

## Technical Report

# Bill of Material Report

Report generated in BoMGen powered by CompoSIDE

<b>Document:</b>	BoMGEN Report
<b>Product Name:</b>	60' Motor Sports Fishing Boat
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<b>Circulation:</b>	

### Issues and Amendments:

Issue	Issue Log	Issued by	Approved by	Issue Date
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### Disclaimer:

1. This document is intended for estimation purposes only and is not to be used for materials order.
2. This document should be used as a guide to tendering only. It remains the responsibility of the builder to satisfy himself as to the final selection of materials and the quantities required.
3. Some of the laminates are based on limited information and previous experience.
4. The laminates will be subject to change as the design evolves.
5. The "Weight Estimate" is exclusive of "wastage factors" (i.e. weights as designed) but includes "usage factor" (i.e. core resin consumption etc.).
6. The "Bill of Materials (BoM)" estimate includes "wastage and usage factors"
7. Product BoM factors are specified in the Appendix to this document or if specific for component in the document section outlining component BoM.
8. It is the builder responsibility to verify the appropriateness of the "wastage factors" and "usage factors" applied.

## 1. Introduction

<b>Product:</b>	60' Motor Sports Fishing Boat
<b>Product Type:</b>	
<b>Keywords:</b>	Bill of Materials

## 2. Product Summary

### 2.1 BoM - Summary

		Summary		
Type	Material / Component	Total Areal Quantity <sup>1</sup> [m <sup>2</sup> ]	Total Weight Quantity <sup>1</sup> [kg]	Total Material Cost <sup>1</sup> [€]
	Total		110.37	-
Cores	17 mm T10.110	2.75	4.27	-
	20 mm T10.100	5.23	12.46	-
	30 mm T10.110	0.35	0.95	-
	34 mm R63.140	2.8	14.51	-
	40 mm T10.100	0.25	1.19	-
	40 mm T10.110	0.45	1.65	-
	55 mm T10.100	0.35	2.32	-
	7 mm T10.110	3.53	2.26	-
	8 mm T10.110	3.96	2.9	-
Plies	QC-SM600-EP-PP	10.29	9.92	-
	UC-SM300-EP-PP	5.56	2.53	-
	XC-SM300-EP-PP	88.33	42.57	-
	XC-SM400-EP-PP	19.96	12.83	-

Core Weights include Resin Weight due to core resin consumption.

Areal and weight quantities include wastage and usage factors.

For core sheet size please refer to section: "Material Details"

## 2.2 BoM - Cost

		Component (Material Cost) [€]			
Type	Material / Component	HULL	DECK	INTERNAL	Engine Grillage
	Total	-	-	-	-
Cores	17 mm T10.110	-	-	-	-
	20 mm T10.100	-	-	-	-
	30 mm T10.110	-	-	-	-
	34 mm R63.140	-	-	-	-
	40 mm T10.100	-	-	-	-
	40 mm T10.110	-	-	-	-
	55 mm T10.100	-	-	-	-
	7 mm T10.110	-	-	-	-
	8 mm T10.110	-	-	-	-
Plies	QC-SM600-EP-PP	-	-	-	-
	UC-SM300-EP-PP	-	-	-	-
	XC-SM300-EP-PP	-	-	-	-
	XC-SM400-EP-PP	-	-	-	-

Core Weights include Resin Weight due to core resin consumption.  
 Areal and weight quantities include wastage and usage factors.  
 For core sheet size please refer to section: "Material Details"

## 2.3 Weight Estimate

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#	Component	As Designed Weight <sup>2</sup> [kg]
1	DECK	25.13
2	HULL	74.45

## 3. Components Summary

### 3.1 HULL (incl. Sub-components details)

Quantity: 1 (Including parent component quantity)

#### 3.1.1 HULL Unique Material List (Total quantities)

#	Material Name	Type	As Designed Area <sup>2</sup> [m <sup>2</sup> ]	Total Area <sup>1</sup> [m <sup>2</sup> ]	As Designed Weight <sup>2</sup> [kg]	Total Weight <sup>1</sup> [kg]	Total Resin Weight <sup>1</sup> [kg]	Total Fibre Weight <sup>1</sup> [kg]	Total Price [€]	Price per Kg [€]
1	QC-SM600-EP-PP	Ply	9.33	10.29	8.91	9.92	0	0	-	-
2	UC-SM300-EP-PP	Ply	3.37	3.71	1.51	1.69	0	0	-	-
3	XC-SM300-EP-PP	Ply	58.51	64.51	27.92	31.09	0	0	-	-
4	XC-SM400-EP-PP	Ply	4.73	5.22	3.01	3.35	0	0	-	-
5	17 mm T10.110	Core	2.38	2.75	3.89	4.27	0	0	-	-
6	20 mm T10.100	Core	4.53	5.23	11.33	12.46	0	0	-	-
7	34 mm R63.140	Core	2.43	2.8	13.19	14.51	0	0	-	-
8	40 mm T10.100	Core	0.22	0.25	1.08	1.19	0	0	-	-
9	40 mm T10.110	Core	0.39	0.45	1.5	1.65	0	0	-	-
10	55 mm T10.100	Core	0.31	0.35	2.11	2.32	0	0	-	-

Core Weights include Resin Weight due to core resin consumption.

#### HULL Subcomponents:

#	Name	Type	Unit Area / Unit Length [m <sup>2</sup> ] / [mm]	Unit Subcomponent Weight (Factored) <sup>2</sup> [kg]	Unit Quantity	Quantity (including component quantity)
1	Hull Laminates	Surface Element	9.34 / -	60.01	1	1
2	Hull Aft Transverse Beam	Beam	- / 1294	1.76	1	1
3	Hull Topside Beam	Beam	- / 2657	3.1	1	1
4	Slamming beams	Beam	- / 1435	3.32	1	1

#### 3.1.2 HULL Stacking

##### 3.1.2.1 Hull Laminates StackUp (Surface Element)

Area: 9.34 [m<sup>2</sup>]    Component Area Percentage: 100 [%]

Material	$\alpha$	Area / Cov.	Comment
	[°]	[m <sup>2</sup> ] / [%]	
1	QC-SM600-EP-PP	0	4.53 / 48.52
2	XC-SM400-EP-PP	45	2.43 / 25.99
3	XC-SM300-EP-PP	45	2.38 / 25.49
4 - 6	3 x XC-SM300-EP-PP	45	9.34 / 100
7	34 mm R63.140	0	2.43 / 25.99
8	17 mm T10.110	0	2.38 / 25.49
9	20 mm T10.100	0	4.53 / 48.52
10 - 11	2 x XC-SM300-EP-PP	45	9.34 / 100
12	XC-SM300-EP-PP	45	4.81 / 51.48
13	QC-SM600-EP-PP	0	4.53 / 48.52

##### 3.1.2.2 Hull Aft Transverse Beam StackUp (Beam)

Subcomponent Quantity: 1, Length: 1294 [mm]

Material	$\alpha$	Width / Leng. / Cov.	Comment	Shear Web	Capping	Inner Skin	Outer Skin
	[°]	[mm] / [mm] / [%]		ShearWeb	Capping	Reinforcement	Reinforcement
1 - 2 2 x XC- SM300-EP-PP	45	220 / 1294 / 100	SHEAR WEB SKIN (LAP ON TOP FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 40 mm T10.100	0	167 / 1294 / 100	SHEAR WEB CORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 - 5 2 x XC- SM300-EP-PP	45	177 / 1294 / 100	SHEAR WEB SKIN (LAP ON BOTTOM FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 UC-SM300- EP-PP	0	50 / 1294 / 100	INNER SKIN REINFORCEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7 - 8 2 x UC- SM300-EP-PP	0	50 / 1294 / 100	OUTER SKIN REINFORCEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9 - 18 10 x UC- SM300-EP-PP	0	50 / 1294 / 100	BEAM CAPPING	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Element Quantity		[-]		1	1	1	1
Single Element Thickness		[mm]		41.28	2.98	0.3	0.6
Average Lap Distance		[mm]		0	0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)		[mm]		0	0	0	0

### 3.1.2.3 Hull Topside Beam StackUp (Beam)

Subcomponent Quantity: 1, Length: 2657 [mm]

Material	$\alpha$	Width / Leng. / Cov.	Comment	Shear Web	Capping	Inner Skin	Outer Skin
	[°]	[mm] / [mm] / [%]		ShearWeb	Capping	Reinforcement	Reinforcement
1 - 2 2 x XC- SM300-EP-PP	45	200 / 2657 / 100	SHEAR WEB SKIN (LAP ON TOP FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 40 mm T10.110	0	147 / 2657 / 100	SHEAR WEB CORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 - 5 2 x XC- SM300-EP-PP	45	157 / 2657 / 100	SHEAR WEB SKIN (LAP ON BOTTOM FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 - 7 2 x UC- SM300-EP-PP	0	50 / 2657 / 100	INNER SKIN REINFORCEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8 - 10 3 x UC- SM300-EP-PP	0	50 / 2657 / 100	OUTER SKIN REINFORCEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11 - 20 10 x UC- SM300-EP-PP	0	50 / 2657 / 100	BEAM CAPPING	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Element Quantity		[-]		1	1	1	1
Single Element Thickness		[mm]		41.28	2.98	0.6	0.89
Average Lap Distance		[mm]		0	0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)		[mm]		0	0	0	0

### 3.1.2.4 Slamming beams StackUp (Beam)

Subcomponent Quantity: 1, Length: 1435 [mm]

Material		$\alpha$	Width / Leng. / Cov.	Comment	Shear Web	Capping
		[°]	[mm] / [mm] / [%]		ShearWeb	Capping
1 - 3	3 x XC-SM400-EP-PP	45	280 / 1435 / 100	SHEAR WEB SKIN (LAP ON TOP FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	55 mm T10.100	0	214 / 1435 / 100	SHEAR WEB CORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 - 7	3 x XC-SM400-EP-PP	45	224 / 1435 / 100	SHEAR WEB SKIN (LAP ON BOTTOM FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8 - 12	5 x UC-SM300-EP-PP	0	65 / 1435 / 100	BEAM CAPPING	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Element Quantity			[-]		1	1
Single Element Thickness			[mm]		57.56	1.49
Average Lap Distance			[mm]		0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0

### 3.2 DECK (incl. Sub-components details)

Quantity: 1 (Including parent component quantity)

#### 3.2.1 DECK Unique Material List (Total quantities)

#	Material Name	Type	As Designed Area <sup>2</sup> [m <sup>2</sup> ]	Total Area <sup>1</sup> [m <sup>2</sup> ]	As Designed Weight <sup>2</sup> [kg]	Total Weight <sup>1</sup> [kg]	Total Resin Weight <sup>1</sup> [kg]	Total Fibre Weight <sup>1</sup> [kg]	Total Price [€]	Price per Kg [€]
1	UC-SM300-EP-PP	Ply	1.68	1.85	0.75	0.84	0	0	-	-
2	XC-SM300-EP-PP	Ply	21.61	23.82	10.31	11.48	0	0	-	-
3	XC-SM400-EP-PP	Ply	13.37	14.74	8.51	9.48	0	0	-	-
4	30 mm T10.110	Core	0.3	0.35	0.87	0.95	0	0	-	-
5	7 mm T10.110	Core	3.06	3.53	2.06	2.26	0	0	-	-
6	8 mm T10.110	Core	3.43	3.96	2.64	2.9	0	0	-	-

Core Weights include Resin Weight due to core resin consumption.

#### DECK Subcomponents:

#	Name	Type	Unit Area / Unit Length [m <sup>2</sup> ] / [mm]	Unit Subcomponent Weight (Factored) <sup>2</sup> [kg]	Unit Quantity	Quantity (including component quantity)
1	Deck Laminates	Surface Element	6.49 / -	21.99	1	1
2	Deck Fwd Longitudinal Beam	Beam	- / 3102	2.22	1	1

#### 3.2.2 DECK Stacking

##### 3.2.2.1 Deck Laminates StackUp (Surface Element)

Area: 6.49 [m<sup>2</sup>]    Component Area Percentage: 100 [%]

Material		α	Area / Cov.	Comment
		[°]	[m <sup>2</sup> ] / [%]	
1	XC-SM300-EP-PP	0	6.49 / 100	
2	XC-SM300-EP-PP	45	6.49 / 100	
3	XC-SM300-EP-PP	0	6.49 / 100	
4	8 mm T10.110	0	3.43 / 52.87	
5	7 mm T10.110	0	3.06 / 47.13	
6 - 7	2 x XC-SM400-EP-PP	0	6.49 / 100	

##### 3.2.2.2 Deck Fwd Longitudinal Beam StackUp (Beam)

Subcomponent Quantity: 1, Length: 3102 [mm]



Material	$\alpha$	Width / Leng. / Cov.	Comment	Shear Web	Capping	Inner Skin	Outer Skin
	[°]	[mm] / [mm] / [%]		ShearWeb	Capping	Reinforcement	Reinforcement
1 - 2 2 x XC- SM300-EP-PP	45	138 / 3102 / 100	SHEAR WEB SKIN (LAP ON TOP FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 30 mm T10.110	0	97 / 3102 / 100	SHEAR WEB CORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 - 5 2 x XC- SM300-EP-PP	45	105 / 3102 / 100	SHEAR WEB SKIN (LAP ON BOTTOM FACE OF CAPPING)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 UC-SM300- EP-PP	0	50 / 3102 / 100	INNER SKIN REINFORCEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7 - 8 2 x UC- SM300-EP-PP	0	50 / 3102 / 100	OUTER SKIN REINFORCEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9 - 18 10 x UC- SM300-EP-PP	0	38 / 3102 / 100	BEAM CAPPING	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Element Quantity		[-]		1	1	1	1
Single Element Thickness		[mm]		31.28	2.98	0.3	0.6
Average Lap Distance		[mm]		0	0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)		[mm]		0	0	0	0

### 3.3 Engine Grillage (incl. Sub-components details)

Quantity: 1 (Including parent component quantity)

#### 3.3.1 Engine Grillage Unique Material List (Total quantities)

#	Material Name	Type	As Designed Area <sup>2</sup> [m <sup>2</sup> ]	Total Area <sup>1</sup> [m <sup>2</sup> ]	As Designed Weight <sup>2</sup> [kg]	Total Weight <sup>1</sup> [kg]	Total Resin Weight <sup>1</sup> [kg]	Total Fibre Weight <sup>1</sup> [kg]	Total Price [€]	Price per Kg [€]
1	UC-SM300-EP-PP	Ply	1.85	2.04	0.83	0.93	0	0	-	-
2	XC-SM300-EP-PP	Ply	22.46	24.76	10.72	11.94	0	0	-	-
3	XC-SM400-EP-PP	Ply	91.95	101.38	58.54	65.19	0	0	-	-
4	20 mm T10.110	Core	8.56	9.89	16.44	18.09	0	0	-	-
5	34 mm R63.140	Core	3.63	4.2	19.76	21.73	0	0	-	-

Core Weights include Resin Weight due to core resin consumption.

#### Engine Grillage Subcomponents:

#	Name	Type	Unit Area / Unit Length [m <sup>2</sup> / [mm]	Unit Subcomponent Weight (Factored) <sup>2</sup> [kg]	Unit Quantity	Quantity (including component quantity)
1	Beam_001	Beam	- / 6346	23.16	1	1
2	Beam_002	Beam	- / 6346	44.79	1	1
3	Beam_003	Beam	- / 1120	4.09	1	1
4	Beam_004	Beam	- / 1119.99	5.37	1	1
5	Beam_005	Beam	- / 1120	6.65	1	1
6	Beam_006	Beam	- / 1060	7.48	1	1
7	Beam_007	Beam	- / 1060	8.32	1	1

#### 3.3.2 Engine Grillage Stacking

##### 3.3.2.1 Beam\_001 StackUp (Beam)

Subcomponent Quantity: 1, Length: 6346 [mm]

Material	α	Width / Leng. / Cov.	Comment	Element_001	Element_002	Element_003
	[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	XC-SM400-EP-PP	45	200 / 6346 / 100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 6346 / 100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	17 mm T10.110	0	200 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 6346 / 100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	245 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	245 / 6346 / 100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	245 / 6346 / 100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	245 / 6346 / 100	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	245 / 6346 / 100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Element Quantity		[-]		1	1	1
Single Element Thickness		[mm]		36.35	24.27	1.19
Average Lap Distance		[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)		[mm]		0	0	0

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_001	Element_002	Element_003
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
29 - 30	2 x UC-SM300-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 - 41	5 x XC-SM400-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		36.35	24.27	1.19
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

### 3.3.2.2 Beam\_002 StackUp (Beam)

Subcomponent Quantity: 1, Length: 6346 [mm]

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	XC-SM400-EP-PP	45	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	17 mm T10.110	0	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	663 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	663 / 6346 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	663 / 6346 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	663 / 6346 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	663 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 - 30	2 x UC-SM300-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 - 41	5 x XC-SM400-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 6346 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		24.27	1.19	36.35
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

### 3.3.2.3 Beam\_003 StackUp (Beam)

Subcomponent Quantity: 1, Length: 1120 [mm]

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	XC-SM400-EP-PP	45	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	17 mm T10.110	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	245 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	245 / 1120 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	245 / 1120 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	245 / 1120 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	245 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 - 30	2 x UC-SM300-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 - 41	5 x XC-SM400-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		24.27	1.19	36.35
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

### 3.3.2.4 Beam\_004 StackUp (Beam)

Subcomponent Quantity: 1, Length: 1119.99 [mm]

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	XC-SM400-EP-PP	45	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	17 mm T10.110	0	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	385 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	385 / 1119.99 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	385 / 1119.99 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	385 / 1119.99 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	385 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 - 30	2 x UC-SM300-EP-PP	0	25 / 1119.99 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		24.27	1.19	36.35
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
37 - 41	5 x XC-SM400-EP-PP	0	25 / 1119.99 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 1119.99 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		24.27	1.19	36.35
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

### 3.3.2.5 Beam\_005 StackUp (Beam)

Subcomponent Quantity: 1, Length: 1120 [mm]

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	XC-SM400-EP-PP	45	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	17 mm T10.110	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	525 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	525 / 1120 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	525 / 1120 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	525 / 1120 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	525 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 - 30	2 x UC-SM300-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 - 41	5 x XC-SM400-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 1120 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		24.27	1.19	36.35
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

### 3.3.2.6 Beam\_006 StackUp (Beam)

Subcomponent Quantity: 1, Length: 1060 [mm]

Material		$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
		[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2	XC-SM400-EP-PP	45	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	17 mm T10.110	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	663 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	663 / 1060 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	663 / 1060 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	663 / 1060 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	663 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29 - 30	2 x UC-SM300-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37 - 41	5 x XC-SM400-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Element Quantity			[-]		1	1	1
Single Element Thickness			[mm]		24.27	1.19	36.35
Average Lap Distance			[mm]		0	0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0	0

### 3.3.2.7 Beam\_007 StackUp (Beam)

Subcomponent Quantity: 1, Length: 1060 [mm]

Material	$\alpha$	Width / Leng. / Cov.	Comment	Element_002	Element_003	Element_001
	[°]	[mm] / [mm] / [%]		ShearWeb	ShearWeb	ShearWeb
1	QC-SM600-EP-PP	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
2	XC-SM400-EP-PP	45	200 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 - 6	4 x XC-SM300-EP-PP	45	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
7	34 mm R63.140	0	200 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	17 mm T10.110	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
9	20 mm T10.100	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
10 - 12	3 x XC-SM300-EP-PP	45	200 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	QC-SM600-EP-PP	0	200 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
14 - 15	2 x UC-SM300-EP-PP	0	760 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
16 - 20	5 x XC-SM400-EP-PP	0	760 / 1060 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>
21	20 mm T10.110	0	760 / 1060 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>
22 - 26	5 x XC-SM400-EP-PP	0	760 / 1060 / 100		<input checked="" type="checkbox"/>	<input type="checkbox"/>
27 - 28	2 x UC-SM300-EP-PP	0	760 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
29 - 30	2 x UC-SM300-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>
31 - 35	5 x XC-SM400-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
36	20 mm T10.110	0	25 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
37 - 41	5 x XC-SM400-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input type="checkbox"/>
42 - 43	2 x UC-SM300-EP-PP	0	25 / 1060 / 100		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Element Quantity			[-]		1	1
Single Element Thickness			[mm]		24.27	1.19
Average Lap Distance			[mm]		0	0
Bonding Tape Radius (Radius used for bonding plies width calculation)			[mm]		0	0

## 4. BoM Material Details

### Cores

Name	t <sub>pp</sub> [mm]	ρ [kg/m <sup>3</sup> ]	A <sub>m</sub> [g/m <sup>2</sup> ]	Sheet Width Sheet Length [mm]	Core Preprocessing Type	Paper/Film Type	Cell Shape / Grade	Price per m <sup>2</sup> €
17 mm T10.110	17	80	1360	1020 2180	Plain (PL)	-	- / -	
20 mm T10.100	20	100	2000	950 2050	Plain (PL)	-	- / -	
30 mm T10.110	30	80	2400	1020 2180	Plain (PL)	-	- / -	
34 mm R63.140	34	130	4420	850 1900	Plain (PL)	-	- / -	
40 mm T10.100	40	100	4000	950 2050	Plain (PL)	-	- / -	
40 mm T10.110	40	80	3200	1020 2180	Plain (PL)	-	- / -	
55 mm T10.100	55	100	5500	950 2050	Plain (PL)	-	- / -	
7 mm T10.110	7	80	560	1020 2180	Plain (PL)	-	- / -	
8 mm T10.110	8	80	640	1020 2180	Plain (PL)	-	- / -	

### Plies

Name	t <sub>pp</sub> [mm]	A <sub>m</sub> [g/m <sup>2</sup> ]	FVF	RWF	Material Type	Reinforcement Type	Matrix Type	Processing Type	Price per m <sup>2</sup> €
QC-SM600-EP-PP	0.642	964	0.52	0.378	Stackups	SMC		Prepreg	
UC-SM300-EP-PP	0.298	454.39	0.56	0.34	UD	SMC	Epoxy	Prepreg	
XC-SM300-EP-PP	0.321	482	0.52	0.378	Biaxials	SMC	Epoxy	Prepreg	
XC-SM400-EP-PP	0.427	643	0.52	0.378	Biaxials	SMC	Epoxy	Prepreg	

### Material Description

Type	Name	Description
Cores	17 mm T10.110	
	20 mm T10.100	
	30 mm T10.110	
	34 mm R63.140	
	40 mm T10.100	
	40 mm T10.110	
	55 mm T10.100	
	7 mm T10.110	
	8 mm T10.110	
Plies	QC-SM600-EP-PP	
	UC-SM300-EP-PP	
	XC-SM300-EP-PP	
	XC-SM400-EP-PP	

## 5. Appendix

### 5.1 BoM Settings

#### Wastage factors

Property	Value	Unit
Wastage Scale Factor	1	
Finished Part Offcut	5	%
Cores Offcut	10	%

	Prepreg
Fabric Offcut [%]	5
Resin Application Wastage [%]	0

Included in Usage and Wastage Quantities accordingly.

#### Usage factors

Property	Value	Unit
Usage Scale Factor	1	

	Prepreg
General Resin Usage [%]	0
Resin Bleed-Out [%]	1

Included in Usage and Wastage Quantities accordingly.

#### Overlap Factors (Wastage & Usage)

Overlap Factors (Percentage of ply total area)

	Prepreg
Woven Overlap [%]	3
Multiaxial Overlap [%]	3
UD Overlap [%]	2

Included in Usage and Wastage Quantities accordingly.

#### Core Resin Consumption Factors

Core Resin Consumption varies and depends on Core Preprocessing (i.e. Core Cut Type) and Laminate Processing Type (i.e. Infusion).

Defined according to CompoSIDE Internal Knowledge.

### 5.2 Tables Header Notes

<sup>1</sup> Including Wastage & Usage Factors

<sup>2</sup> Including Usage Factors

<sup>3</sup> Laminates are compliant with the ISO 12215 Category A and ABS guidelines