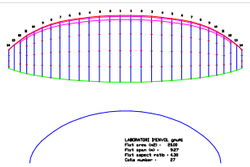
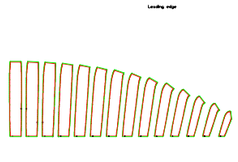
LABORATORI D'ENVOL gnuA1 3.15

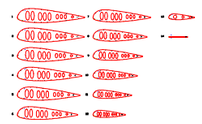


1-1 PLANFORM AND VAULT

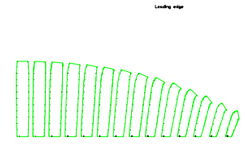
1-2 RIBS



1-3 EXTRADOS PANELS

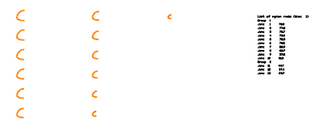


1-4 RIBS (FOR CUTTING TABLE)

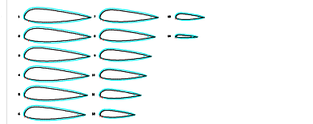


1-5 EXTRADOS PANELS (FOR CUTTING TABLE)

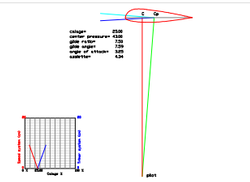
1-6 MIDDLE UNLOADED RIBS



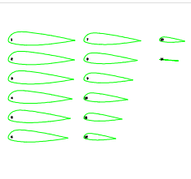
1-7 NYLON RIBS POCKETS, NOSE NYLARS



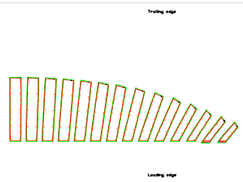
1-8 MIDDLE AND MIDDLE OVALIZED AIRFOILS



2-1 CALAGE ESTIMATION

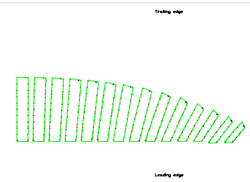


2-2 RIBS WASHIN ANGLE



2-3 INTRADOS PANELS

2-4 MINI-RIBS

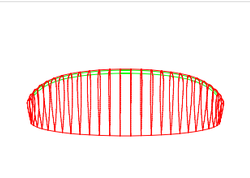


2-5 INTRADOS PANELS (FOR CUTTING TABLE)

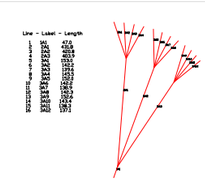
2-6 FULL DIAGONAL RIBS

2-7

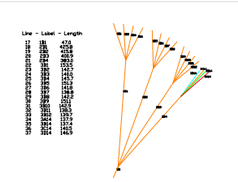
2-8



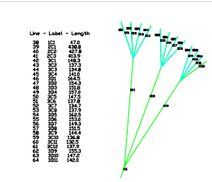
3-1 UPPER VIEW



3-2 LINES A



3-3 LINES B



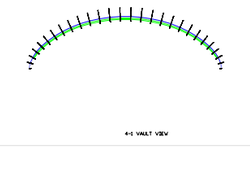
3-4 LINES C

3-5 LINES D

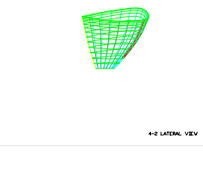
3-6 V-rib type-6

3-7

3-8



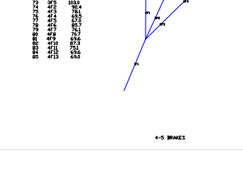
4-1 VAULT VIEW



4-2 LATERAL VIEW

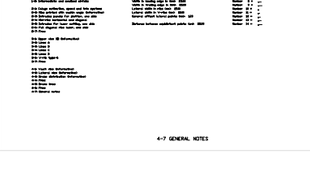
4-3 BRAKE DISTRIBUTION

4-4



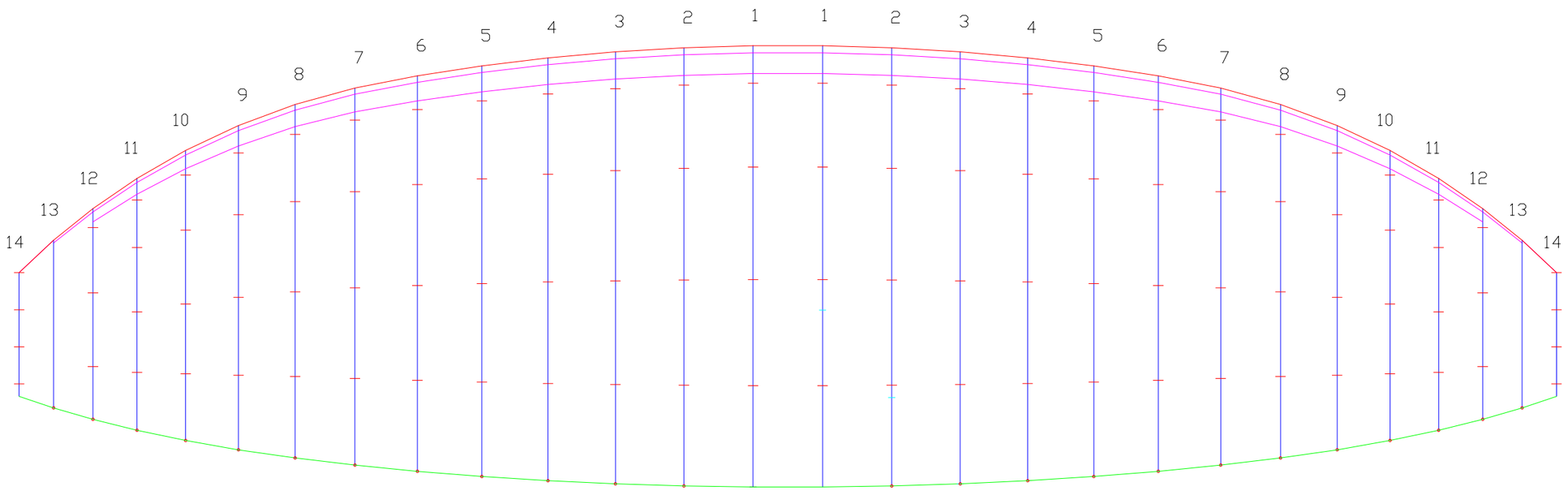
4-5 BRAKES

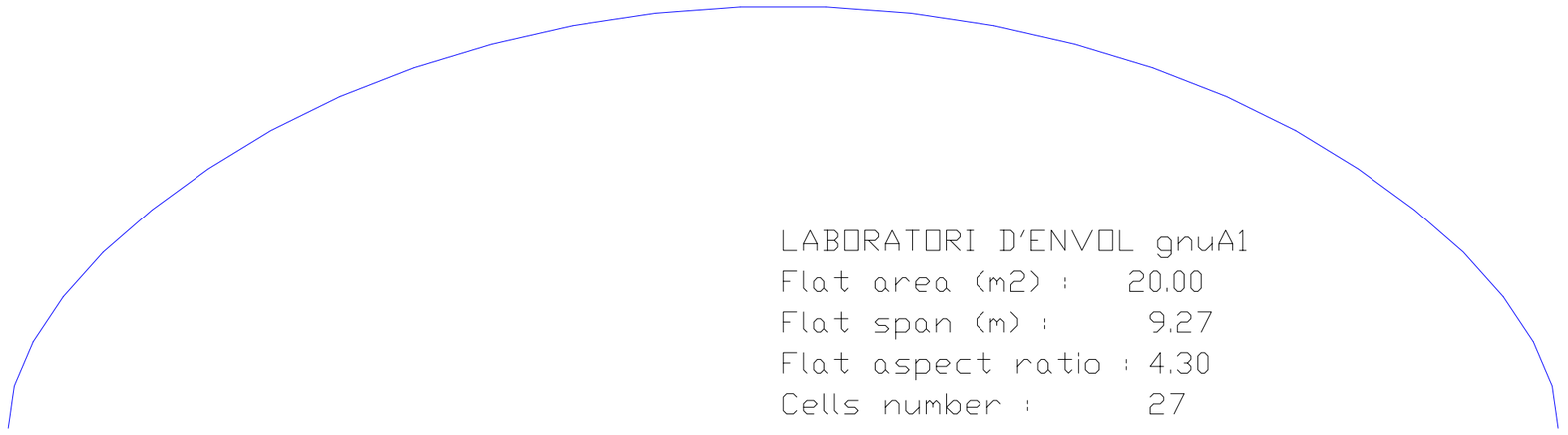
4-6



4-7 GENERAL NOTES

4-8





LABORATORI D'ENVOL gnuA1
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Flat span (m) : 9.27
Flat aspect ratio : 4.30
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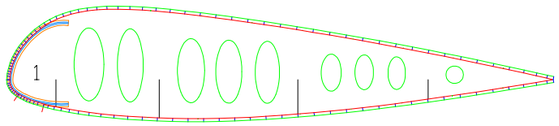
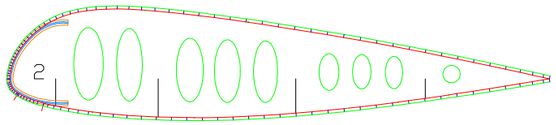
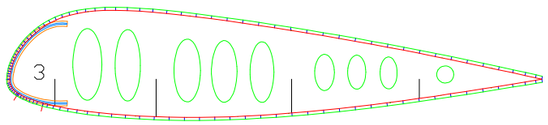
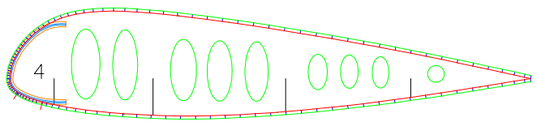
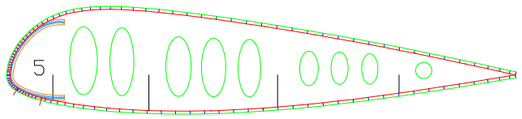
1-1 PLANFORM AND VAULT

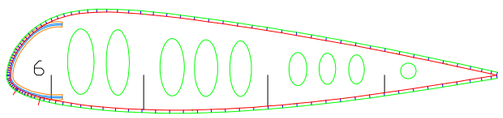


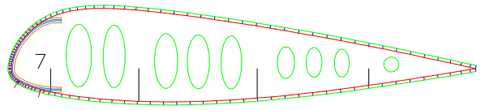


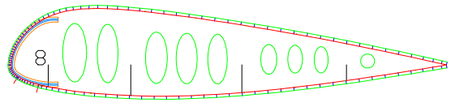


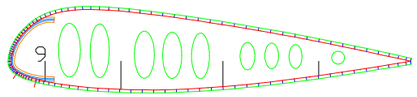


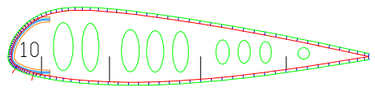


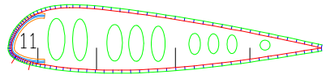


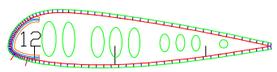


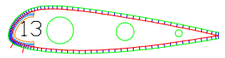


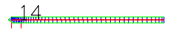






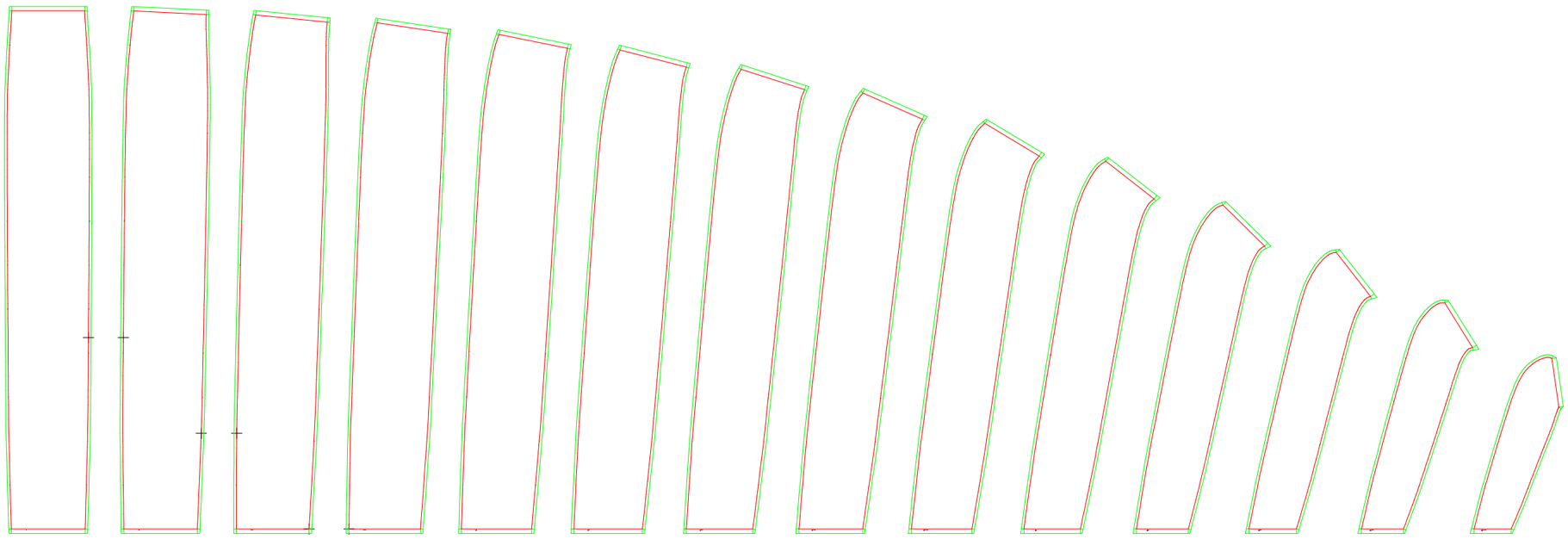






1-2 RIBS

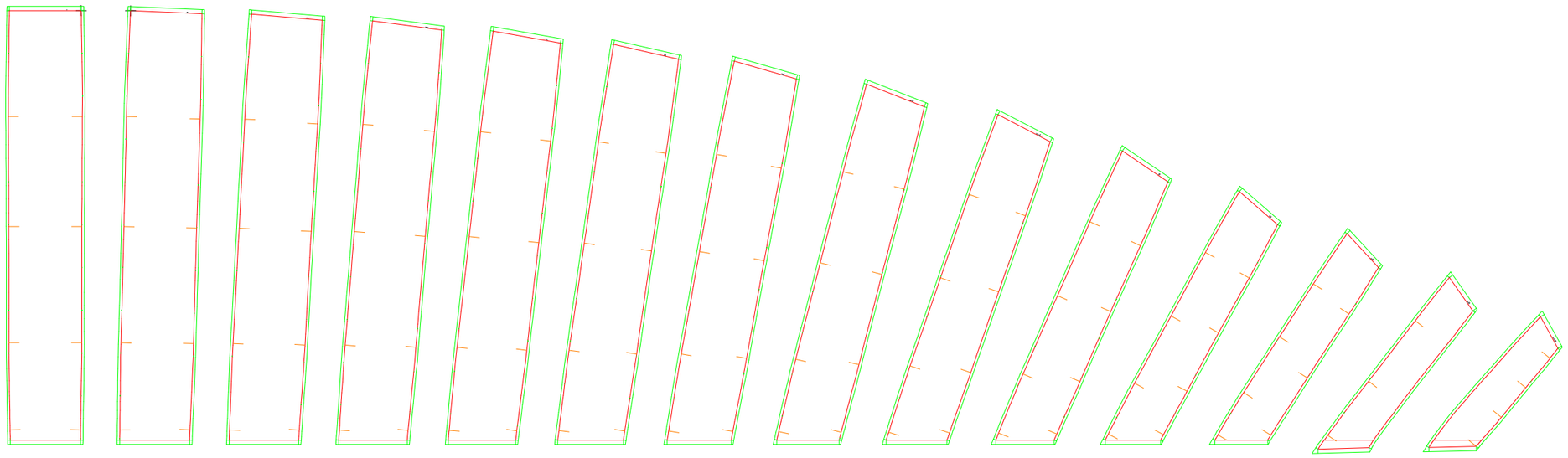
Leading edge



Trailing edge

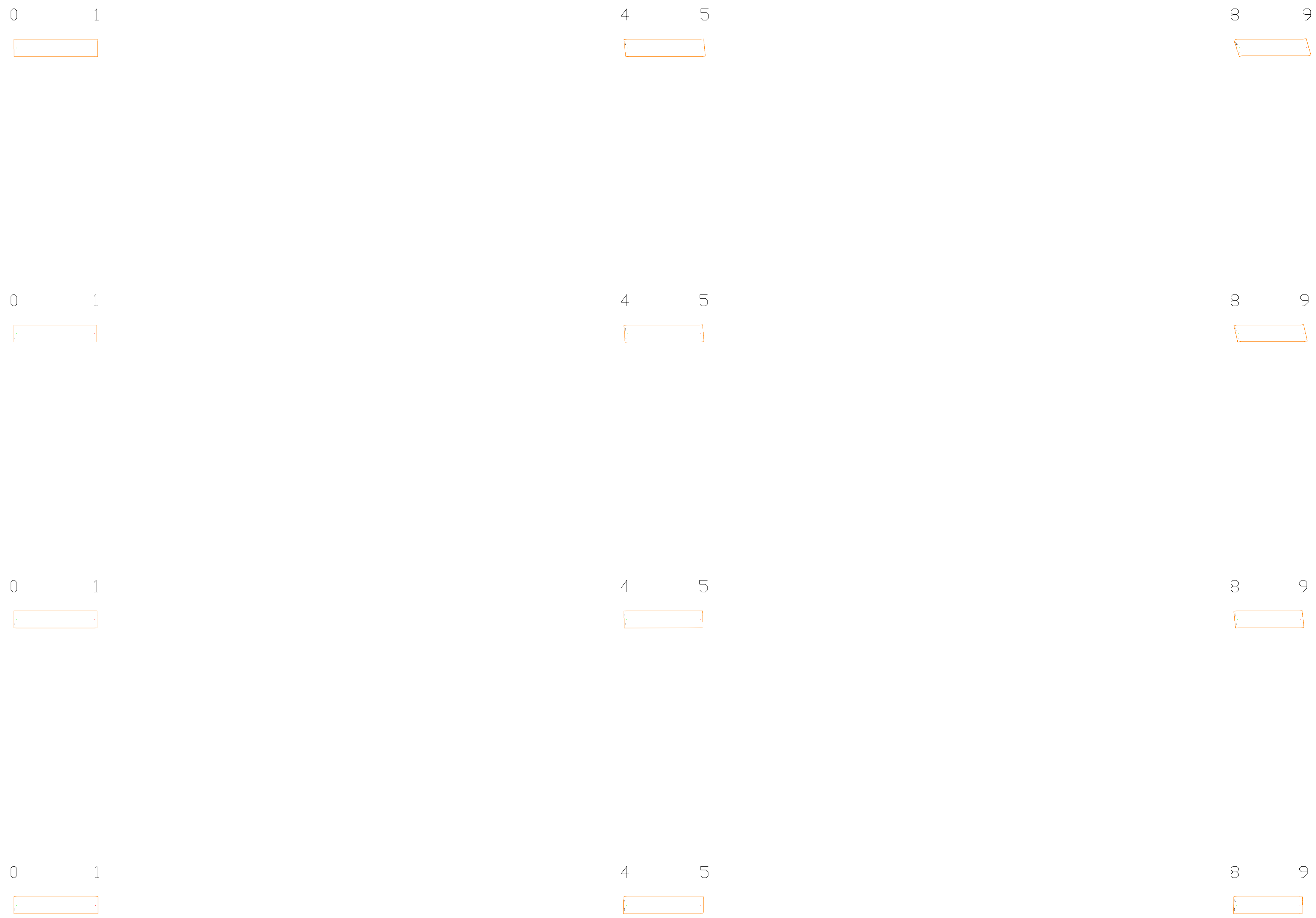
1-3 EXTRADOS PANELS

Trailing edge

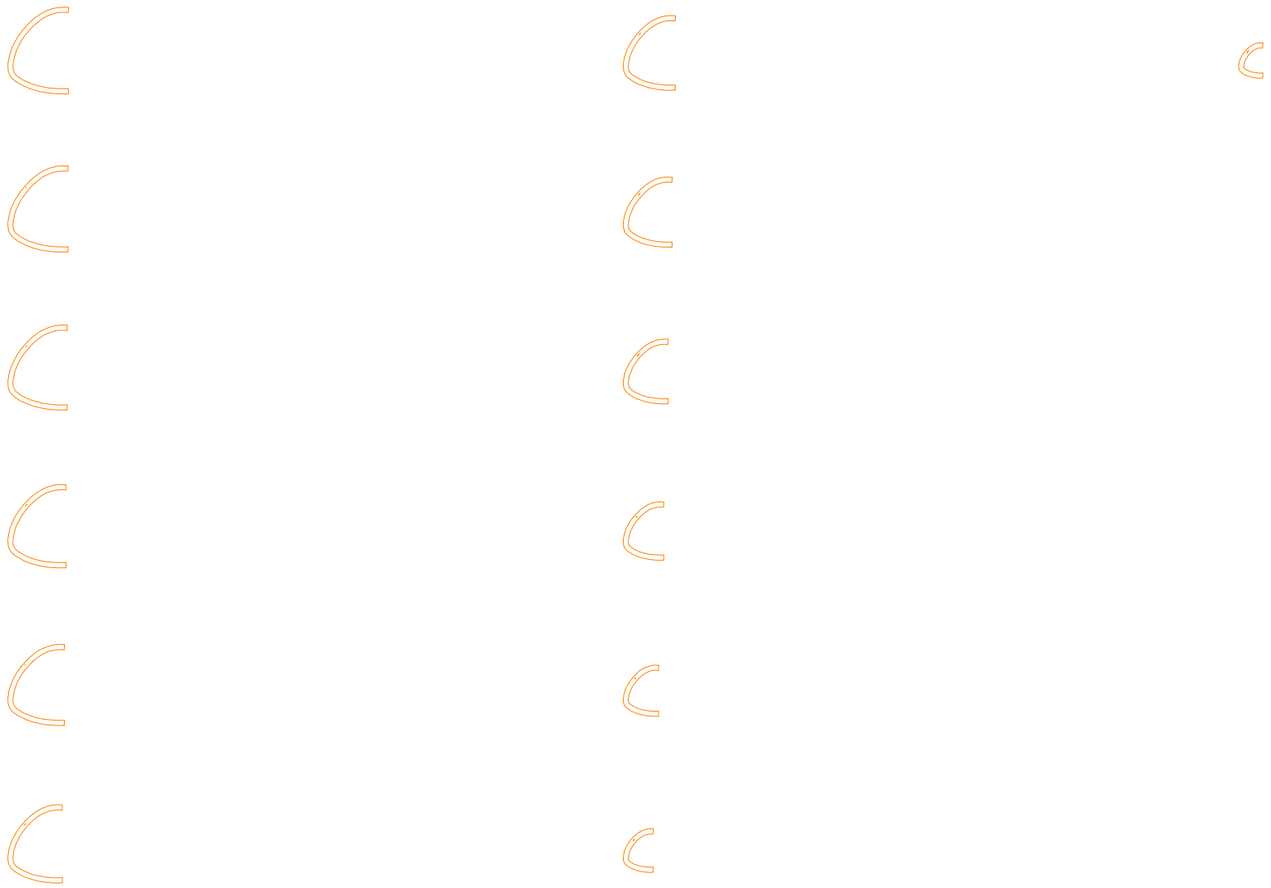


Leading edge

2-3 INTRADOS PANELS



2-4 MINI-RIBS

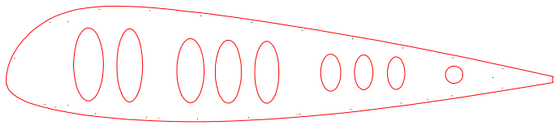


List of nylon rods (bloc 1)

Group	1	
Jonc	1	78.3
Jonc	2	77.8
Jonc	3	76.7
Jonc	4	75.0
Jonc	5	72.9
Jonc	6	70.2
Jonc	7	66.9
Jonc	8	62.7
Jonc	9	57.6
Jonc	10	51.5
Group	2	
Jonc	11	44.7
Jonc	12	37.4
Jonc	13	29.7

1-7 NYLON RODS POCKETS, NOSE MYLARS

1



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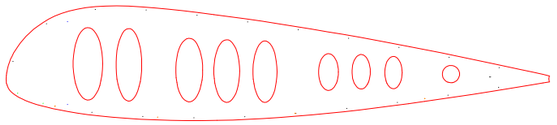

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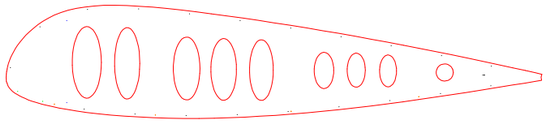

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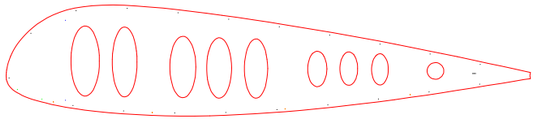

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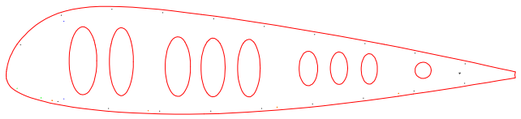

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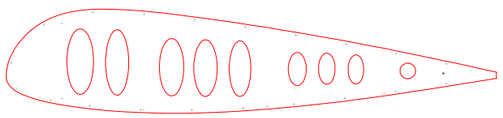

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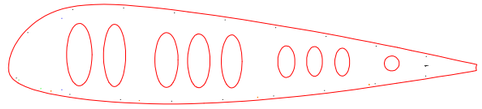

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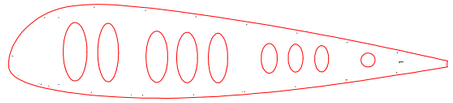

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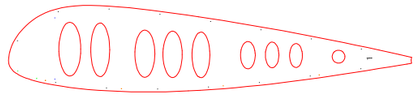

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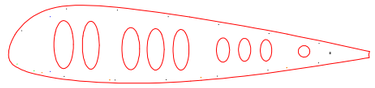


11

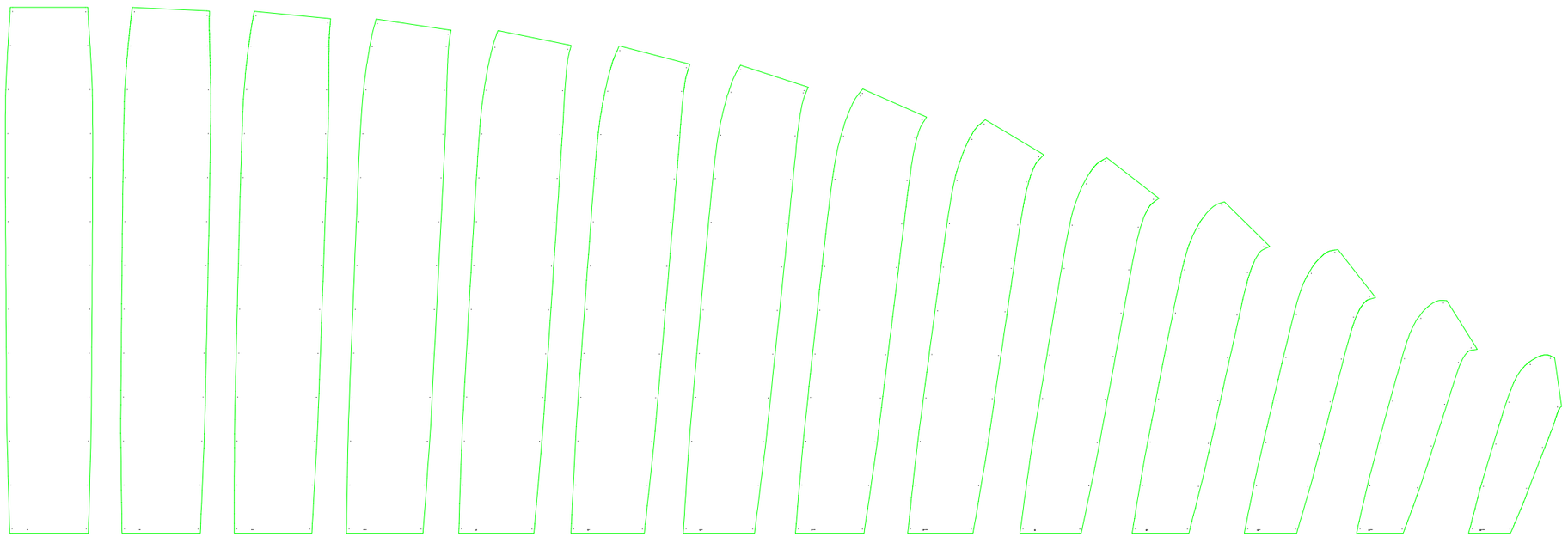
12

13

14

1-4 RIBS (FOR CUTTING TABLE)

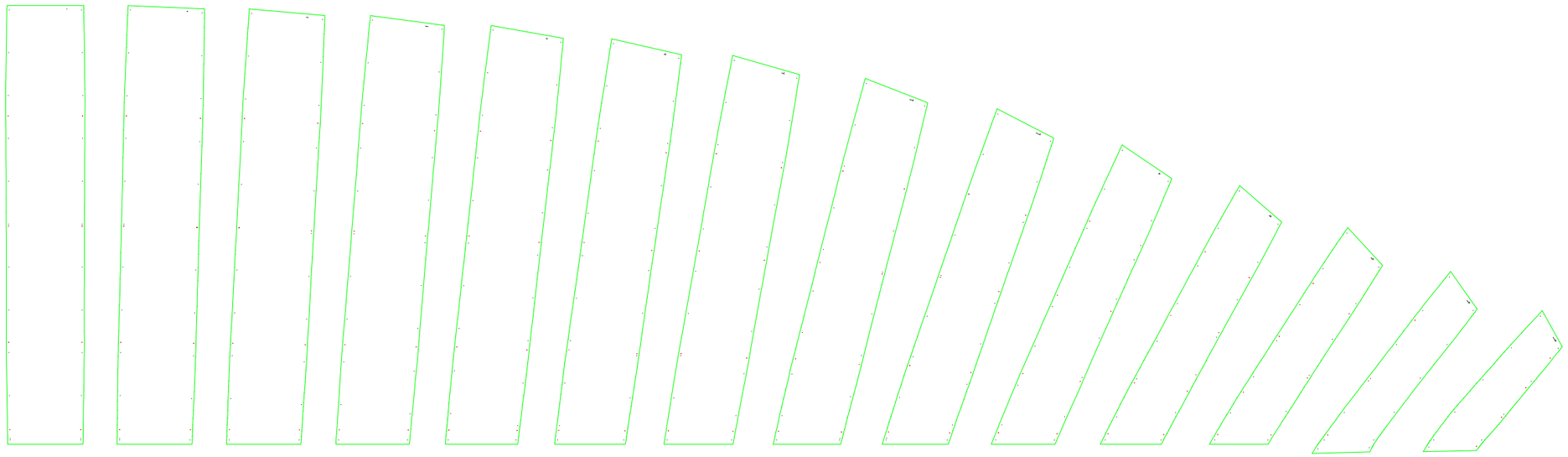
Leading edge



Trailing edge

1-5 EXTRADOS PANELS (FOR CUTTING TABLE)

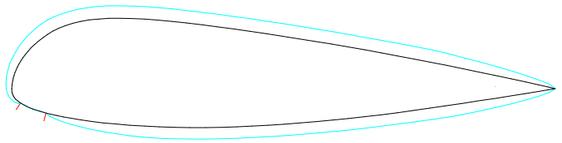
Trailing edge



Leading edge

2-5 INTRADOS PANELS (FOR CUTTING TABLE)

1



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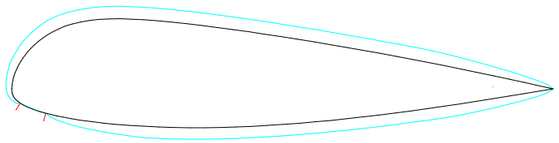

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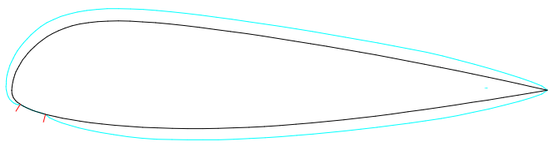

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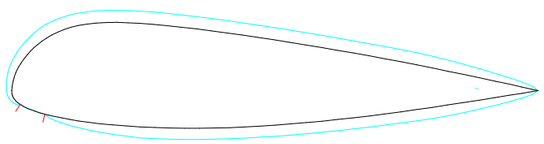

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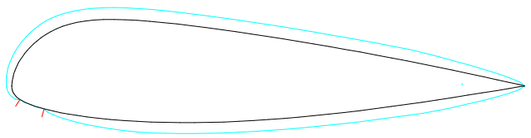

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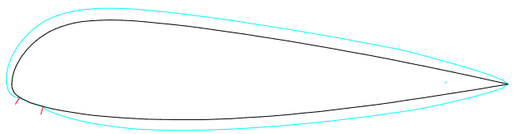

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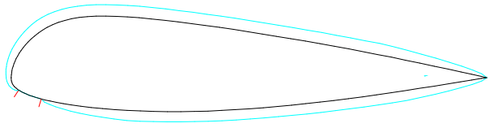
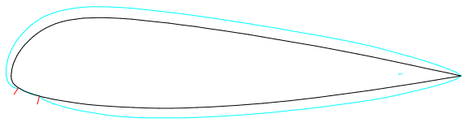


8



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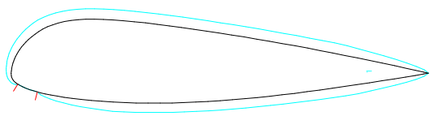

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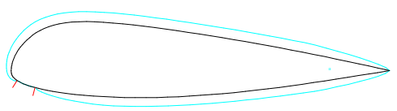

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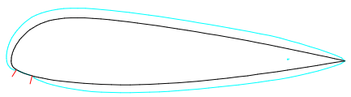
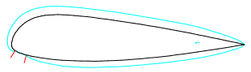


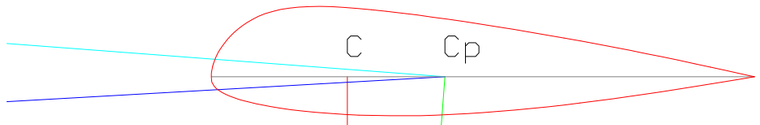
12

13



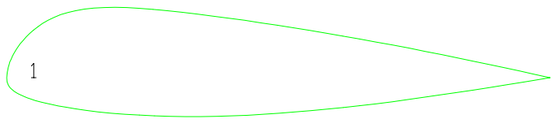
14

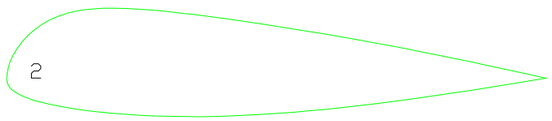
1-8 MIDDLE AND MIDDLE OVALIZED AIRFOILS

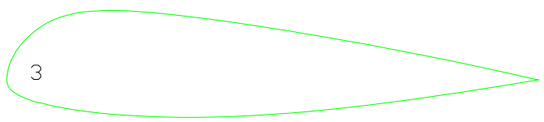


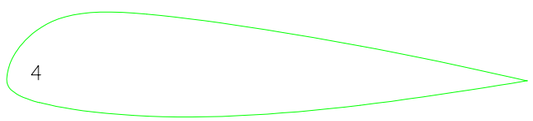
calage=	25.00
center pressure=	43.00
glide ratio=	7.50
glide angle=	7.59
angle of attack=	3.25
assiette=	4.34

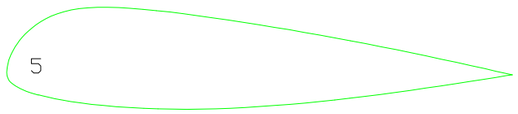
2-1 CALAGE ESTIMATION

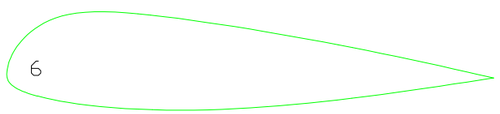


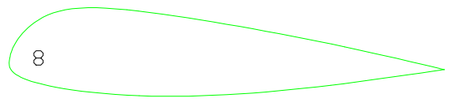


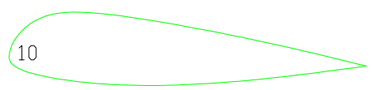


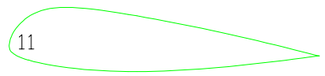






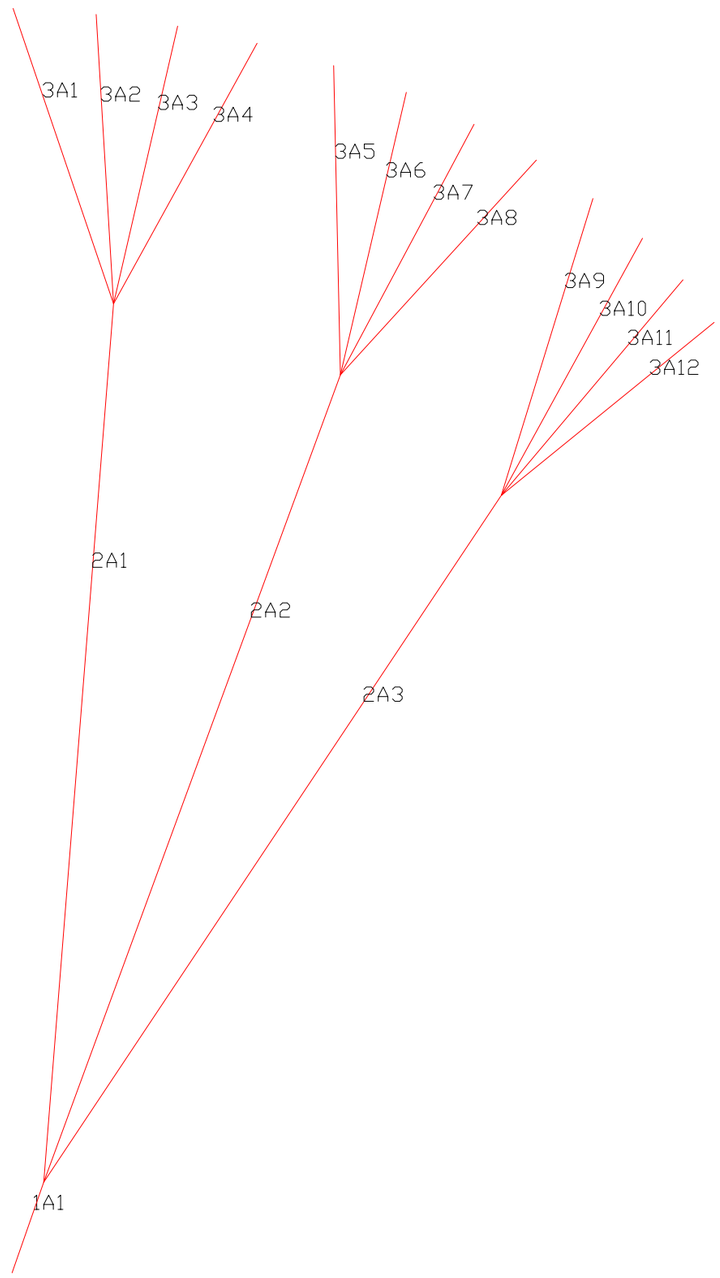






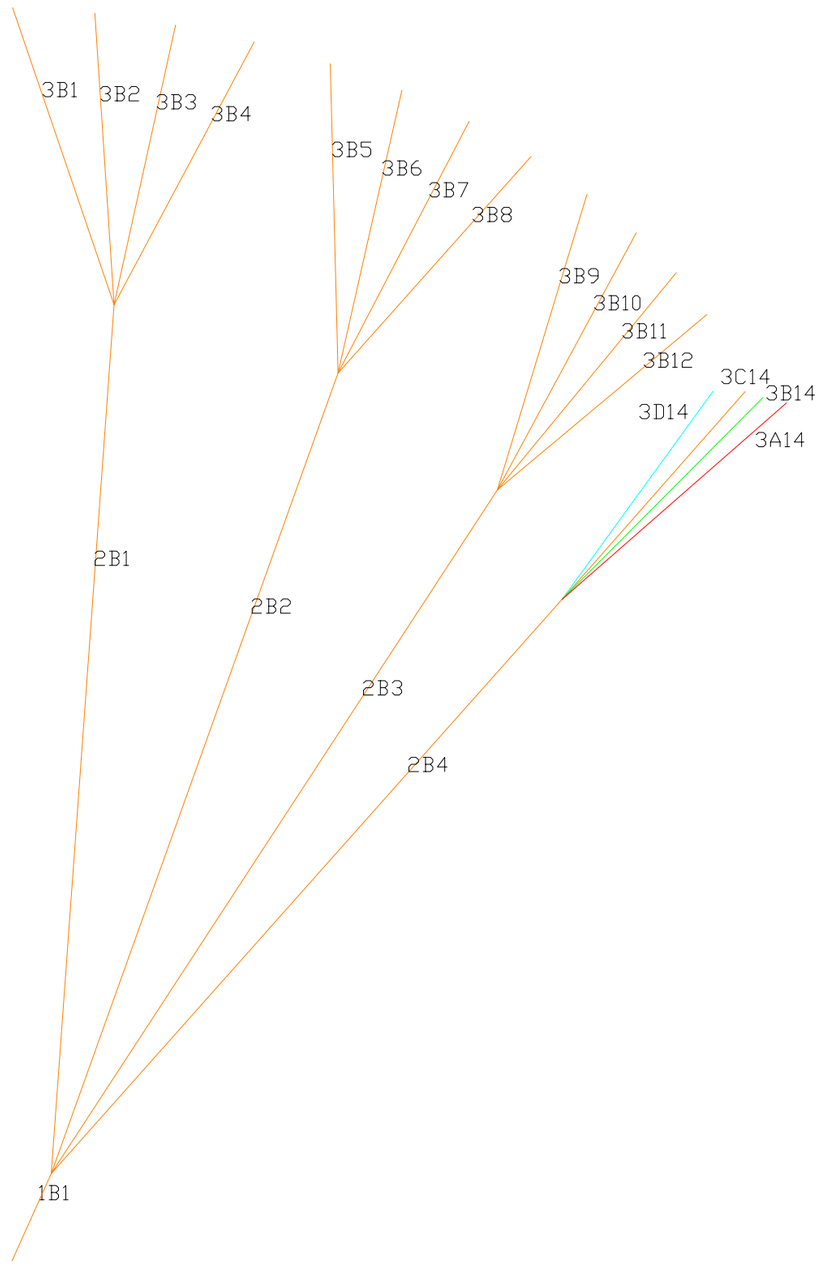
2-2 RIBS WASHIN ANGLE

Line	Label	Length
1	1A1	47.0
2	2A1	431.8
3	2A2	420.8
4	2A3	403.9
5	3A1	153.0
6	3A2	142.2
7	3A3	139.6
8	3A4	145.5
9	3A5	152.0
10	3A6	142.2
11	3A7	138.9
12	3A8	142.3
13	3A9	152.6
14	3A10	143.4
15	3A11	138.3
16	3A12	137.1



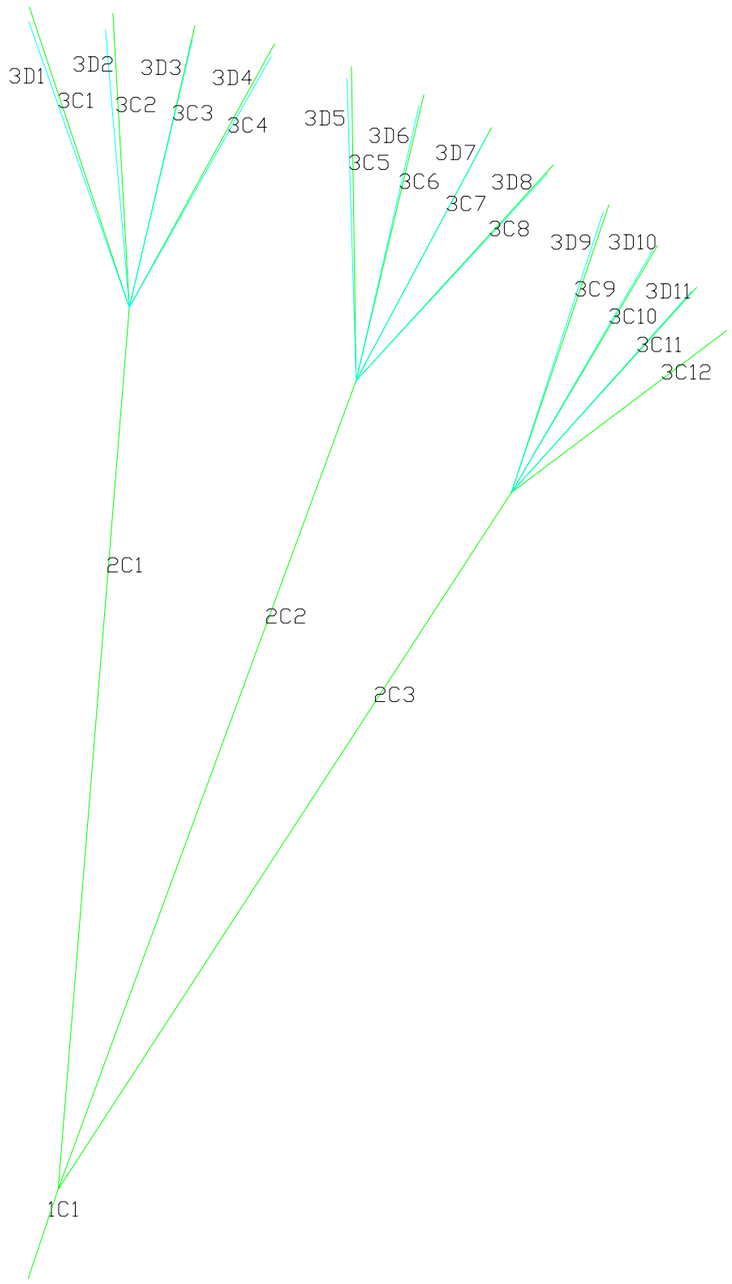
3-2 LINES A

Line	Label	Length
17	1B1	47.0
18	2B1	425.8
19	2B2	415.8
20	2B3	400.9
21	2B4	383.0
22	3B1	153.5
23	3B2	142.7
24	3B3	140.0
25	3B4	145.7
26	3B5	151.3
27	3B6	141.8
28	3B7	138.8
29	3B8	142.2
30	3B9	151.1
31	3B10	142.9
32	3B11	138.3
33	3B12	139.7
34	3A14	137.9
35	3B14	137.4
36	3C14	140.5
37	3D14	146.9



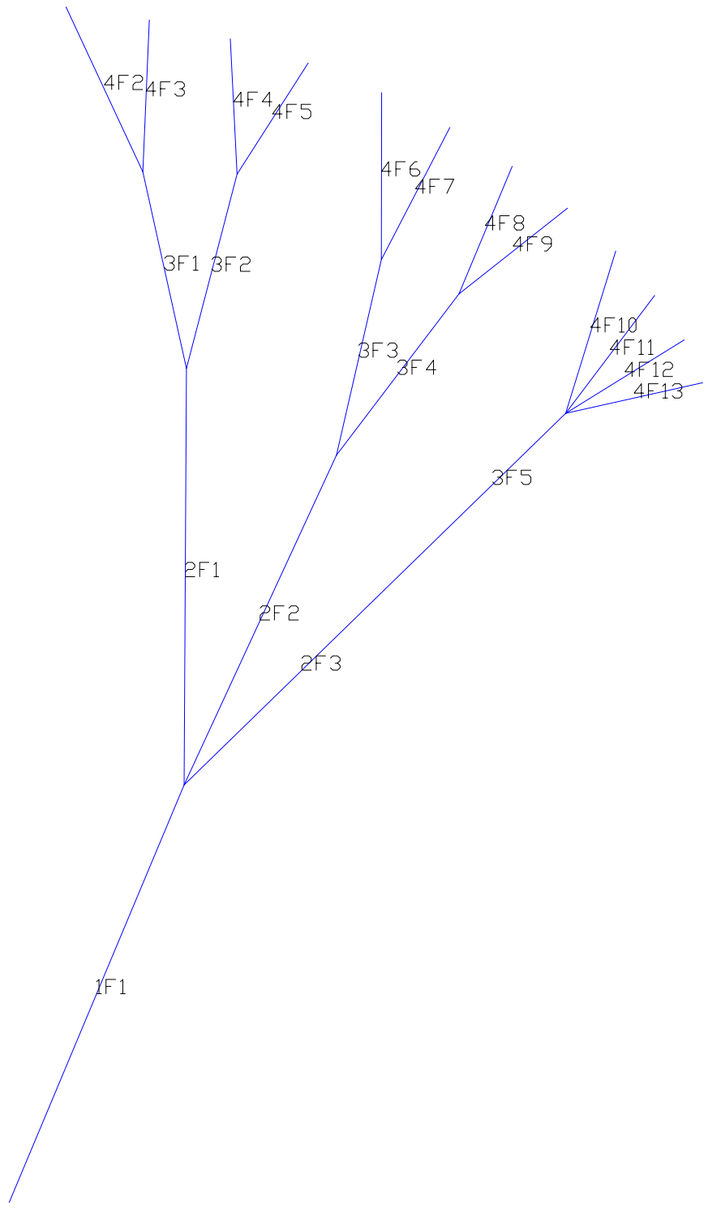
3-3 LINES B

Line	Label	Length
38	1C1	47.0
39	2C1	438.8
40	2C2	427.8
41	2C3	413.9
42	3C1	148.3
43	3C2	137.3
44	3C3	134.8
45	3C4	141.0
46	3D1	164.5
47	3D2	154.3
48	3D3	151.8
49	3D4	157.0
50	3C5	147.5
51	3C6	137.8
52	3C7	134.7
53	3C8	137.9
54	3D5	162.5
55	3D6	153.0
56	3D7	149.3
57	3D8	151.5
58	3C9	144.4
59	3C10	136.8
60	3C11	132.5
61	3C12	137.9
62	3D9	155.3
63	3D10	147.2
64	3D11	142.0

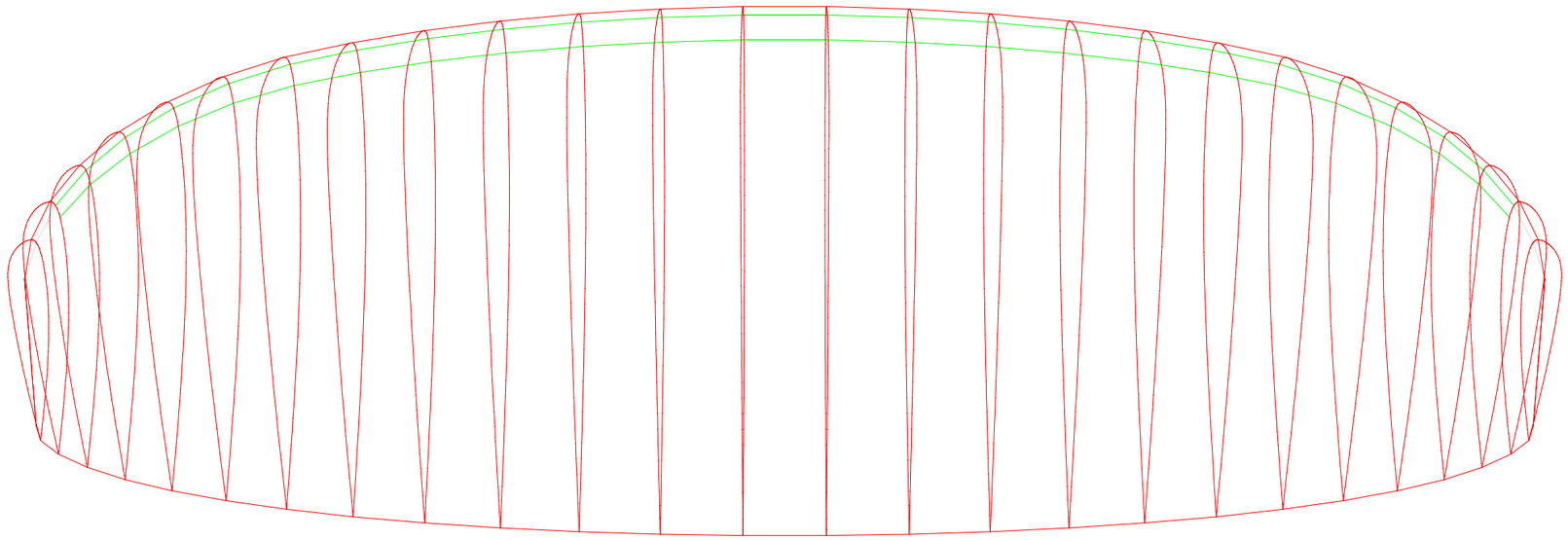


3-4 LINES C

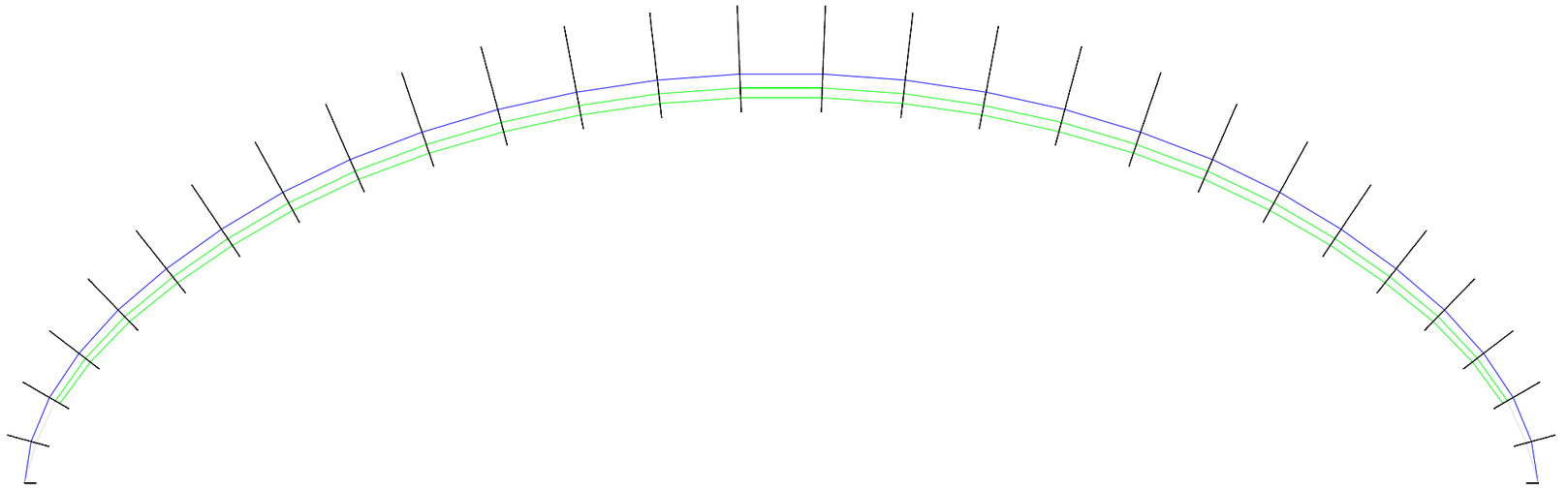
Line	Label	Length
65	1F1	232.0
66	2F1	214.0
67	2F2	186.0
68	2F3	166.0
69	3F1	103.0
70	3F2	103.0
71	3F3	103.0
72	3F4	103.0
73	3F5	103.0
74	4F2	92.4
75	4F3	78.1
76	4F4	69.5
77	4F5	67.0
78	4F6	85.7
79	4F7	76.1
80	4F8	70.7
81	4F9	69.6
82	4F10	87.3
83	4F11	75.1
84	4F12	69.6
85	4F13	69.0



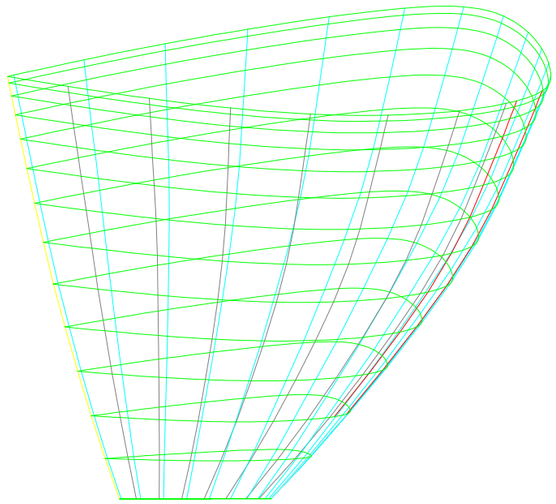
4-5 BRAKES



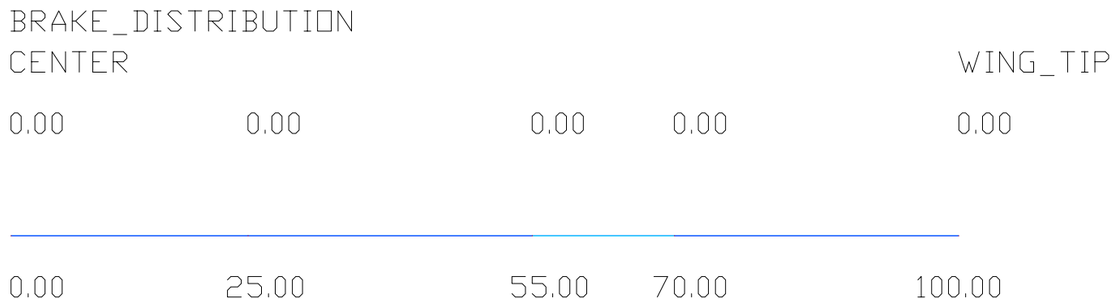
3-1 UPPER VIEW



4-1 VAULT VIEW



4-2 LATERAL VIEW



4-3 BRAKE DISTRIBUTION

PLANS GENERAL NOTES

1-1: Planform and vault view (informative)
1-2: Ribs for plotter, one side
1-3: Extrados panels for plotter, one side
1-4: Ribs for laser cutting, one side. Units cm
1-5: Extrados for laser cutting, one side.Units cm
1-6: Middle unloaded ribs for laser cutting,
one side Units cm
1-7: Rods pockets and nylons lengths, mylars
1-8: Intermediate and ovalized airfoils

2-1: Calage estimation, speed and trim systems
2-2: Ribs printed with washin angle (informative)
2-3: Intrados panels for plotter, one side
2-4: Mini-ribs horizontal and diagonal
2-5: Intrados for laser cutting, one side
2-6: Full diagonal ribs laser, one side
2-7: Free

3-1: Upper view 3D (informative)
3-2: Lines A
3-3: Lines B
3-4: Lines C
3-5: Lines D
3-6: V-rib type-6
3-7: Free

4-1: Vault view (informative)
4-2: Lateral view (informative)
4-3: Brake distribution (informative)
4-4: Free
4-5: Brake lines
4-6: Free
4-7: General notes

UNITS

Main units are centimeters. Scale x10 to use in mm

WIDTHS FOR SEWING AND OFFSETS

Lateral width in extrados (mm): 15.00
Width in leading edge ex (mm): 25.00
Width in trailing edge ex (mm): 25.00
Lateral width in intrados (mm): 15.00
Width in leading edge in (mm): 25.00
Width in trailing edge in (mm): 25.00
Lateral width in ribs (mm): 15.00
Lateral width in V-ribs (mm): 15.00
General offset lateral points (mm): 1.20

Distance between equidistant points (cm): 25.00

"ROMAN" NUMBERS CODIFICATION
Numbering panels, ribs, mini-ribs, V-ribs

Number 1 = .
Number 2 = ..
Number 3 = ...
Number 4 = ...
Number 5 = :.
Number 6 = :..
Number 7 = :...
Number 8 = :....
Number 9 = :.....
Number 10 = :
Number 11 = :.
Number 12 = :..
Number 13 = :...
Number 14 = :....

4-7 GENERAL NOTES