weight	[kg]	3,65	3,85	4,15	4,45	4,65
Weight range*	[kg]	73 - 86	84 - 97	92 - 107	100 - 117	115 - 129
Weight range*	[lbs]	161-190	185-214	203-236	220-258	253-284
Optimal weight range*	[kg]	77 - 82	88 - 94	95 - 102	106 - 113	119 - 127
Optimal weight range*	[lbs]	170-181	194-207	209-225	234-249	262-280
Min.speed	[km/h]	24-26	24-26	24-26	24-26	24-26
Max.speed	[km/h]	37-39	37-39	37-39	37-39	37-39
Top speed (accelerator)	[km/h]	54-56	54-56	54-56	54-56	54-56

*pilot equipped = weight naked + cca. 12-20 Kg (26-44 lbs)