

# Mainsail: 6001226 Daniel FMain Bavaria 30 cruiser-V2.des

## Daniel Peter Job Number: 6001226 Daniel

Design Info  
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Design File:  
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Job No: 6001226 Daniel  
Initial Design Date: 31/12/2022  
Boat:  
Bavaria 30 Cruiser  
Client:  
Daniel Peter

Comments:  
Bavaria 30, FR rig, radial cut  
Luff = max 11.037m, Leech = 11.362 m, Foot = 4.12 m  
4 vertical batten,  
radial seams = 15 mm, zone seams = 25 mm  
clew radial patches ,fan patch at head &tack.  
2 Draft stripe, Clew UV cover

Design Data  
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Main

Measurements

Luff geodesic: 10.917m  
Leech geodesic: 11.259m  
Foot geodesic: 4.100m  
Head geodesic: 0.040m  
Upper width (MUW): 0.614m  
Three-quarter width (MTW): 1.174m  
Half width (MHW): 2.221m  
Quarter width (MQW): 3.182m  
Foot median: 10.955m  
ORC Mainsail area: 23.611m?  
Surface area: 23.681m?  
Clew height: 0.429m  
Mast rake: 0.000m

Seams: Tripplle stitched  
Material: Challenge Sailcloth 6.11 Warp - Drive

Sail head: webbing loop  
Sail tack: webbing loop  
Sail clew: Rutgeron clew block 1692-060

Luff tape 5mm

UV Cover: Both sides around the leech,  
Material: Sunbrella 9oz, Color: Ocean Blue C8479  
Footlength ~450mm

Leech string with aluminium cleat, e.g. Clamcleat CL241  
Foot string with aluminium cleat, e.g. Clamcleat CL241

Reef marks: 3  
Draft stripes: 2, color blue, with ~40mm  
Tell tales: 10 on both sides, color blue, ripstop material  
Leech tell tales: 4, color blue, ripstop material

Battens

Position	Length	Roach	Angle	Luff	Leech	Full
80.000%	1.400m	0.077m	158.996?	143.056m	8.987m	
60.000%	1.400m	0.082m	158.996?	269.003m	6.740m	
40.000%	1.400m	0.057m	158.996?	394.947m	4.494m	
21.000%	1.400m	0.032m	158.996?	514.596m	2.359m	

Battens located on the port side of the sail!

Reefing Points

1, Luff: 0.000m ; Leech: 0.000m ; Offset: 0.000m ; Number Eyelets: 0  
2, Luff: 0.000m ; Leech: 0.000m ; Offset: 0.000m ; Number Eyelets: 0  
3, Luff: 0.000m ; Leech: 0.000m ; Offset: 0.000m ; Number Eyelets: 0

Draft Stripes

1, Luff: 3.601m ; Leech: 3.400m ;  
2, Luff: 7.203m ; Leech: 7.244m ;

Nation sign & sail number: SUI 607, letter size 380mm  
Class sign: Bavaria 30 Cruiser, size h:~800mm w:~900mm

Luff Curve

	Fanned Luff (@ 5.00% [0.203m])	Before BSeam
10.917m, 0.000m	100% (10.917m) :	-0.000m
9.557m, -0.009m	90% (9.826m) :	0.004m
8.188m, -0.016m	80% (8.734m) :	0.009m
6.816m, -0.019m	70% (7.642m) :	0.011m
5.459m, -0.020m	60% (6.550m) :	0.012m
4.068m, -0.019m	50% (5.459m) :	0.011m
2.729m, -0.015m	40% (4.367m) :	0.009m
1.360m, -0.008m	30% (3.275m) :	0.007m
0.000m, 0.000m	20% (2.183m) :	0.004m
	10% (1.092m) :	0.001m
	0% (0.000m) :	0.000m



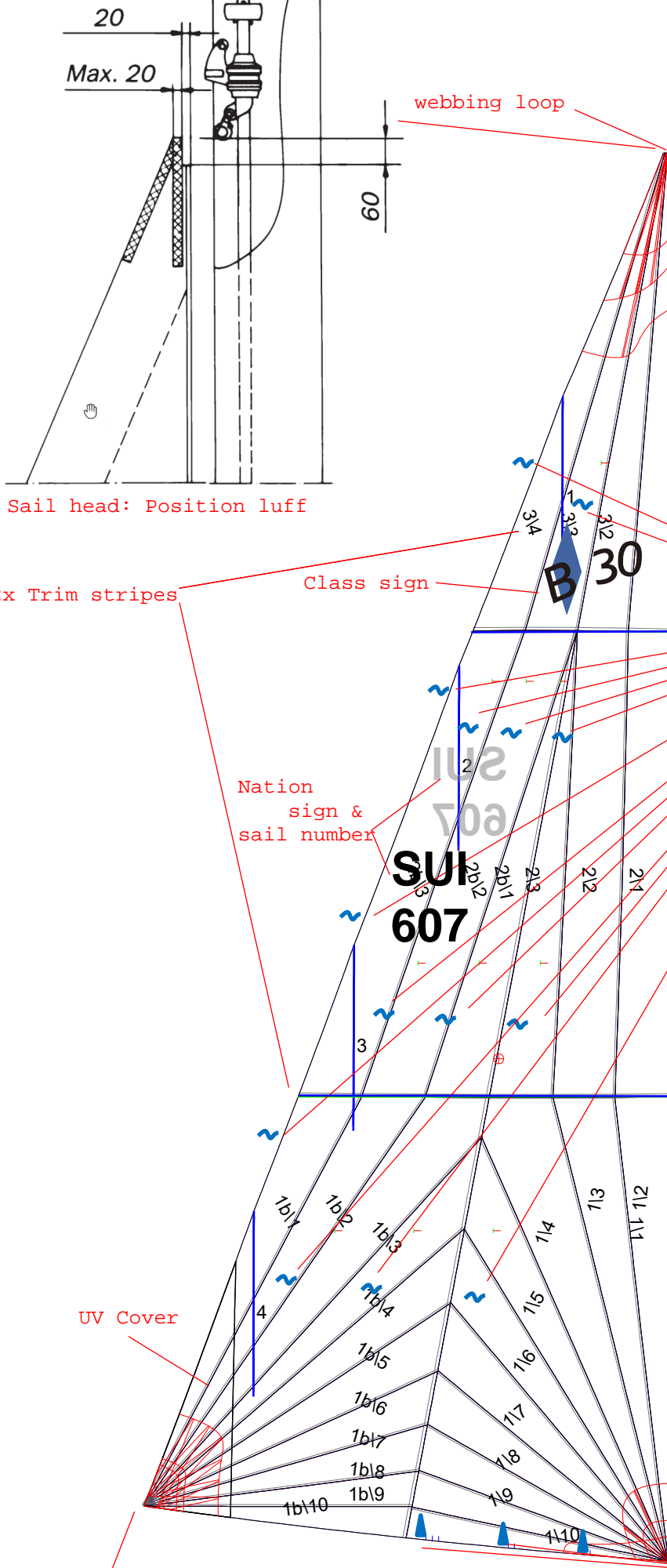
The following dimensions have to be checked after production and before shipping to prevent from return shipments!

Max luff including webbings: 11.037m  
Tack Angle: 42° resp. clew height: 0.429m

**APPROVED**

*D. Peter*

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Seam Allowances

	Split	Radial	Cross
Zone: 1/a	0.025m	0.015m	0.025m
Zone: 1/b	0.025m	0.015m	0.025m
Zone: 2/a	0.025m	0.015m	0.025m
Zone: 2/b	0.025m	0.015m	0.025m
Zone: 3	0.025m	0.015m	0.025m
Cover 1	0.000m	0.000m	0.000m
Cover 2	0.000m	0.000m	0.000m

Edge Excesses

	Luff	Leech	Foot
Sail:	0.000m	0.000m	0.000m
Cover 0	0.000m	0.000m	0.000m
Cover 1	0.000m	0.000m	0.000m

Total Seam Lengths (m)

Horizontal	4.60
Radial/Vertical	78.35
Bi-Radial Split	7.35

Materials

Material	Area (m <sup>2</sup> )	Panels
Material 1	23.72	1/1, 1/2, 1/3, 1/4, 1/5 1/6, 1/7, 1/8, 1/9, 1/10 1b/1, 1b/2, 1b/3, 1b/4, 1b/5 1b/6, 1b/7, 1b/8, 1b/9, 1b/10 2/1, 2/2, 2/3, 2b/1, 2b/2 2b/3, 3/1, 3/2, 3/3, 3/4

Sail head: Position luff

2x Trim stripes

Class sign

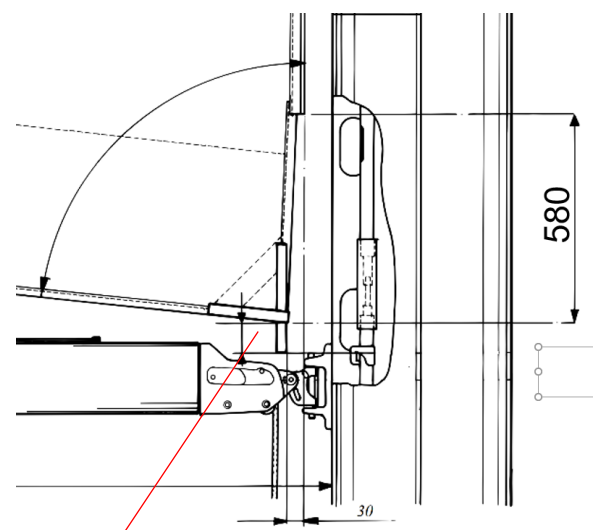
10x Tell tales  
+ 4 leech tell tales

Nation  
sign &  
sail number

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*Stele*

UV Cover



Sail tack: Position luff  
tape

webbing loop

Rutgeron clew block

3x Reef marks

## Battens detail:

*Steve*

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Batten cut to fit pocket tightly and inserted to inboard end

Batten bowed to allow entry to top half

Batten twists and lays flat inside of pocket under tension

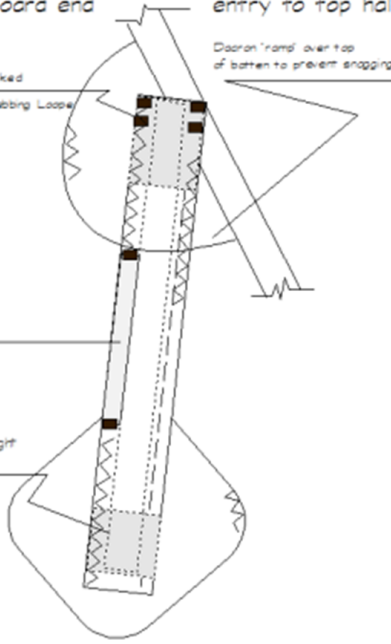
Security Bar-Tacked  
End finished with Light Webbing Loops

Diagonal 'ramp' over top of batten to prevent snagging

75mm opening centered between ends of pocket. Strongly barn-tacked at top and bottom of opening

End finished with Light weight webbing loop

Inboard and Leach end finished with extra layers as shown



Batten:

Pocket:

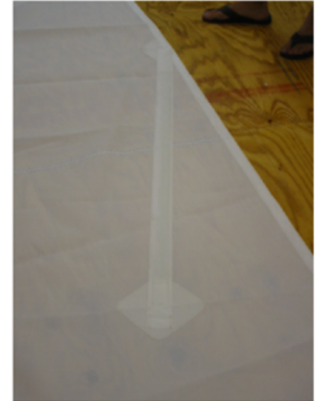
Light web reinforcement:

Landing:

Outboard

Inboard ends:

Sail:



## Guidelines of Selden for the furling mainsail with battens:

### Batten types

The main batten types used in furling main sails are: full-length vertical battens, short vertical battens and horizontal (foldable) battens. Experience has shown that vertical battens work very well whereas horizontal battens have a tendency to snag in the sail slot when the sail is furled out.

If full-length vertical battens are used, round battens generally work better than square battens since square battens can twist. If short vertical battens are used, square battens often work well and are usually less bulky.

### Batten location

Battens must be located on the port side of the sail so as not to snag on the inside of the sail compartment.

### End fittings, connectors and tensioning arrangement

End fittings, connectors and tensioning arrangement (vertical battens) should be made as slim as possible. Bulky solutions may cause the battens to snag in the sail slot.

### Short vertical battens – vertical displacement

Short vertical battens should be located so that they do not overlap each other vertically. The lowest batten should not overlap the clew reinforcement.