

BOAT	GPH	HULL
Name CRISTABELLA Sail Nr URU 226	520,0	Length Overall 14,085m Maximum Beam 3,700m Displacement 8.067kg Draft 2,862m IMS Reg. Division Performance Dynamic Allowance 0,000% Fwd Accommodation Yes Hull Construction Carbon Carbon Rudder Yes Crew Arm Extension
GENERAL		IMSL 12,613m VCGD -0,361m Sink 28,00kg/mm RL 11,967m VCGM -0,417m WS 38,13m² LSM0 12,239m Displacement/Length ratio 4,4002
Class JV 48 Designer JUDEL/VROLIJK Builder NEVILLE HUTTON Series 03/2004 Age 03/2004 Age Allowance 0,390% Offset File loyal3.off - 09/01/2013 07:09:22 p.m. Measurement by P. GUTIERREZ - 14/01/2016		



World Leader in Rating Technology

2016
ORC International
Certificate

Rating Office
PATRICIO D. GUTIERREZ
C. GRIERSON Y
COSTANERASUR
Y.C.A



SCORING OPTIONS						
	OFFSHORE COASTAL / LONG DISTANCE			INSHORE WINDWARD / LEEWARD		
Time On Distance	507,0			572,7		
Time On Time	1,1835			1,1787		
Performance Line	PLT		PLD	PLT		PLD
	0,771		19,6	1,013		211,6
Triple Number	Low	Medium	High	Low	Medium	High
	1,1277	1,4651	1,6774	0,8580	1,1680	1,3619

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	885,0	718,1	643,0	610,4	590,6	573,1	568,3
52°	571,6	468,9	435,0	423,5	417,0	408,5	402,3
60°	532,6	445,4	419,5	408,9	402,2	395,3	383,8
75°	498,0	430,5	403,4	386,3	376,3	369,8	353,8
90°	497,5	431,5	403,5	376,5	356,2	345,3	333,8
110°	522,5	434,8	399,7	374,1	357,0	342,9	300,2
120°	545,8	445,5	408,8	377,3	347,3	330,9	298,4
135°	620,2	494,6	433,2	404,6	375,8	347,3	285,0
150°	745,8	591,1	495,9	439,6	409,6	383,1	328,0
Run VMG	861,1	682,6	572,6	503,4	459,8	425,8	375,8

Selected Courses							
Windward / Leeward	873,1	700,3	607,8	556,9	525,2	499,5	472,0
Circular Random	720,3	580,0	504,5	460,0	431,4	411,0	382,0
Ocean for PCS	894,5	686,9	569,6	497,2	449,2	414,5	365,0
Non Spinnaker	766,3	612,8	529,0	478,7	446,3	423,8	394,4

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	43,8°	43,0°	41,0°	40,0°	38,8°	37,9°	38,1°
Beat VMG	4,07	5,01	5,60	5,90	6,10	6,28	6,33
52°	6,30	7,68	8,28	8,50	8,63	8,81	8,95
60°	6,76	8,08	8,58	8,80	8,95	9,11	9,38
75°	7,23	8,36	8,92	9,32	9,57	9,74	10,17
90°	7,24	8,34	8,92	9,56	10,11	10,43	10,78
110°	6,89	8,28	9,01	9,62	10,08	10,50	11,99
120°	6,60	8,08	8,81	9,54	10,37	10,88	12,06
135°	5,80	7,28	8,31	8,90	9,58	10,37	12,63
150°	4,83	6,09	7,26	8,19	8,79	9,40	10,97
Run VMG	4,18	5,27	6,29	7,15	7,83	8,45	9,58
Gybe Angles	140,8°	142,3°	146,8°	154,1°	162,5°	180,0°	180,0°

Certificate
Number **22601**
ORC Ref **ARG00002668**
Issued On **24/06/2016**
VPP Ver. **2016 1.01**
Valid until **31/12/2016**

Crew Weight
Declared **1.115kg**
Default* **918kg**
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	545,8	1,0993
Non Spin OSN	533,6	1,1245
N/S Perf. Line	-8,1	0,683

Sails Limitations

Headsails	Spinnakers
7	4

Class Division Length
CDL = **12,291**

Storm Sails Areas

Heavy Weather Jib	46,91
Storm Jib (JL=12,12)	17,37
Storm Trysail	24,70

Owner
Dr. Martin Meerhoff
Luis Alberto de Herrera 2044
11600 Montevideo
Uruguay

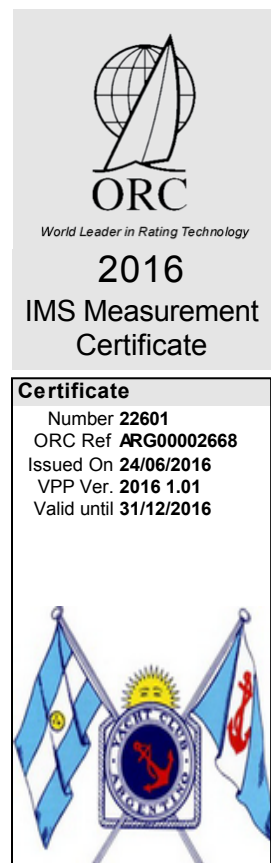
I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

BOAT Name CRISTABELLA Sail Nr URU 226 File URU226.dxt Data in meters/kilograms		INCLINING TEST AND FREEBOARDS Inclining Test Current Inclining Flotation date 14/01/2016 SG 1,0000 FFM 1,544 FF 1,553 SFFP 0,250 FAM 1,324 FA 1,332 SAFFP 14,070 W1 128,13 PD1 428,5 WD 13,490 W2 128,13 PD2 427,9 GSA 1,0 W3 128,13 PD3 425,7 RSA 1,0 W4 128,13 PD4 425,5 PLM 9000,0 LCF from stem on CL / on sheer 7,674 / 7,867 Maximum beam station from stem 9,082 RM Measured 318,9kg·m RM Default 296,9kg·m Limit of positive stability / Stab.Index 140,1° / 145,8 Freeboard at mast at 5,350 1,450	
RIG Forestay Tension Aft Spreaders 2 Inner Stay None Fitted Runners 0 Carbon Mast Yes Jumper Struts None Taper Hollows No Jib Furler No Fiber Rigging No Main Furler No Lenticular Rigging No Without Backstay No Articulated Bowsprit No P 19,600 E 7,200 MDT1 0,146 MW 0,286 IG 18,606 J 5,300 MDL1 0,286 GO 0,296 ISP 18,630 SFJ 0,050 MDT2 0,115 BD 0,300 BAS 1,770 SPL 5,300 MDL2 0,134 MWT 286,00 FSP 0,088 TPS TL 2,815 MCG 6,400		PROPELLER Installation Strut PRD 0,430 Type Folding 2 blades PBW Twin Screw No PIPA 0,0042 ST1 0,062 ST3 0,260 ST5 0,295 ST2 0,260 ST4 0,145 EDL 1,300	
MIZZEN RIG AND SAILS N/A		MOVEABLE BALLAST N/A	
COMMENTS 		CENTERBOARD N/A	

SAILS (Maximum Areas)																																																													
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula																																																					
	0,000	0,00	0,00	0,00	0,00	86,61	88,94	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)																																																					
Symmetric	SLU	SLE	SL	SHW	SFL	0,00		SL · (SFL + 4·SHW) / 6																																																					
Asymmetric																																																													
Not Available																																																													
HEADSAILS Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB) <table border="1"> <thead> <tr> <th>HHB</th> <th>HUW</th> <th>HTW</th> <th>HHW</th> <th>HQW</th> <th>HLP</th> <th>HLU</th> <th>Area</th> <th>Btn</th> <th>Fly</th> <th>Meas.Date</th> <th>Material</th> <th>Comment</th> </tr> </thead> <tbody> <tr> <td>0,10</td> <td>0,79</td> <td>1,51</td> <td>2,89</td> <td>4,22</td> <td>5,50</td> <td>18,18</td> <td>51,69</td> <td>Y</td> <td></td> <td>05/10/2015</td> <td>Carbon</td> <td></td> </tr> <tr> <td>0,10</td> <td>0,75</td> <td>1,44</td> <td>2,78</td> <td>4,10</td> <td>5,44</td> <td>18,52</td> <td>51,21</td> <td>Y</td> <td></td> <td>09/06/2015</td> <td>Carbon</td> <td>NEW</td> </tr> <tr> <td>0,06</td> <td>0,68</td> <td>1,35</td> <td>2,70</td> <td>4,08</td> <td>5,43</td> <td>18,62</td> <td>50,57</td> <td>Y</td> <td></td> <td>14/01/2010</td> <td>Carbon</td> <td></td> </tr> </tbody> </table>										HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment	0,10	0,79	1,51	2,89	4,22	5,50	18,18	51,69	Y		05/10/2015	Carbon		0,10	0,75	1,44	2,78	4,10	5,44	18,52	51,21	Y		09/06/2015	Carbon	NEW	0,06	0,68	1,35	2,70	4,08	5,43	18,62	50,57	Y		14/01/2010	Carbon	
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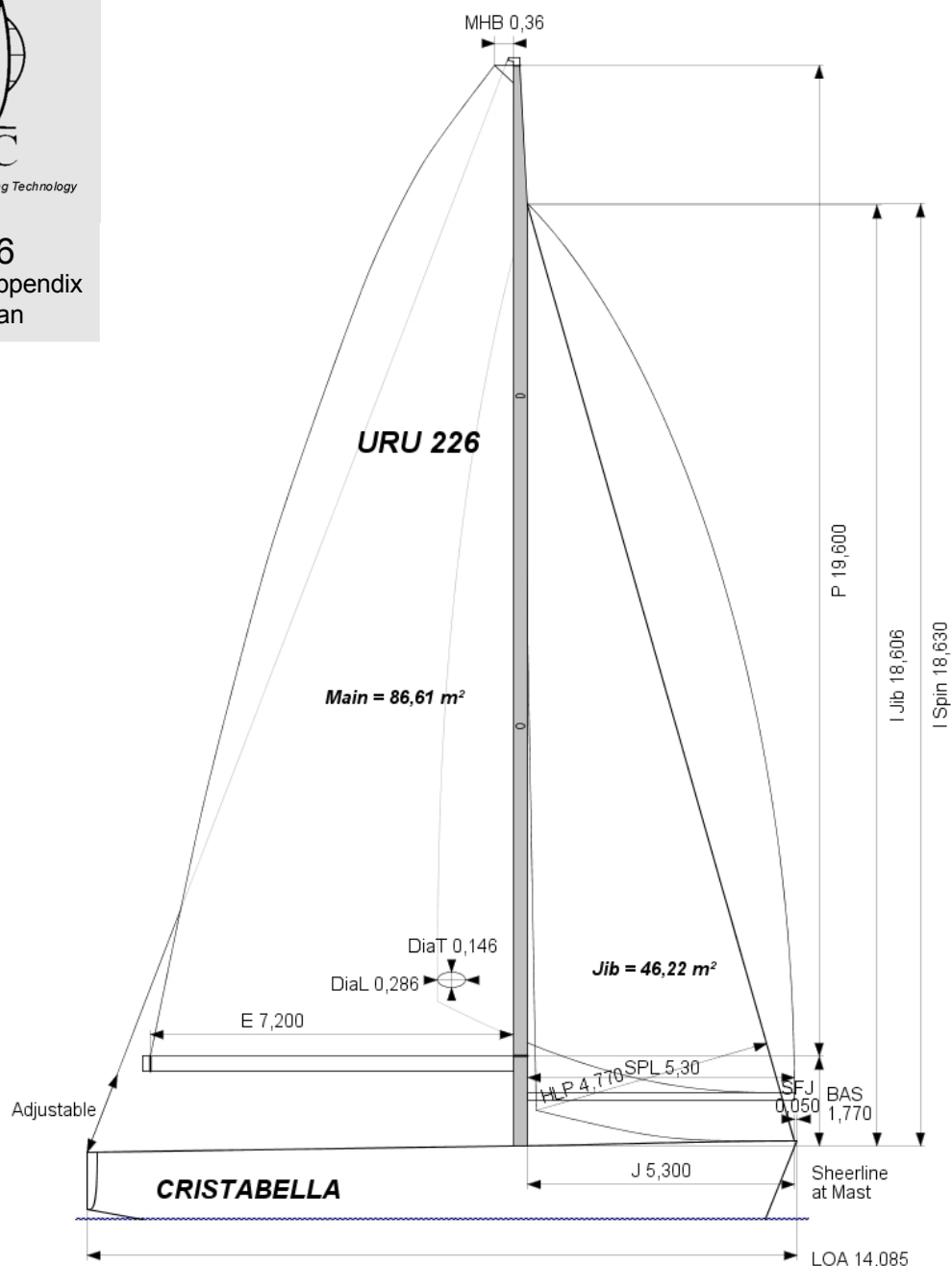
MEASUREMENT INVENTORY Measurer P. GUTIERREZ PG Date 14/01/2016 Comment					MEASUREMENT INVENTORY <table border="1"> <thead> <tr> <th>Id</th> <th>Item</th> <th>Tank Use</th> <th>Tank Type</th> <th>Capcty</th> <th>Dist.</th> <th>VCG</th> <th>Condtn</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>C5</td> <td>Tank</td> <td>GAS OIL</td> <td>INOX</td> <td>80,0</td> <td>7,80</td> <td>0,00</td> <td>35,0</td> <td></td> </tr> <tr> <td>B4</td> <td>Tank</td> <td>AGUA</td> <td>PVC FLEX</td> <td>55,0</td> <td>8,90</td> <td>0,00</td> <td>0,0</td> <td></td> </tr> </tbody> </table>					Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description	C5	Tank	GAS OIL	INOX	80,0	7,80	0,00	35,0		B4	Tank	AGUA	PVC FLEX	55,0	8,90	0,00	0,0				
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2016 Certificate Appendix Sail Plan



SAILS INVENTORY

MAINSAIL

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
MO1	0,250	1,52	2,71	4,62	6,00	83,67	ROBERTO	19/06/2015	OLIMPIC	Carbon	NEW

HEADSAILS

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1L	0,10	0,79	1,51	2,89	4,22	5,50	18,18	104%	51,69	Y		J BIRD	05/10/2015	OLIMPIC	Carbon	
GHO	0,10	0,75	1,44	2,78	4,10	5,44	18,52	103%	51,21	Y		GABRILE	09/06/2015	OLIMPIC	Carbon	NEW
H N	0,06	0,68	1,35	2,70	4,08	5,43	18,62	102%	50,57	Y		P	14/01/2010	OLIMPIC	Carbon	

SYMMETRIC SPINNAKERS

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
S2	18,41	18,41	18,41	10,31	9,90	156,91	J. BIRD	21/06/2016	NORTH	Nylon	2008
S1.5	18,43	18,43	18,43	10,18	9,85	155,33	J. BIRD	21/06/2016	QUANTUM	Nylon	2009
S3	18,26	18,26	18,26	9,76	9,48	147,66	M.BUNGE	19/10/2010	North	Nylon	REFORMADO

ASYMMETRIC SPINNAKERS

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
A1N2	18,49	17,08	17,78	6,96	9,22	109,85	asym	J BIRD	05/10/2015	OLIMPIC	Technora	NUEVA