

**DUDEK**  
*paragliders*

 **Nucleon** **WRC**  
*cabrio*

02-2018

## SERVICE MANUAL

The latest version of service manual is available at:  
[www.dudek.eu/en/service-and-inspections/](http://www.dudek.eu/en/service-and-inspections/)

## TECHNICAL INSPECTIONS

Full Inspection is recommended every 24 months or every 150 hours whatever comes first, if not advised otherwise by the inspecting person due to paraglider's condition.

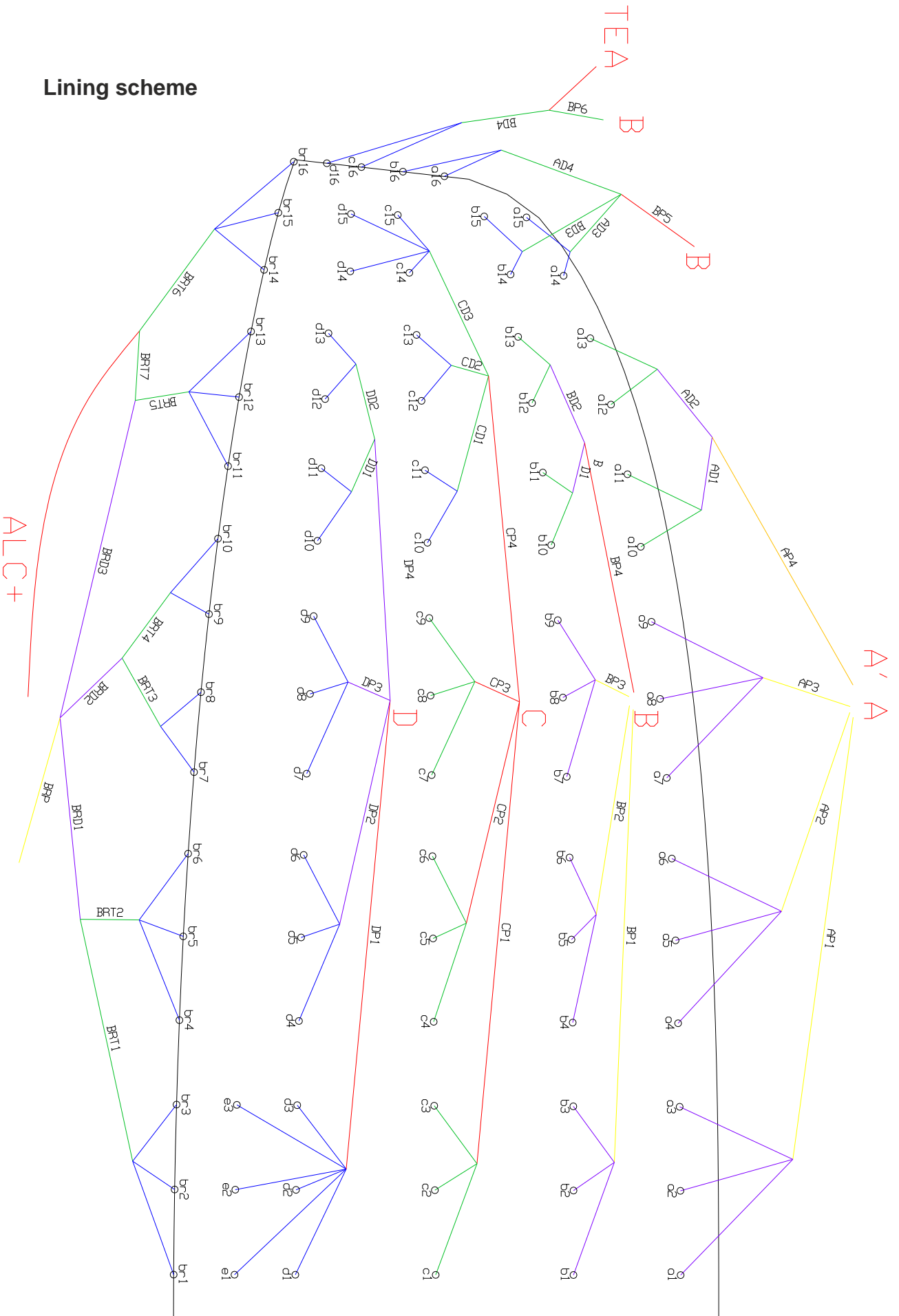
In case of paragliders used commercially (e.g. in schools or tandem flying) a Full Inspection is recommended every 12 months after first 24 months from purchase date or every 100 hours airtime (whatever comes first).

A paraglider can be officially inspected only by the manufacturer or a dealer (authorised to do so).

## TECHNICAL DATA

<b>Nucleon WRC Cabrio</b>	<b>38</b>	<b>42</b>
Approval	DGAC	DGAC
Number of cells	62	62
Surface area (flat) [m <sup>2</sup> ]	38,00	42,00
Surface area (projected) [m <sup>2</sup> ]	32,48	35,90
Span (flat) [m]	14,33	15,06
Span (projected) [m]	11,50	12,09
Aspect Ratio (flat)	5,40	
Aspect Ratio (projected)	4,07	
Sink rate [m/s]	min = 1,8; trim = 2,0; max = 3,0	
Speed [km/h]	min = 35; trim = 45; max = 65	
Max. cord [cm]	315,80	332,00
Min. cord [cm]	63,16	66,40
Distance pilot to wing [m]	9,03	9,49
Total line length [m]	574,00	604,00
Weight range [kg]	160-250	190-310
Weight [kg]	10,1	10,3
Lines	Technora: 1,2 & 1,3 & 1,5 & 1,8 & 2,3	
Fabric	Dominico tex 34, 38, 41 g/m <sup>2</sup>	
	SkyTex Hard 40 g/m <sup>2</sup>	
	SR Scrim, SR Laminate 180 g/m <sup>2</sup>	
Risers	PASAMON - Bydgoszcz, Polska	

# Lining scheme



## Length of the lines

Nucleon WRC Cabrio – 38

The tables/ Tables/ Tabele:

The individual lengths and type of line

La longueur et le type de chaque ligne

Długo ci i rodzaj poszczególnych linek

	a	b	c	d	e	br
1	2581	2569	2595	2507	2647	1833
2	2524	2512	2538	2446	2588	1599
3	2543	2530	2557	2467	2606	1489
4	2514	2498	2526	2368		1537
5	2467	2452	2480	2314		1420
6	2490	2476	2505	2341		1448
7	2491	2462	2495	2251		980
8	2439	2414	2446	2190		814
9	2446	2421	2448	2190		911
10	877	856	864	883		887
11	785	766	742	769		1294
12	813	775	783	789		1096
13	779	750	700	745		1000
14	730	665	840	943		969
15	602	567	761	861		790
16	703	759	605	633		698

The total lengths

Longueur des suspentes

Sumaryczna długo linek

	a	b	c	d	e	br
1	8430	8373	8436	8600	8740	9873
2	8374	8316	8379	8539	8681	9639
3	8393	8334	8398	8560	8699	9530
4	8375	8317	8381	8538		9411
5	8328	8270	8334	8485		9293
6	8351	8295	8359	8511		9322
7	8328	8273	8337	8486		9133
8	8276	8225	8288	8426		8967
9	8283	8232	8290	8425		8860
10	8257	8204	8311	8369		8837
11	8165	8114	8189	8255		8705
12	8088	8044	8071	8167		8507
13	8055	8019	7988	8123		8411
14	7859	7835	7908	8011		8268
15	7730	7737	7830	7929		8089
16	7695	7752	7714	7742		7942

	AD	BD	CD	DD	ED	BRT
1	1658	1600	2263	1638		2074
2	1555	1522	2104	1529		1908
3	1612	1654	1885			1033
4	1470	6880				830
5						1394
6						1043
7						250

	AP	BP	CP	DP	EP	BRD
1	5859	5813	5851	6103		3253
2	5871	5829	5864	6180		4407
3	5847	5821	5852	6245		3254
4	5746	5772	5204	5868		
5		5542				
6		245				

BRP	2750	ALC+	6450
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Technora 7343-090-005:



Technora 7343-140-006:



Technora 7343-190-024:



Technora 7343-280-011:



Technora 7343-280-018:



Technora 7343-420-041:



Technora TSL 190:

XXXX

Total suspension lines length, measured from the lower surface of the canopy to the inside edge of the maillon (tolerancy +/- 10 mm)

## Length of the lines

Nucleon WRC Cabrio – 42

The tables/ Tables/ Tabele:

The individual lengths and type of line

La longueur et le type de chaque ligne

Długo ci i rodzaj poszczególnych linek

	a	b	c	d	e	br
1	2712	2700	2727	2634	2781	1926
2	2654	2641	2668	2571	2720	1676
3	2675	2662	2689	2594	2741	1556
4	2642	2625	2655	2489		1620
5	2594	2578	2607	2433		1491
6	2619	2604	2634	2462		1516
7	2618	2588	2623	2366		1030
8	2565	2538	2572	2303		855
9	2572	2546	2575	2303		958
10	922	900	908	928		932
11	826	806	780	809		1360
12	854	815	824	829		1152
13	819	789	737	783		1051
14	768	699	883	991		981
15	633	596	801	905		889
16	739	798	636	665		887

The total lengths

Longueur des suspentes

Sumaryczna długo linek

	a	b	c	d	e	br
1	8878	8817	8882	9059	9206	10407
2	8820	8758	8823	8996	9145	10157
3	8841	8779	8844	9019	9165	10037
4	8824	8762	8827	8997		9906
5	8775	8714	8780	8941		9777
6	8800	8741	8807	8970		9803
7	8776	8719	8785	8944		9602
8	8723	8669	8734	8881		9426
9	8731	8677	8737	8882		9313
10	8694	8639	8765	8823		9287
11	8598	8544	8636	8704		9135
12	8518	8472	8513	8611		8927
13	8483	8446	8426	8565		8826
14	8287	8263	8343	8451		8657
15	8152	8160	8260	8364		8565
16	8115	8174	8139	8168		8523

	AD	BD	CD	DD	ED	BRT
1	1743	1682	2379	1722		2185
2	1635	1601	2213	1609		1990
3	1694	1739	1982			1087
4	1546	7273				870
5						965
6						631
7						250

	AP	BP	CP	DP	EP	BRD
1	6180	6132	6170	6435		3293
2	6196	6151	6187	6518		4482
3	6173	6146	6177	6588		3767
4	6069	6096	5497	6193		
5		5855				
6		245				

BRP	3050	ALC+	7270
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Technora 7343-090-005:



Technora 7343-140-006:



Technora 7343-190-024:



Technora 7343-280-011:



Technora 7343-280-018:



Technora 7343-420-041:

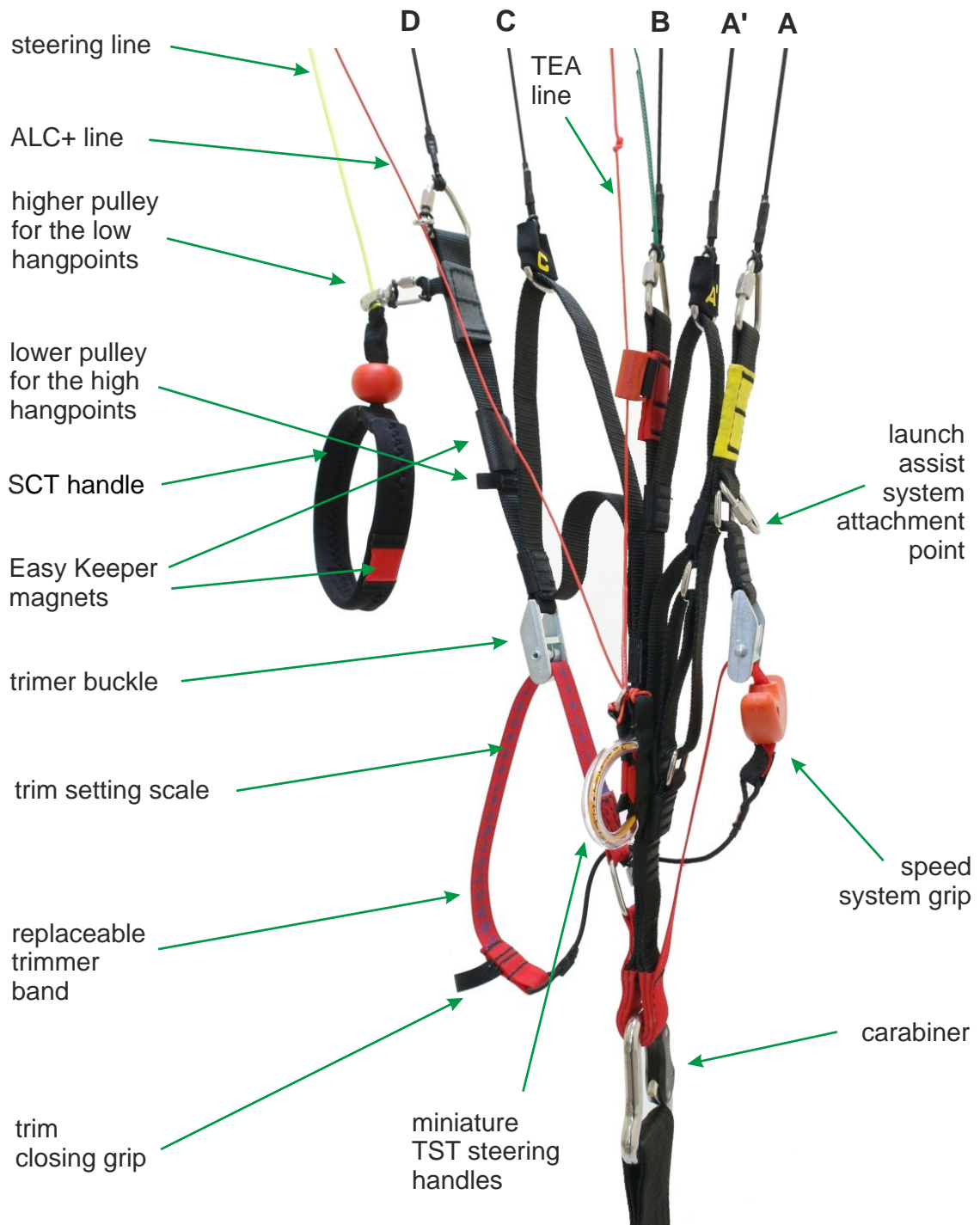


Technora TSL 190:

XXXX

Total suspension lines length, measured from the lower surface of the canopy to the inside edge of the maillon (tolerancy +/- 10 mm)

## Nucleon WRC Cabrio risers

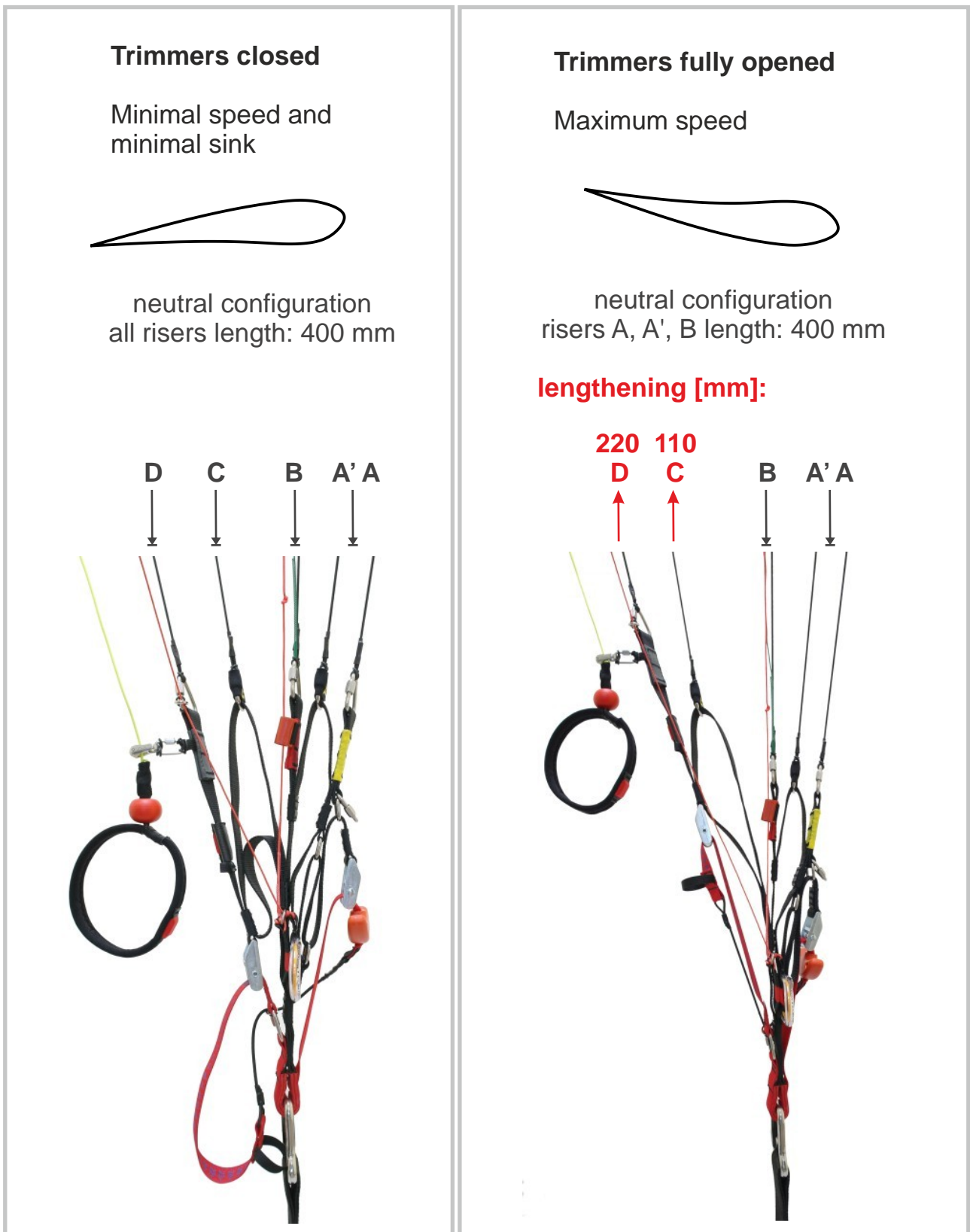


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### Other informations:

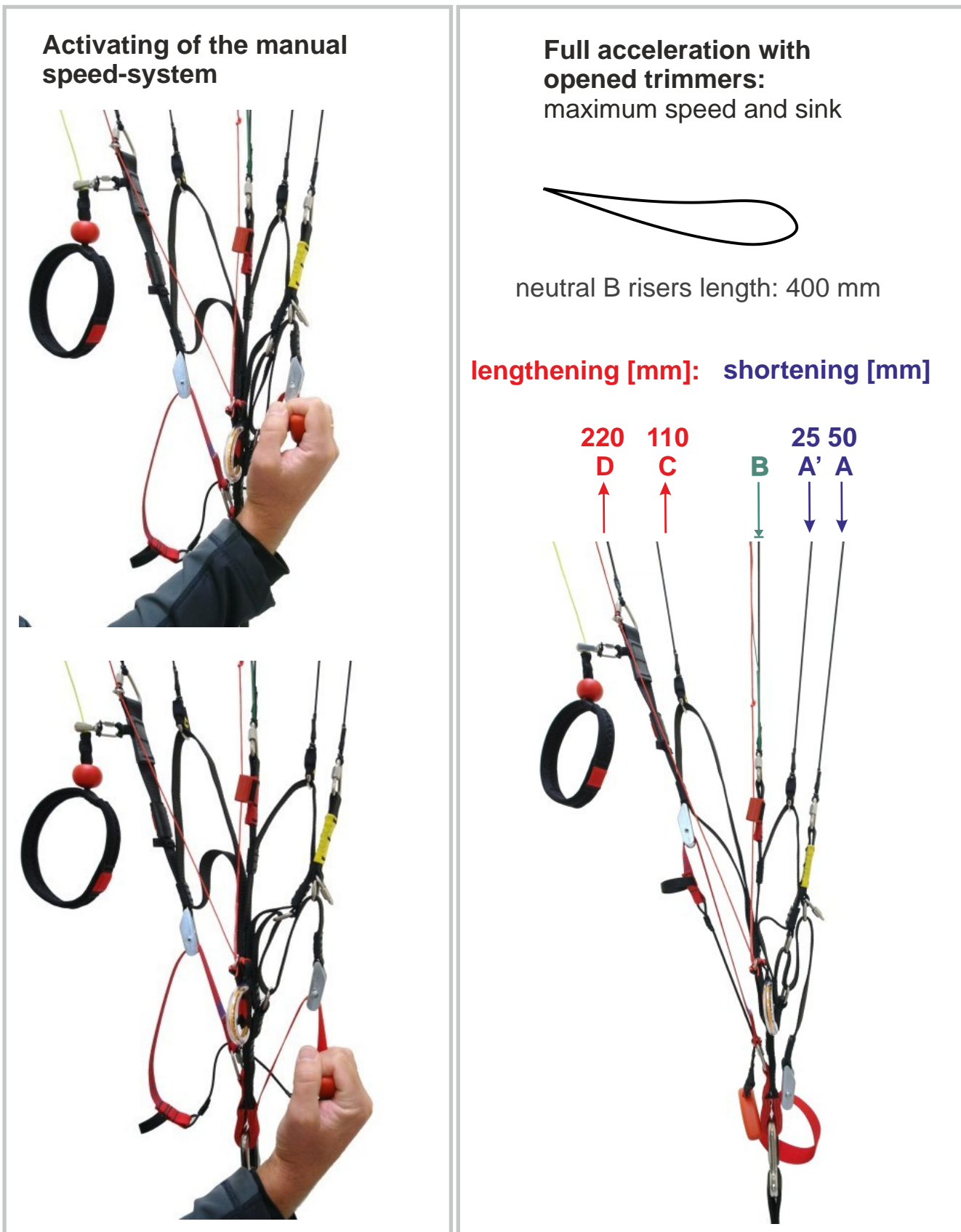
- number of risers: 4 (with A riser split into A and A')
- trimmers: yes

**Figure 5** Trimmers influence on the wing section



Total risers length measured without the maillons (tolerancy +/- 5 mm)

**Figure 6** Trimmer and speed-system settings influence on the wing section



Total risers length measured without the maillons (tolerancy +/- 5 mm)



# Components

## List of components and materials for NucleonWRC Cabrio

Name of product	Dimension	Supplier	Location of use								
			Top surface		Bottom surface		Ribs		Ribs		Vector –
			Others	front	Top surface	front	Bottom surface	suspended	unsuspended	Diagonals	
<b>CANOPY</b>											
Dominico DOKDO-20DMF(WR)	34gr	Domico Textile			X	X					
Dominico DOKDO-30DFM(NON-WR)	40gr	Domico Textile					X	X	X	X	
Dominico DOKDO-30DMF(WR)	40gr	Domico Textile		X	X						
Porcher 09092 1520 001 80g	80gr	NCV industries	Reinforcements								
Porcher 02420 1450 X15A	180gr	NCV industries	Reinforcements								
Porcher 06382 0015 004 170g	15mm/170gr	NCV industries	Edging on intake								
Porcher 06382 0025 004 170g	25mm/170gr	NCV industries	Edging on trailing edge								
Nylon Fibre 2,0mm	fi 2,0mm	Zarys	Reinforcements on ribs								
Nylon Fibre 2,4mm	fi 2,4mm	Zarys	Reinforcements on ribs								
Webbing 57 501/12,5	12,5mm	GUTH & WOLF	Suspension points		&		Edging on intake				
Ring inox - welded	13/3mm	Sow-Yacht	On trailing edge								
Machine thread Durafix size 60	60	Durak	Canopy sewing								
<b>LINES</b>			<b>Others</b>	<b>Main</b>	<b>Brake</b>						
Dyneema Top Line 16650	1,7mm/320 daN	Cousin	X								
Technora A-7343-090	1,2mm/90 daN	Edelrid	X		X						
Technora A-7343-140	1,3mm/140 daN	Edelrid	X	X	X						
Technora A-7343-190	1,5mm/190 daN	Edelrid	X	X	X						
Technora A-7343-280	1,8mm/280 daN	Edelrid	X								
Technora A-7343-420	2,3mm/420 daN	Edelrid	X								
Machine thread Durafix size 60	60	Durak	Lines sewing								
<b>RISERS &amp; METAL PARTS</b>											
Webbing TE331/25	25mm	Pasamon	Riser main								
Webbing TS548/20	20mm	Pasamon	Trimer tape								
Webbing TS548/25	25mm	Pasamon	Trimer tape								
Webbing TE324/10 czarna	10mm	Pasamon	Suspension for accelerator pulley				Suspension for brake pulley				
Webbing TS555/20	20mm	Pasamon	Suspension for accelerator pulley				Suspension for brake pulley				
Webbing TS555/25	25mm	Pasamon	Suspension for accelerator pulley								
Rubber O-rings 16x2mm	16x2mm	ABS Serwis	For lines protection								
Neodymium magnet 16x16x4[N38]	16x16x4mm	Biegun	Riser magnet								
Rolls - AustriAlpin	15mm	AustriAlpin	Brake pulley								
Delta Inox MRDIO4.0	fi 4,0mm	Pequet	Maillon								
Square Inox MRCIO3.5	fi 3,5mm	Pequet	Square								
Rectangle inox - welded	25/4mm	Sow-Yacht	Riser constraction								
Ring inox - welded	13/3mm	Sow-Yacht	Riser constraction								
Buckle regulator 25mm	25mm	NINGBO	Buckle trimer								
Cleat DP red	25x14mm	Backer	Riser constraction								
Machine thread Gral size 20	20	COATS	Riser sewing								