

BOAT Name IRONFX Sail Nr CYP-46	GPH 510.1	HULL Length Overall 13.901m Maximum Beam 4.188m Displacement 6,851kg Draft 2.883m Plan Review IMS Reg. Division Performance Dynamic Allowance 0.000% Hull Construction Light Carbon Rudder Yes Crew Arm Extension
GENERAL Class COREL 45 Designer B. FARR Builder CARROL Series 06/1996 Age 01/1997 Age Allowance 0.487% Offset File US30708.OFF - 06/09/1996 11:52:00 Measurement by - 31/05/2012		IMSL 12.271m VCGD -0.651m Sink 25.72kg/mm RL 12.469m VCGM -0.655m WS 34.80m² LSM0 11.974m Displacement/Length ratio 3.9906



2020
ORC International Certificate

Rating Office
Offshore Racing Congress

COPY ONLY
Invalid for Racing

World Leader In Rating Technology

SCORING OPTIONS						
Time on Distance	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Time	1.2089			1.2059		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	577.0	454.8	401.7	745.5	562.5	491.4
Time on Time	1.1698	1.4842	1.6802	0.9054	1.2000	1.3737

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	844.1	689.0	622.9	598.0	586.1	573.6	565.0
52°	552.5	463.4	436.4	426.7	421.0	416.9	406.0
60°	520.8	448.2	424.6	412.9	405.6	400.9	387.2
75°	496.0	438.6	412.9	392.6	380.6	373.4	364.3
90°	500.7	439.9	413.1	387.5	366.3	351.1	335.7
110°	508.5	433.7	400.2	380.7	363.7	347.3	314.3
120°	524.3	438.4	401.8	370.1	350.0	332.9	300.4
135°	585.3	467.8	423.0	389.7	357.1	324.2	271.7
150°	699.9	555.0	471.2	425.4	399.7	371.8	306.8
Run VMG	808.2	640.9	544.2	491.9	461.5	429.4	354.3

Certificate
Number **03/20**
ORC Ref **03470000NIA**
Issued On **31/07/2020**
VPP Ver. **2020 1.02**
Valid until **31/12/2020**

Crew Weight
Default **890kg**
Maximum **965kg**
Minimum* **724kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	546.9	1.0971
Non Spin OSN	534.2	1.1232

Selected Courses							
Windward / Leeward	826.2	664.9	583.5	544.9	523.8	501.5	459.6
Circular Random	697.2	565.3	495.5	455.0	428.8	409.4	379.0
Coastal / Long Distance	824.4	626.0	528.4	473.2	442.2	412.9	361.7
Non Spinnaker	763.0	612.3	530.4	481.5	449.8	427.7	397.5

Sails Limitations

Headsails	Spinnakers
7	5

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°	41.3°	39.4°	37.9°	37.1°	36.4°	36.4°
Beat VMG	4.26	5.23	5.78	6.02	6.14	6.28	6.37
52°	6.52	7.77	8.25	8.44	8.55	8.64	8.87
60°	6.91	8.03	8.48	8.72	8.88	8.98	9.30
75°	7.26	8.21	8.72	9.17	9.46	9.64	9.88
90°	7.19	8.18	8.71	9.29	9.83	10.25	10.72
110°	7.08	8.30	9.00	9.46	9.90	10.37	11.46
120°	6.87	8.21	8.96	9.73	10.29	10.81	11.98
135°	6.15	7.70	8.51	9.24	10.08	11.10	13.25
150°	5.14	6.49	7.64	8.46	9.01	9.68	11.73
Run VMG	4.45	5.62	6.62	7.32	7.80	8.38	10.16
Gybe Angles	142.0°	144.0°	148.5°	152.5°	150.0°	147.5°	142.5°

Class Division Length
CDL = **12.362**

Storm Sails Areas

Heavy Weather Jib	44.09
Storm Jib (JL=11.75)	16.33
Storm Trysail	21.42

Owner

BOAT	
Name IRONFX File GR46	Sail Nr CYP-46 Data in meters/kilograms
RIG	
Forestay Tension Aft	Spreaders 3
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 18.400	E 6.650 MDT1 0.140 MW 0.248
IG 17.954	J 5.416 MDL1 0.248 GO 0.283
ISP 19.669	SFJ 0.000 MDT2 0.091 BD 0.293
BAS 1.929	SPL MDL2 0.144 MWT 214.50
FSD 	TPS 7.116 TL 2.755 MCG 6.200

INCLINING TEST AND FREEBOARDS			
Inclining Test Boom Inclining	LCFD 8.000		
Flotation date 01/07/2020	SG 1.0270		
FFM 1.507	FF 1.506	SFFP 0.201	
FAM 1.125	FA 1.126	SAFP 13.110	
W1 122.8	PD1 217.6	WD 6.505	
W2 122.8	PD2 217.3	GSA 1.0	
W3 122.8	PD3 217.3	RSA 1.0	
W4 122.8	PD4 217.1	PLM 9000.0	
LCF from stem on CL / on sheer	7.662 / 7.910		
Maximum beam station from stem	8.733		
RM Measured	289.5kg-m		
RM Default	245.3kg-m		
Limit of positive stability / Stab.Index	139.2° / 137.5		
Freeboard at mast at 5.416	1.304		



2020
IMS Measurement
Certificate

MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.423		
Type Folding 2 blades	PBW 0.114		
Twin Screw No	PIPA 0.0037		
ST1 0.042	ST3 0.180	ST5 0.280	
ST2 0.180	ST4 0.110	EDL 0.698	

Certificate	
Number 03/20	
ORC Ref 03470000NIA	
Issued On 31/07/2020	
VPP Ver. 2020 1.02	
Valid until 31/12/2020	

COMMENTS	

MOVABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



World Leader In Rating Technology

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.27	1.44	2.56	4.35	5.62	73.61	75.30	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		
	21.83	19.81	20.82	11.75	11.18	201.88	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
0.14	0.80	1.51	2.84	4.17	5.54	17.97	50.86	Y	No	01/07/2020	Carbon	MEDIUM
0.12	0.78	1.47	2.81	4.15	5.54	17.93	50.37	Y	No	01/07/2020	Carbon	LIGHT
0.06	0.53	1.05	1.17	3.37	4.56	15.97	31.99		No	31/01/2012	Unknow	STAYSAIL

MEASUREMENT INVENTORY				
Measurer GRE-21				
Date 01/07/2020				
Comment				
Internal Ballast total = 163.5				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	YANMAR	4JH (47 HP)	
Id	Item	Weight Description		

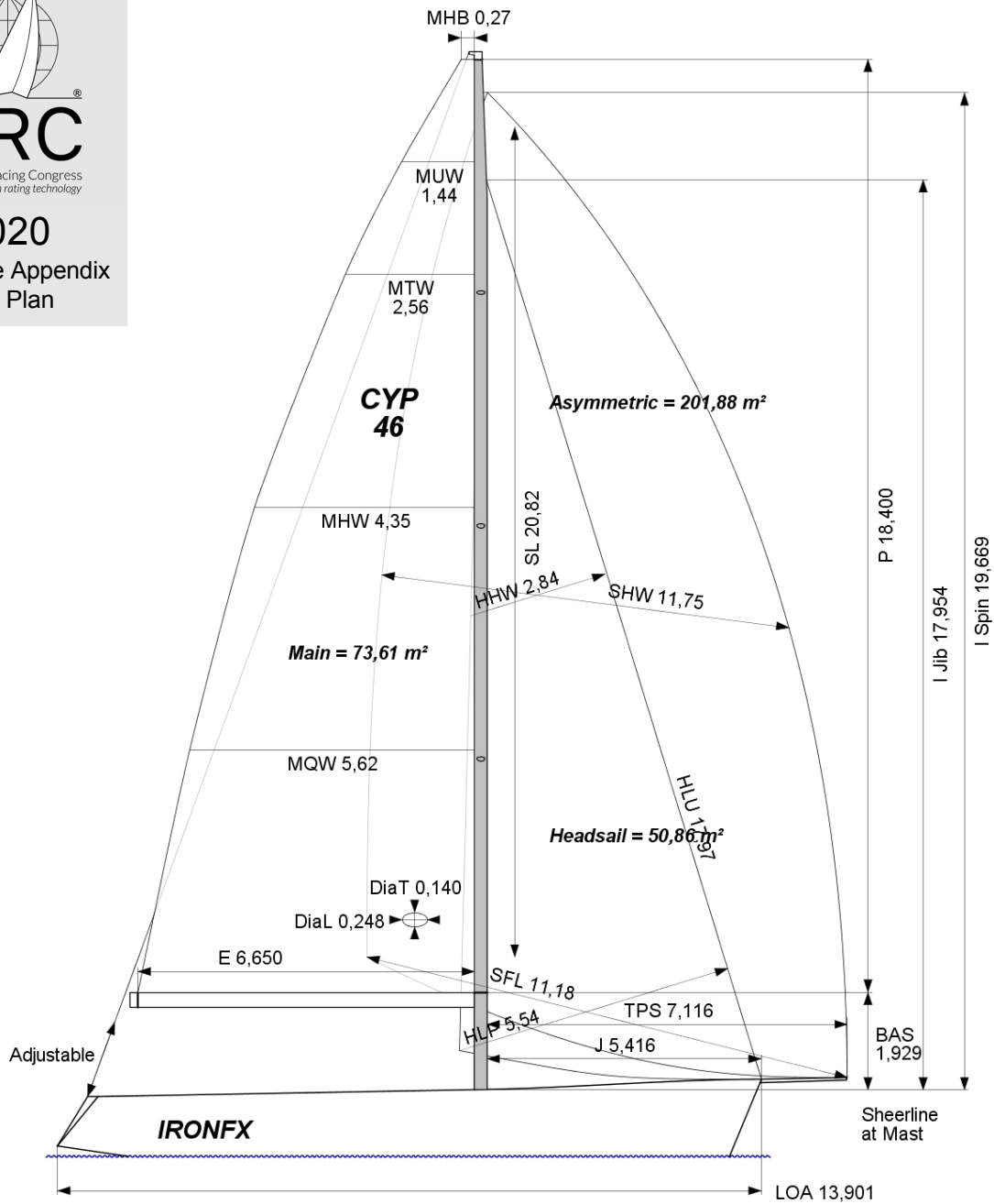
MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank	FUEL	Aluminium	80.0	9.40	0.20	15.0 (C)
2	Tank	WATER	Soft bag	100.0	6.60		0.0 (P)
Id	Item	Weight	Distance	VCG Description			
1	Ballast	113.9	12.30	12 square plaques			
2	Ballast	49.6	12.20	2 rectangular plates			
2	Battery		7.90	1 x 100 Ah (P)			
3	Battery		8.40	1 x 100 Ah (P) ENGINE			
1	Battery		8.40	1 x 135 Ah (S)			
1	Misc		5.90	OVEN (light weight, 1 burner)			



ORC

Offshore Racing Congress
World leader in rating technology

2020
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2	0,27	1,44	2,56	4,35	5,62	73,62		30/06/2020	NORTH	Carbon	

HEADSAILS (3)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
10	0,14	0,80	1,51	2,84	4,17	5,54	17,97	102%	50,86	Y	No		01/07/2020	NORTH	Carbon	MEDIUM
1	0,12	0,78	1,47	2,81	4,15	5,54	17,93	102%	50,37	Y	No		01/07/2020	QUANTUM	Carbon	LIGHT
6	0,06	0,53	1,05	1,17	3,37	4,56	15,97	84%	31,99		No		31/01/2012	QUANTUM	Unknow	STAYSAIL

SYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
----	-----	-----	----	-----	-----	------	----------	-----------	-------------	----------	---------

ASYMMETRIC SPINNAKERS (3)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	21,83	19,81	20,82	11,75	11,18	201,89	asym		25/02/2020	NORTH	Nylon	
2	21,70	19,85	20,78	11,16	11,17	193,25	asym		19/02/2020	NORTH	Nylon	
3	21,27	19,77	20,52	9,39	10,99	166,05	asym		20/02/2020	NORTH	Nylon	