

BOAT Name BORDERLINE Sail Nr RUS 768	GPH 511.1	HULL Length Overall 11.800m Maximum Beam 3.414m Displacement 3,992kg Draft 2.892m Plan Review IMS Reg. Division Performance Dynamic Allowance 0.000% Hull Construction Carbon Carbon Rudder Yes Crew Arm Extension
GENERAL Class FARR 400 One Desig Designer FARR Builder PREMIER COMPOSITES Series 03/2011 Age 01/2012 Age Allowance 0.292% Offset File FARR400c.off - 05/12/2014 16:08:20 Measurement by - 01/08/2018		IMSL 11.473m VCGD -0.684m Sink 20.57kg/mm RL 10.898m VCGM -0.678m WS 26.78m² LSM0 11.060m Displacement/Length ratio 2.9507



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	501.4			568.2		
Time on Time	1.1966			1.1880		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	569.5	459.8	403.9	737.9	576.0	496.7
Time on Time	1.1853	1.4681	1.6711	0.9147	1.1718	1.3590

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	830.9	695.8	655.7	639.6	622.8	615.9	619.5
52°	542.9	470.7	454.3	447.0	441.0	434.1	431.2
60°	511.2	454.4	438.7	430.4	425.2	414.2	408.3
75°	482.0	441.3	415.2	401.0	392.4	387.0	370.2
90°	471.7	429.5	405.3	380.5	365.3	355.6	345.7
110°	486.7	433.0	390.5	359.1	339.7	323.5	297.4
120°	513.5	439.4	399.9	363.3	329.4	306.0	275.4
135°	575.3	463.3	417.9	372.7	332.2	307.1	263.6
150°	689.5	544.6	468.7	421.5	383.9	341.8	267.0
Run VMG	796.2	628.9	541.2	489.2	443.3	394.7	308.3

Certificate
Number **2861**
ORC Ref **03020000RLD**
Issued On **09/10/2020**
VPP Ver. **2020 1.02**
Valid until **30/06/2021**

Crew Weight
Default **795kg**
Maximum **664kg**
Minimum* **498kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **551.9** **1.0872**
Non Spin OSN **541.7** **1.1076**

Selected Courses							
Windward / Leeward	813.5	662.3	598.4	564.4	533.0	505.3	463.9
Circular Random	690.1	564.2	497.5	458.1	431.8	412.3	383.1
Coastal / Long Distance	811.8	623.3	539.4	485.6	446.4	411.3	359.6
Non Spinnaker	760.6	614.7	536.0	489.0	458.3	436.7	407.3

Sails Limitations
Headsails **6** Spinnakers **4**

Velocity Prediction in Knots for True Wind Speeds							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	42.8°	40.9°	39.0°	38.6°	38.6°	38.6°	39.4°
Beat VMG	4.33	5.17	5.49	5.63	5.78	5.84	5.81
52°	6.63	7.65	7.92	8.05	8.16	8.29	8.35
60°	7.04	7.92	8.21	8.36	8.47	8.69	8.82
75°	7.47	8.16	8.67	8.98	9.18	9.30	9.72
90°	7.63	8.38	8.88	9.46	9.86	10.12	10.41
110°	7.40	8.31	9.22	10.02	10.60	11.13	12.10
120°	7.01	8.19	9.00	9.91	10.93	11.77	13.07
135°	6.26	7.77	8.61	9.66	10.84	11.72	13.66
150°	5.22	6.61	7.68	8.54	9.38	10.53	13.48
Run VMG	4.52	5.72	6.65	7.36	8.12	9.12	11.68
Gybe Angles	142.0°	144.0°	150.0°	151.5°	147.5°	145.5°	145.5°

Class Division Length
CDL = **11.175**

Storm Sails Areas
Heavy Weather Jib **32.71**
Storm Jib (JL=10.12) **12.12**
Storm Trysail **16.34**

Owner

BOAT	
Name BORDERLINE	Sail Nr RUS 768
File 2861	Data in meters/kilograms

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners/Checkstays 0		
Carbon Mast Yes	Jib Furler No		
Fiber Rigging Yes	Main Furler No		
Non-Circular Rigging No			
Articulated Bowsprit No			
P 16.150	E 5.780	MDT1 0.124	MW 0.245
IG 15.565	J 4.455	MDL1 0.245	GO 0.245
ISP 17.840	SFJ 0.182	MDT2 0.093	BD 0.290
BAS 1.600	SPL	MDL2 0.130	MWT 177.30
FSD 0.036	TPS 6.850	TL 1.990	MCG 5.640

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining		Flotation date 01/08/2018	
		SG 1.0250	
FFM 1.392	FF 1.391	SFFP 0.378	
FAM 0.906	FA 0.910	SAFP 11.766	
W1 24.0	PD1 63.0	WD 11.800	
W2 48.0	PD2 126.0	GSA 19.4	
W3 72.0	PD3 189.0	RSA 6400.0	
W4 96.0	PD4 252.0	PLM 2040.0	
LCF from stem on CL / on sheer		6.441 / 6.643	
Maximum beam station from stem		8.433	
RM Measured		160.0kg-m	
RM Default		146.8kg-m	
Limit of positive stability / Stab.Index		141.9° / 139.4	
Freeboard at mast at 4.637		1.313	



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MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Installation Strut	PRD 0.425
Type Folding 2 blades	PBW 0.105
Twin Screw No	PIPA 0.0039
ST1 0.065	ST3 0.180
ST2 0.180	ST4 0.110
	ST5 0.284
	EDL 0.750

Certificate	
Number 2861	
ORC Ref 03020000RLD	
Issued On 09/10/2020	
VPP Ver. 2020 1.02	
Valid until 30/06/2021	

COMMENTS	
Grinder on Primaries	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	1.66	2.10	2.94	4.08	4.97	63.03	64.91	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL				
	20.24	17.29	18.77	11.04	11.42	173.83		AS · (SFL + 4·SHW) / 6	

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HBB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Flying	Meas.Date	Material	Comment
0.13	0.72	1.27	2.33	3.36	4.42	15.60	35.90	Y	No		Carbon	

MEASUREMENT INVENTORY				
Measurer 2015				
Date 01/08/2018				
Comment				
Internal Ballast total = 0.0				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	VOLVO	D1/30 27hp	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

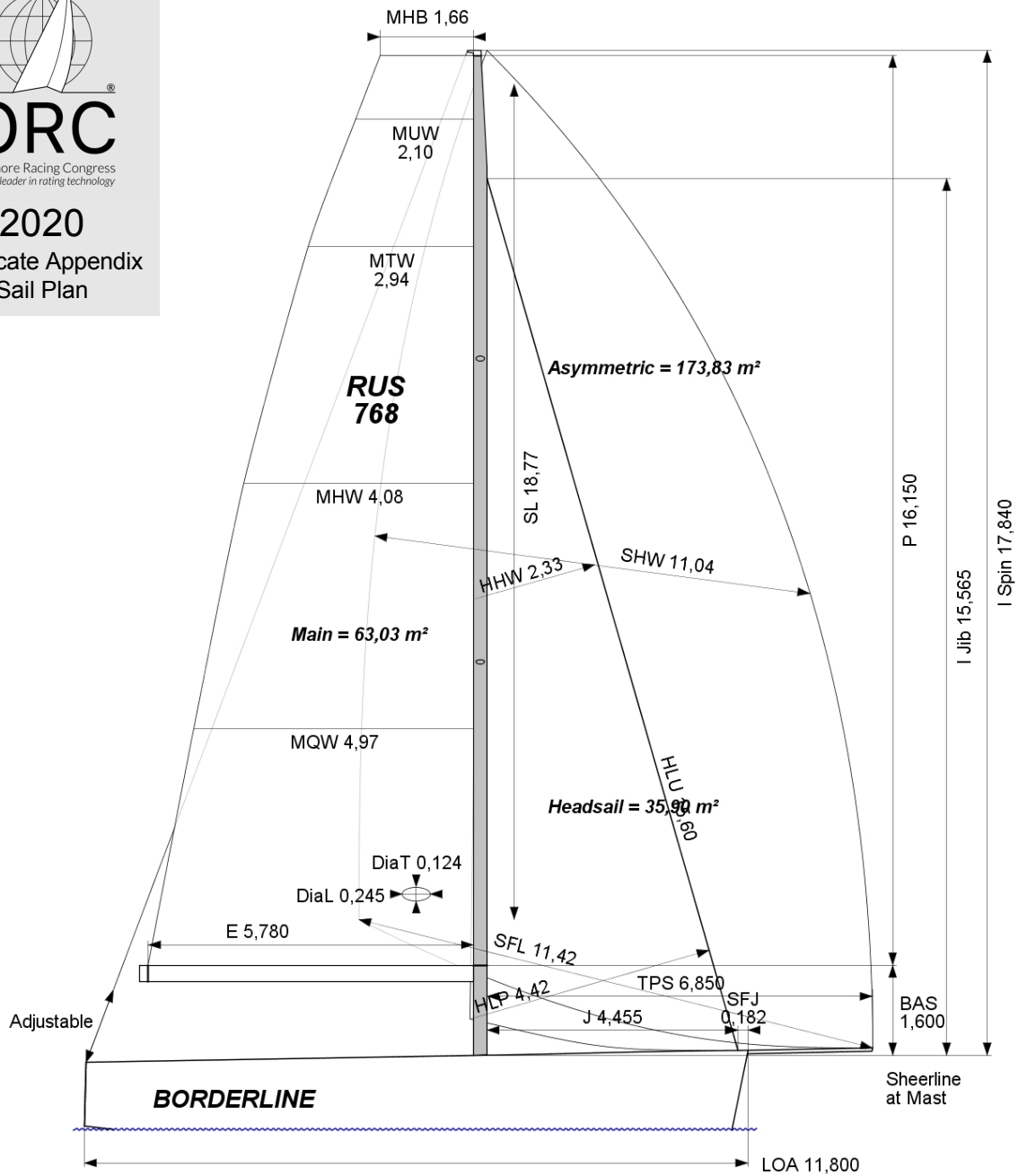
MEASUREMENT INVENTORY						
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG Condtm Description</i>
2	Tank	Water	Rubber	80.0	5.10	0-0
1	Tank	Fuel	Plastic	61.0	7.90	40-0
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>		
1	Battery	26.0	8.30	1 X 12v Sealed ENGINE		
1	Battery	26.0	8.30	! X 12v Sealed HOUSE		



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	1.66	2.10	2.94	4.08	4.97	63.03			North	Carbon	

HEADSAILS (1)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.13	0.72	1.27	2.33	3.36	4.42	15.60	99%	35.90	Y	No			North	Carbon	

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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ASYMMETRIC SPINNAKERS (4)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A2	20.24	17.29	18.77	11.04	11.42	173.83	asym		02/02/2018	North	Nylon	
A1.5	20.00	16.95	18.48	10.80	11.35	167.97	asym		02/02/2018		Unknown	
A3	19.90	17.33	18.62	10.10	11.60	161.33	asym		02/02/2018		Unknown	
C0	17.70	16.19	16.95	5.77	7.69	86.90	asy76		02/02/2018		Unknown	