

# Mainsail: 8000430 John-1 Columbia 45 Mainsail.des

Design Info  
=====

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

Initial Design Date: 3/5/2024  
Boat:  
Columbia 45  
Client:

Comments:  
tack angle 88.5deg

Design Data  
=====

Main

Measurements

Luff geodesic: 11.264m  
Leech geodesic: 12.169m  
Foot geodesic: 4.776m  
Head geodesic: 0.135m  
Upper width (MUW): 0.873m  
Three-quarter width (MTW): 1.595m  
Half width (MHW): 2.846m  
Quarter width (MQW): 3.893m  
Foot median: 11.633m  
ORC Mainsail area: 30.392m?  
Surface area: 31.301m?  
Clew height: 0.052m  
Mast rake: 0.000m

Battens

Position	Length	Roach	Angle	Luff	Leech	Full
82.000%	1.279m	0.219m	68.972?	9.230m	9.932m	Full
62.000%	2.343m	0.289m	68.972?	6.978m	7.510m	Full
42.000%	3.247m	0.250m	68.972?	4.726m	5.087m	Full
22.000%	4.026m	0.146m	68.972?	2.474m	2.665m	Full

Reefing Points

1, Luff: 1.374m ; Leech: 1.458m ; Offset: 0.000m ; Number Eyelets: 0  
2, Luff: 2.984m ; Leech: 3.160m ; Offset: 0.000m ; Number Eyelets: 0

Draft Stripes

1, Luff: 3.716m ; Leech: 3.839m ;  
2, Luff: 7.433m ; Leech: 7.834m ;

Luff Slides

1, Position: 0.950m  
2, Position: 1.799m  
3, Position: 3.452m  
4, Position: 4.141m  
5, Position: 5.476m  
6, Position: 6.227m  
7, Position: 7.728m  
8, Position: 8.479m  
9, Position: 9.908m  
10, Position: 10.586m

Luff Curve

		Fanned Luff (@ 5.00% [0.238m])	Before BSeam
11.264m,	0.000m	100% (11.264m) :	0.000m
9.860m,	-0.026m	90% (10.138m) :	0.049m
8.448m,	-0.045m	80% (9.011m) :	0.091m
7.032m,	-0.053m	70% (7.885m) :	0.120m
5.632m,	-0.054m	60% (6.758m) :	0.136m
4.197m,	-0.050m	50% (5.632m) :	0.141m
2.816m,	-0.040m	40% (4.506m) :	0.134m
1.404m,	-0.022m	30% (3.379m) :	0.114m
0.000m,	0.000m	20% (2.253m) :	0.084m
		10% (1.127m) :	0.042m
		0% (0.000m) :	0.000m

# Mainsail: 8000430 John-1 Columbia 45 Mainsail.des

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	26.42
Radial/Vertical	0.00
Bi-Radial Split	0.00

Materials

Material	Area (m <sup>2</sup> )	Panels
Material 1	31.33	1,2,3,4,5 6,7,8,9,10

