

Mainsail: 8000430 John-1 Columbia 45 MainsailV1.des

Design Info
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Design File:
\\NAS\Engineering files\Queenie-Customer Order\Fareast Sails\2024 Orders\Need to be Confirmed\8000430 John Col

Initial Design Date: 8/5/2024
Boat:
Columbia 45
Client:

Comments:
tack angle 88.5deg

Design Data
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Main

Measurements

Luff geodesic: 11.138m
Leech geodesic: 12.084m
Foot geodesic: 4.852m
Head geodesic: 0.135m
Upper width (MUW): 0.881m
Three-quarter width (MTW): 1.613m
Half width (MHW): 2.884m
Quarter width (MQW): 3.951m
Foot median: 11.519m
ORC Mainsail area: 30.477m?
Surface area: 31.411m?
Clew height: 0.052m
Mast rake: 0.000m

Battens

Position	Length	Roach	Angle	Luff	Leech	Full
82.000%	1.295m	0.219m	68.370?	9.128m	9.861m	Full
62.000%	2.374m	0.289m	68.370?	6.901m	7.456m	Full
42.000%	3.293m	0.250m	68.370?	4.674m	5.051m	Full
22.000%	4.087m	0.146m	68.370?	2.448m	2.646m	Full

Reefing Points

1, Luff: 1.358m ; Leech: 1.447m ; Offset: 0.000m ; Number Eyelets: 0
2, Luff: 2.951m ; Leech: 3.135m ; Offset: 0.000m ; Number Eyelets: 0

Draft Stripes

1, Luff: 3.675m ; Leech: 3.807m ;
2, Luff: 7.350m ; Leech: 7.773m ;

Luff Slides

1, Position: 0.940m
2, Position: 1.779m
3, Position: 3.414m
4, Position: 4.095m
5, Position: 5.415m
6, Position: 6.157m
7, Position: 7.642m
8, Position: 8.385m
9, Position: 9.798m
10, Position: 10.468m

Luff Curve

		Fanned Luff (@ 5.00% [0.242m])	Before BSeam
11.138m,	0.000m	100% (11.138m) :	0.000m
9.750m,	-0.026m	90% (10.025m) :	0.050m
8.353m,	-0.045m	80% (8.911m) :	0.092m
6.953m,	-0.053m	70% (7.797m) :	0.121m
5.569m,	-0.054m	60% (6.683m) :	0.138m
4.150m,	-0.050m	50% (5.569m) :	0.142m
2.784m,	-0.040m	40% (4.455m) :	0.135m
1.388m,	-0.022m	30% (3.341m) :	0.115m
0.000m,	0.000m	20% (2.228m) :	0.085m
		10% (1.114m) :	0.042m
		0% (0.000m) :	0.000m

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Seam Allowances			
Zone: 1	Split	Radial	Cross
	0.000m	0.000m	0.038m

Edge Excesses			
Sail:	Luff	Leech	Foot
	0.000m	0.000m	0.000m

Total Seam Lengths (m)

Horizontal	26.46
Radial/Vertical	0.00
Bi-Radial Split	0.00

Materials

Material	Area (m ²)	Panels
Material 1	31.44	1,2,3,4,5 6,7,8,9,10

