

BOAT Name I LOVE POLAND Sail Nr POL 20180	GPH 352.1	HULL Length Overall 21.500m Maximum Beam 5.774m Displacement 14,230kg Draft 4.498m Plan Review IMS Reg. Division Performance Dynamic Allowance 0.000% Hull Construction Carbon Carbon Rudder Yes Crew Arm Extension
GENERAL Class VOLVO OPEN 70 Designer JUAN YACHT DESIGN Builder CASTOMLINE YACHTS Series 01/2011 Age 01/2011 Age Allowance 0.292% Offset File FRA1953 2020.off - 13/02/2020 Measurement by - 03/02/2020		IMSL 20.910m VCGD -0.525m Sink 64.16kg/mm RL 27.546m VCGM -0.614m WS 75.61m² LSM0 21.491m Displacement/Length ratio 1.4336



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	342.3			401.4		
Time on Time	1.7530			1.6816		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	440.9	307.3	238.0	591.1	408.8	319.7
Time on Time	1.5309	2.1962	2.8358	1.1419	1.6513	2.1114

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	655.2	509.5	438.1	402.3	375.6	359.7	342.9
52°	414.7	334.6	292.8	263.2	245.4	233.1	222.4
60°	379.6	319.1	272.7	242.6	225.5	213.3	205.3
75°	345.9	297.6	244.8	211.8	197.9	186.0	182.4
90°	344.0	296.8	244.4	201.3	183.5	169.3	164.4
110°	369.9	315.6	267.6	220.5	194.8	161.7	142.7
120°	400.8	329.1	286.7	241.0	202.0	182.1	143.5
135°	481.2	374.0	323.9	285.5	246.5	215.0	158.7
150°	587.4	451.6	373.4	332.6	297.2	258.8	194.3
Run VMG	678.3	521.4	431.2	384.1	343.2	298.9	224.4

Selected Courses							
Windward / Leeward	666.8	515.5	434.7	393.2	359.4	329.3	283.6
Circular Random	518.4	405.9	340.7	298.3	268.5	246.2	215.1
Coastal / Long Distance	667.9	482.2	383.6	320.9	279.1	245.1	196.3
Non Spinnaker	592.4	462.7	387.5	338.8	304.7	279.4	242.2

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	45.8°	44.3°	39.6°	40.5°	41.3°	41.8°	41.6°
Beat VMG	5.49	7.07	8.22	8.95	9.59	10.01	10.50
52°	8.68	10.76	12.29	13.68	14.67	15.44	16.19
60°	9.48	11.28	13.20	14.84	15.96	16.87	17.53
75°	10.41	12.10	14.71	17.00	18.19	19.36	19.74
90°	10.46	12.13	14.73	17.88	19.62	21.27	21.90
110°	9.73	11.41	13.45	16.32	18.48	22.26	25.22
120°	8.98	10.94	12.56	14.94	17.82	19.77	25.08
135°	7.48	9.63	11.12	12.61	14.61	16.74	22.69
150°	6.13	7.97	9.64	10.82	12.11	13.91	18.53
Run VMG	5.31	6.90	8.35	9.37	10.49	12.05	16.04
Gybe Angles	136.5°	139.6°	145.0°	149.0°	142.5°	139.0°	134.5°

Certificate

Number **2**
ORC Ref **03270000D4K**
Issued On **13/02/2020**
VPP Ver. **2020 1.01**
Valid until **31/12/2020**

Crew Weight

Default **2,050kg**
Maximum **1,300kg**
Minimum* **975kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

ToD	ToT
Non Spin GPH 400.7	1.4974
Non Spin OSN 391.8	1.5314

Sails Limitations

Headsails 8	Spinnakers 6
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Class Division Length

CDL = **24.252**

Storm Sails Areas

Heavy Weather Jib **93.29**
Storm Jib (JL=17.09) **34.55**
Storm Trysail **41.01**

Owner

BOAT	
Name I LOVE POLAND	Sail Nr POL 20180
File I Love Poland 2020	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Boom Inclining	LCFD 10.910	
Flotation date 03/02/2020	SG 1.0265	
FFM 1.699	FF 1.699	SFFP 1.384
FAM 1.386	FA 1.388	SAFP 21.500
W1 350.1	PD1 392.4	WD 17.124
W2 350.1	PD2 390.6	GSA 1.0
W3 350.1	PD3 406.5	RSA 1.0
W4 350.1	PD4 410.0	PLM 9000.0
LCF from stem on CL / on sheer	12.583 / 12.879	
Maximum beam station from stem	20.800	
RM Measured	1181.2kg-m	
RM Default	472.4kg-m	
Limit of positive stability / Stab.Index	102.6° / 106.3	
Freeboard at mast at 10.545	1.579	



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RIG																							
Forestay Tension Aft	Runners/Checkstays 2		Spreaders 4																				
Inner Stay None Fitted	Jib Furler No		Main Furler No																				
Carbon Mast Yes	Fiber Rigging Yes		Articulated Bowsprit No																				
<table border="0"> <tr> <td>P 27.960</td> <td>E 8.380</td> <td>MDT1 0.152</td> <td>MW 0.305</td> </tr> <tr> <td>IG 26.178</td> <td>J 9.715</td> <td>MDL1 0.305</td> <td>GO 0.345</td> </tr> <tr> <td>ISP 29.905</td> <td>SFJ 0.830</td> <td>MDT2 0.130</td> <td>BD 0.380</td> </tr> <tr> <td>BAS 1.878</td> <td>SPL</td> <td>MDL2 0.212</td> <td>MWT</td> </tr> <tr> <td>FSD</td> <td>TPS 12.815</td> <td>TL 2.660</td> <td>MCG</td> </tr> </table>				P 27.960	E 8.380	MDT1 0.152	MW 0.305	IG 26.178	J 9.715	MDL1 0.305	GO 0.345	ISP 29.905	SFJ 0.830	MDT2 0.130	BD 0.380	BAS 1.878	SPL	MDL2 0.212	MWT	FSD	TPS 12.815	TL 2.660	MCG
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Certificate	
Number 2	ORC Ref 03270000D4K
Issued On 13/02/2020	
VPP Ver. 2020 1.01	
Valid until 31/12/2020	

MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Type No Propeller	

COMMENTS	

MOVABLE BALLAST			
Keel Angle 13.0	Water Ballast Volume 1,516		
List Angle 42.0	Water Ballast LCG 20.99		
BLR Index 1.0511	Water Ballast VCG 0.28		
	Water Ballast TCG 0.00		

BILGEBOARD			
BS 3.720	BT 0.082	BA -2.8	
BF 0.082	BX 9.213		
BC 0.557	BY 1.090		



SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	2.91	3.56	4.62	6.15	7.34	165.33	169.02	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	Area	Formula		
	33.80	29.34	31.57	18.51	19.76	493.54	AS · (SFL + 4·SHW) / 6		

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB), HS flying rated area = 191.62												
HBB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Flying	Meas.Date	Material	Comment
0.16	1.53	2.93	5.62	8.28	10.93	31.50	175.75	Y	Yes	12/12/2016	Carbon	J0-Blade
0.10	1.38	2.58	4.70	6.88	9.27	27.50	129.48	Y	No	03/02/2020	Carbon	J2-8
0.15	1.05	1.98	3.84	5.84	7.87	23.50	92.07	Y	Yes	02/11/2016	Carbon	J4-4
0.10	1.03	2.00	3.90	5.86	7.78	23.40	91.72	N	Yes	02/11/2016	Carbon	SS-2
0.06	0.71	1.39	2.77	4.21	5.78	17.64	49.88		Yes	15/07/2019	Carbon	GS US

MEASUREMENT INVENTORY				
Measurer 3/ORC				
Date 03/02/2020				
Comment				
Internal Ballast total = 0.0				
Id	Item	Weight	Distance	VCG Description
Feels				
Id	Item	Maker	Model	
2	Engine	Volvo Penta	D1-30F	
1	Engine	Volvo Penta	D2-75F	
Id	Item	Weight Description		

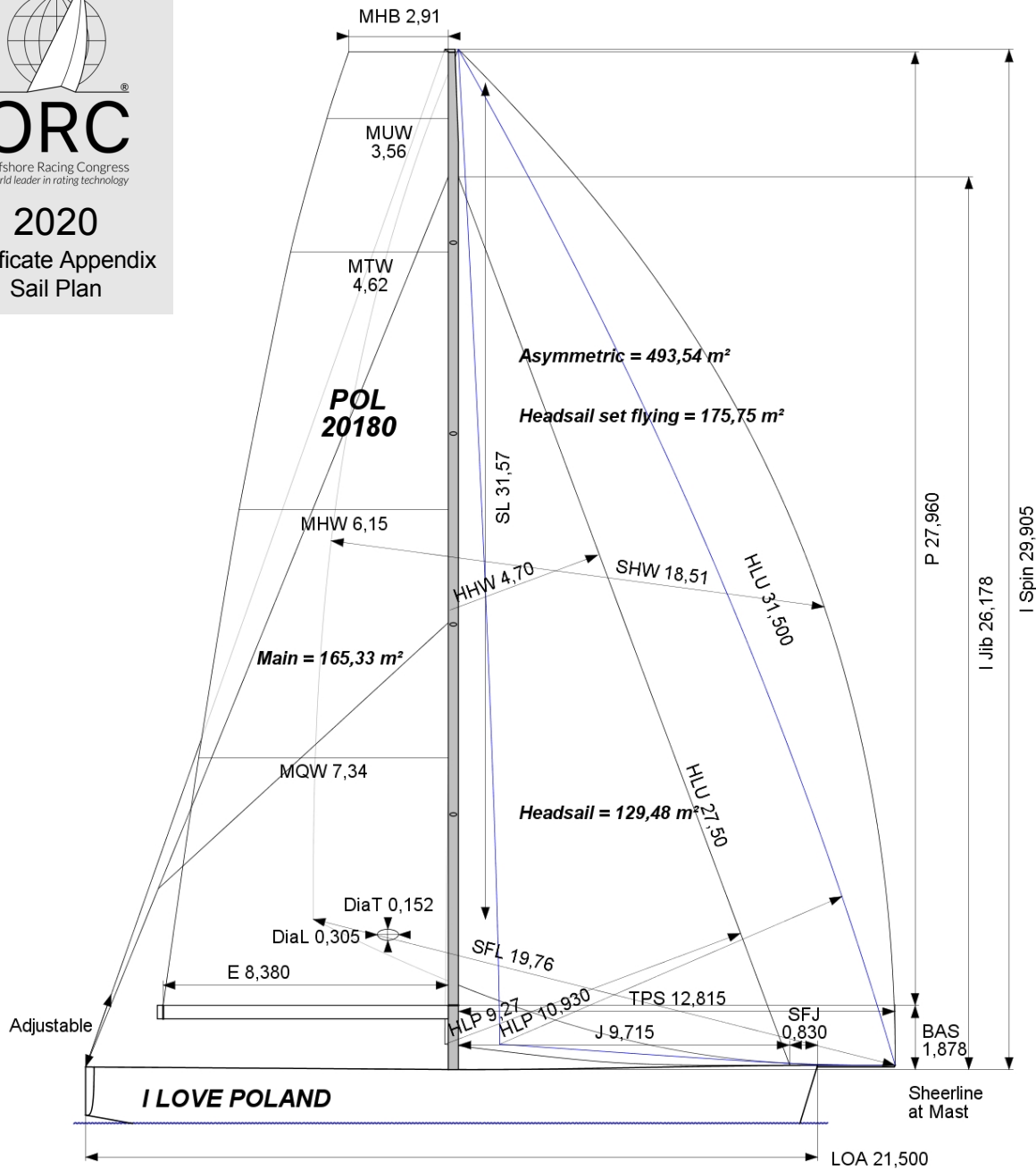
MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
5	Tank	Water	Inegral	100.0	10.35	-0.15	0-0 2xP and ST
7	Tank	Water	Carbon Integ	265.7	19.42	0.02	0-0 Port
6	Tank	Water	Carbon Integ	265.7	19.40	0.02	0-0 Starboard
4	Tank	Water	Plastic	52.0	12.50	-0.15	0-0 CL
3	Tank	Diesel	Alu	60.0	17.70	-0.15	0-0 CL
Id	Item	Weight	Distance	VCG Description			
6	Battery	25.0	16.20	0.00 200 Ah Mastervolts AGM Port			
5	Battery	25.0	16.20	0.00 200 Ah Mastervolts AGM Starboard			
4	Battery	10.0	16.65	0.00 45 Ah engine			
3	Battery	10.0	16.65	0.00 45 Ah engine			
1	Misc	22.0	18.00	0.10 Hydraulic pump for mast			
Water Ballast Tanks							
Id	Volume	Distance	VCG	TCG Description			
A	1,516	20.99	0.28	0.00			



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
B	2.91	3.56	4.62	6.15	7.34	165.34		09/01/2017	North Sails	Carbon	MN6

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
C	0.16	1.53	2.93	5.62	8.28	10.93	31.50	113%	175.75	Y	Yes		12/12/2016	North Sails	Carbon	J0-Blade
J2	0.10	1.38	2.58	4.70	6.88	9.27	27.50	95%	129.48	Y	No		03/02/2020	North Sails	Carbon	J2-8
E	0.15	1.05	1.98	3.84	5.84	7.87	23.50	81%	92.07	Y	Yes		02/11/2016	North Sails	Carbon	J4-4
G	0.10	1.03	2.00	3.90	5.86	7.78	23.40	80%	91.72	N	Yes		02/11/2016	Nrth Sails	Carbon	SS-2
GS US	0.06	0.71	1.39	2.77	4.21	5.78	17.64	59%	49.88		Yes		15/07/2019	North Sails	Carbon	GS US

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
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ASYMMETRIC SPINNAKERS (5)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A2-H	33.80	29.34	31.57	18.51	19.76	493.55	asym		03/02/2020	North Sails	Nylon	A2-H
A2-E	32.90	29.23	31.07	18.13	19.56	476.75	asym		03/02/2020	North Sails	Unknown	A2-E
E	32.05	29.87	30.96	17.85	19.20	467.50	asym		02/02/2020	North Sails	Nylon	A4-A 2011
MHO	31.90	30.05	30.98	12.34	16.45	339.75	asy76		03/02/2020	North Sails	Unknown	MHO IRC
FRO	29.27	25.66	27.47	10.99	14.55	267.83	asy76		03/02/2020	North Sails	Carbon	FRO