

APH ToD: **542.8** CDL: **6.486**

APH ToT: **1.1053** CertNo: **25/1**

BOAT

Class **Viper 640**
Designer **Brian Bennett**
Builder **Rondar Raceboats**
Age date **10/2014**
Series date **01/1993**
Offset file **Viper640.off**
Data file **I72V640**

HULL

Length Overall **6.467 m**
Maximum Beam **2.420 m**
Draft **1.403 m**
Displacement **340 kg**
DLR **1.8552**
IMS Division **Sportboat**
Dynamic Allowance **0.000%**
Age Allowance **0.487%**

PROPELLER

Installation **No Propeller**
Type **N/A**
Diameter **N/A**

CREW

Maximum weight **240 kg** (declared)
Minimum weight **130 kg** * when applied
Non Manual Power **No**
Crew Arm Extension **Loose or no lifelines**

SAIL AREAS (m²)

	Measured	Rated
Mainsail	15.32	15.87
Headsail Luffed	7.75	7.75

Headsail Flying
Symmetric
Asymmetric **37.71** **37.71**
(All asymmetric spinnakers with SHW/SFL > 85%)

STORM SAIL AREAS (m²)

Trysail **4.05**
Storm Jib **2.49**
Heavy Weather Jib **6.71**

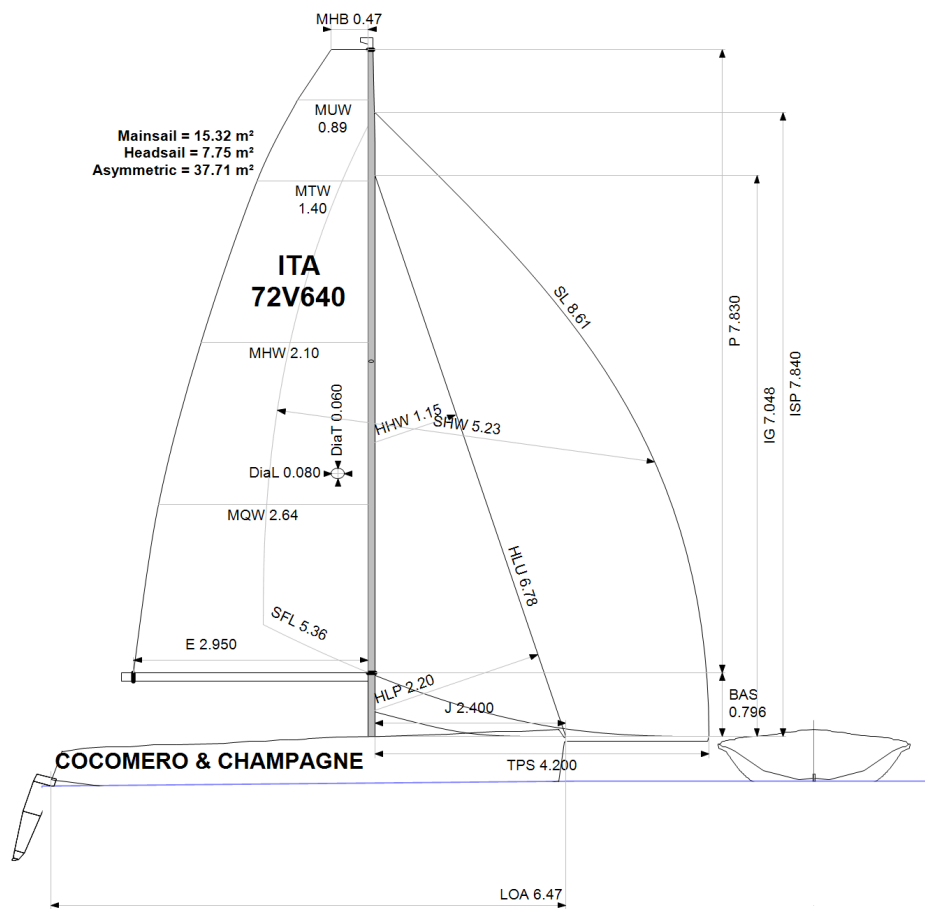
SAIL LIMITS

Headsails **5**
Spinnakers **4**

STABILITY

Righting Moment **N/A**
Stability Index **N/A**

The owner and any other person in charge is responsible that boat is complying with her certificate in accordance with RRS 78.1 and ORC Rule 304.



Rated boat velocities in knots

Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat Angles	42.1°	42.1°	38.6°	37.5°	37.4°	37.8°	38.3°	39.3°	40.8°
Beat VMG	2.63	3.57	4.20	4.40	4.49	4.54	4.57	4.58	4.45
52°	4.15	5.36	6.03	6.33	6.53	6.68	6.79	6.90	6.78
60°	4.33	5.59	6.29	6.68	6.95	7.16	7.33	7.54	7.48
75°	4.40	5.73	6.56	7.25	7.69	8.05	8.34	8.77	8.92
90°	4.48	5.72	6.52	7.55	8.36	8.90	9.35	10.01	10.47
110°	4.37	5.88	6.95	7.75	8.48	9.24	10.23	11.51	12.45
120°	4.25	5.77	6.97	8.14	8.99	9.78	10.52	12.04	13.26
135°	3.96	5.31	6.38	7.72	9.22	10.53	11.57	13.36	14.93
150°	3.17	4.48	5.57	6.45	7.75	9.19	10.74	13.83	16.41
Run VMG	2.74	3.88	4.82	5.59	6.71	7.96	9.30	11.97	14.41
Gybe Angles	142.6°	142.6°	148.8°	147.8°	140.6°	142.3°	144.1°	148.6°	152.4°

Time Allowances in secs/NM									
Wind Velocity	4 kt	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt	24 kt
Beat VMG	1369.5	1009.0	856.8	817.5	801.4	792.6	786.9	785.7	809.3
52°	867.5	671.6	597.3	568.3	551.2	539.2	529.9	521.8	530.9
60°	831.0	644.4	572.5	538.6	518.2	503.0	491.1	477.5	481.0
75°	817.3	628.7	548.6	496.4	468.4	447.2	431.6	410.5	403.6
90°	803.9	629.0	552.1	476.9	430.9	404.7	385.2	359.7	343.9
110°	822.9	612.4	517.7	464.5	424.7	389.5	352.0	312.7	289.2
120°	846.2	624.1	516.5	442.5	400.5	368.1	342.4	299.0	271.5
135°	908.2	678.1	564.4	466.3	390.3	341.8	311.0	269.5	241.1
150°	1136.1	803.5	646.7	558.2	464.7	391.8	335.3	260.4	219.4
Run VMG	1311.9	927.8	746.8	644.5	536.6	452.4	387.2	300.7	249.8
Selected Courses									
Windward / Leeward	1339.7	968.4	801.8	731.0	669.0	622.5	587.1	543.2	529.6
All purpose	1017.0	754.6	637.3	575.3	528.8	494.9	468.7	436.5	424.7

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	685.9	0.8748
All purpose	542.8	1.1053

Data in meters/kilograms (Metric)

HULL AND APPENDAGES (Lightship Trim)

Class	Viper 640	LOA	6.467	VCGD	-0.500
Measurement	10/10/2022	Max. Beam	2.420	VCGM	-0.429
HIN		Draft	1.403	RM Rated (kg·m)	9.7
Plan review		Displacement	340	Limit of positive stability(°)	N/A
Hull construction	Cored	Wetted area	6.12	Stability Index	N/A
Carbon rudder	No	IMS L	6.030	Default crew weight	170
Light stanchions	No	LSM0	5.680	Declared crew weight	240
Trim tab	No	Acc. length	6.467		
		Sink (kg/mm)	5.09		

PROPELLER

Propeller Type	No Propeller
Hydro generator	No

RIG

Forestay tension	Fixed	P	7.830	E	2.950
Inner stay	None Fitted	IG	7.048	J	2.400
Mast material	Carbon	ISP	7.840	BAS	0.796
Single headsail furler	No	MDT1	0.060	FSD	No Foil
Mainsail furler	No	MDL1	0.080	SFJ	
Articulated bowsprit	No	MDT2	0.055	SPL	
Non-circular rigging	No	MDL2	0.060	WPL	
Fiber rigging	No	TL	1.200	TPS	4.200
Adjustable mast foot	No	MW	0.080	BD	
Running backstays	0	GO	0.080	MWT	
Checkstays	0			MCG	
Spreaders	1				
Rotating mast	No				

FLOTATION AND STABILITY

Calculation method	VCG entered directly
VCG entered	-0.500
Flotation Date	09/03/2021

MAINSAIL

<i>Id</i>	<i>MHB</i>	<i>MUW</i>	<i>MTW</i>	<i>MHW</i>	<i>MQW</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
B	0.47	0.89	1.40	2.10	2.64	15.32	10/10/2022	

HEADSAIL

<i>Id</i>	<i>HHB</i>	<i>HUW</i>	<i>HTW</i>	<i>HHW</i>	<i>HQW</i>	<i>HLP</i>	<i>HLU</i>	<i>Btn</i>	<i>Flying FT</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
B	0.05	0.34	0.65	1.15	1.67	2.20	6.78	Yes	No	7.75	10/10/2022	

ASYMMETRIC SPINNAKER

<i>Id</i>	<i>SLU</i>	<i>SLE</i>	<i>SL</i>	<i>SHW</i>	<i>SFL</i>	<i>Ratio</i>	<i>Area</i>	<i>Meas.Date</i>	<i>Comment</i>
A	9.65	7.57	8.61	5.23	5.36	98%	37.71	09/03/2021	

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PROPELLER

Installation **No Propeller**
Type **N/A**
Diameter **N/A**

CREW

Maximum weight **180 kg** (declared)
Minimum weight **120 kg** * when applied
Non Manual Power **No**
Crew Arm Extension **Loose or no lifelines**

SAIL AREAS (m²)

	Measured	Rated
Mainsail	15.32	15.87
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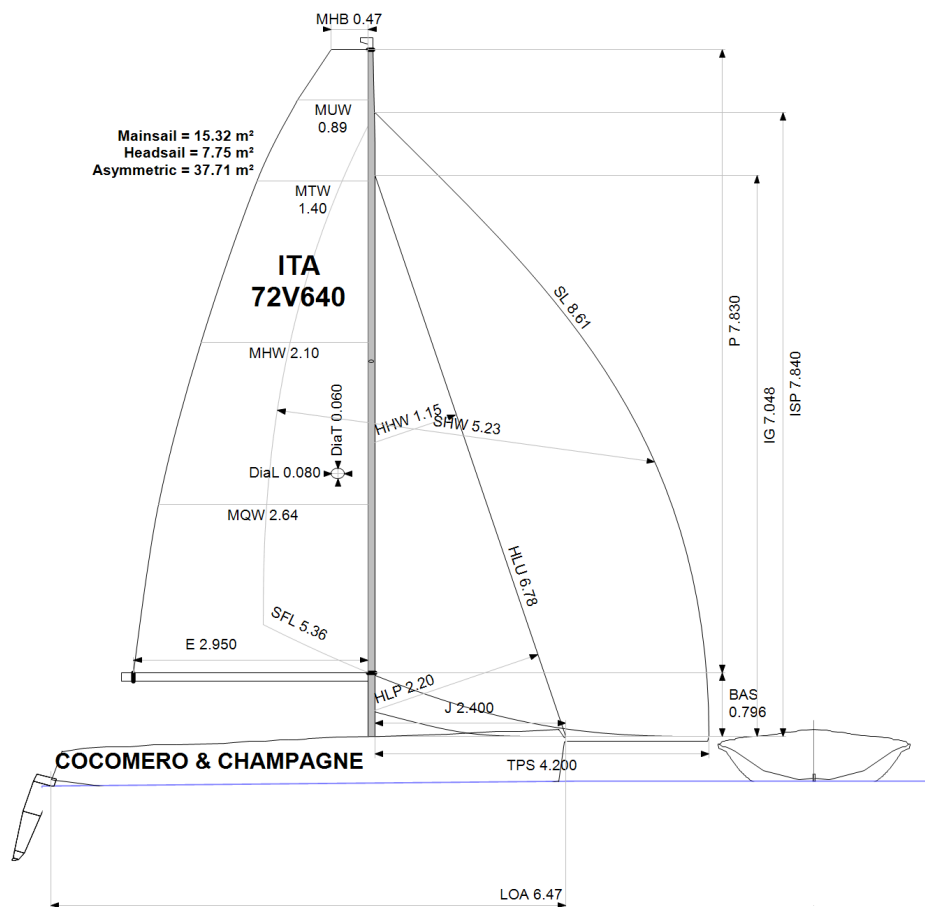
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**Double Handed
Club Certificate
2025**

**COCOMERO &
CHAMPAGNE
ITA-72V640**

FEDERAZIONE ITALIANA VELA
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Tel. + 39068841273
E-mail segreteria@uvai.it



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