

I.O.R. 3 Quarter Ton Racer #01

Project : I.O.R. 3 quarter Tonner
Designer : Delta Consultants/P.Visser
Filename : I:\freeships\3qton01\3qt.fbm

Length over all : 10.000 m
Beam over all : 3.410 m
Draft : 2.000 m
Midship location : 3.500 m
Water density : 1.025 t/m³
Appendage coefficient : 1.0000

Volume properties:

Displaced volume : 3.614 m³
Displacement : 3.704 tons
Total length of submerged body : 9.172 m
Total beam of submerged body : 2.798 m
Block coefficient : 0.0704
Prismatic coefficient : 0.4687
Vert. prismatic coefficient : 0.1177
Wetted surface area : 20.533 m²
Longitudinal center of buoyancy : 4.463 m
Longitudinal center of buoyancy : -1.980 %
Tranverse center of buoyancy : 0.000 m
Vertical center of buoyancy : 1.831 m

Midship properties:

Midship section area : 0.841 m²
Midship coefficient : 0.1502

Waterplane properties:

Length on waterline : 9.172 m
Beam on waterline : 2.798 m
Waterplane area : 15.353 m²
Waterplane coefficient : 0.5983

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Waterplane center of floatation : 4.325 m
 Y coordinate of DWL area CoG : 0.000 m
 Half entrance angle of DWL : 10.869 degr
 Transverse moment of inertia : 6.873 m⁴
 Longitudinal moment of inertia : 53.416 m⁴

Initial stability:

Vertical of transverse metacenter : 3.733 m
 Tranverse metacentric radius : 1.902 m
 Longitudinal transverse metacenter : 16.613 m
 Longitudinal metacentric radius : 14.782 m

Lateral plane:

Lateral area : 4.041 m²
 Longitudinal center of effort : 4.352 m
 Vertical center of effort : 1.477 m

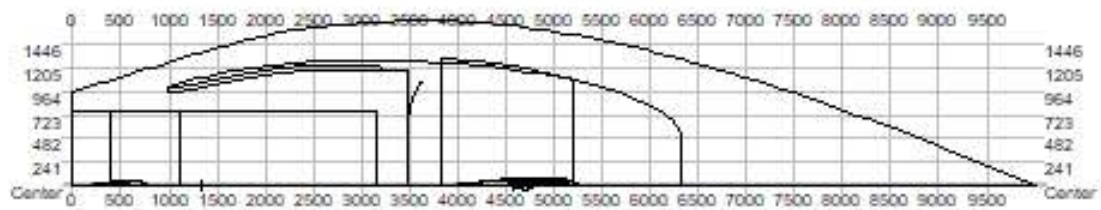
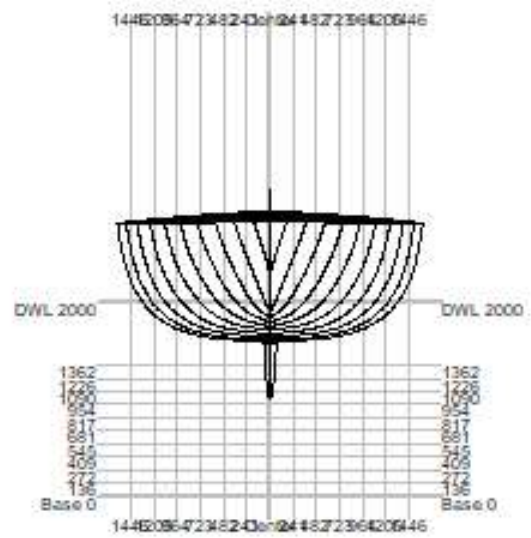
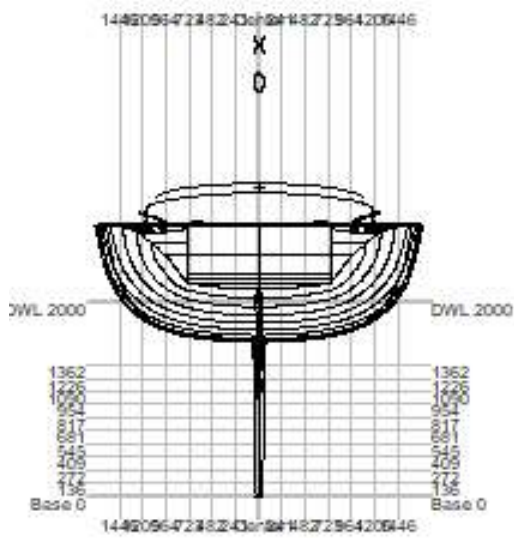
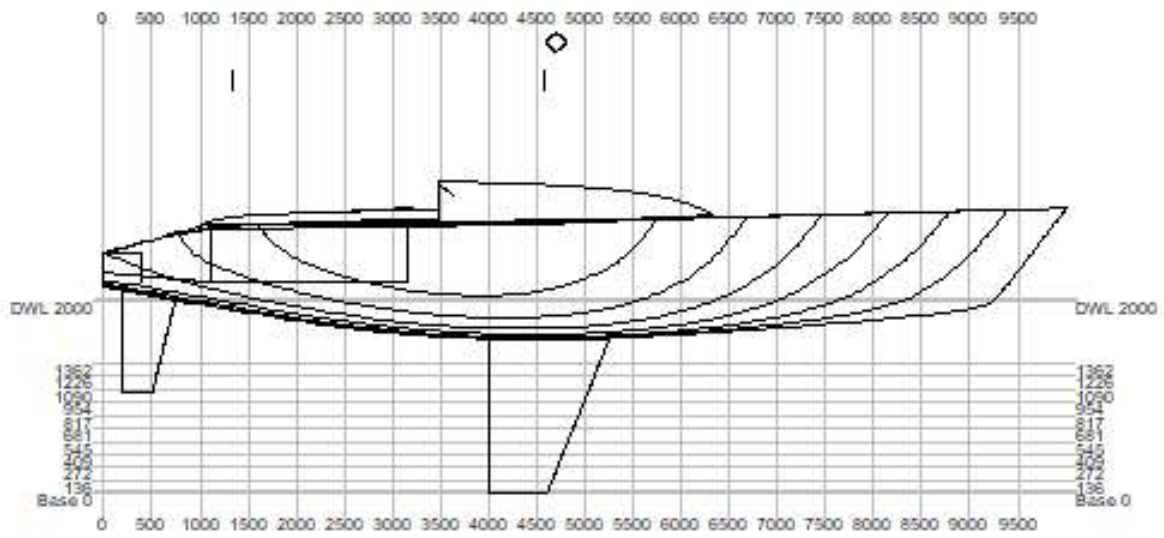
Hull characteristics above waterline:

Lateral wind area : 8.009 m²
 Z coordinate of wind area CoG above DWL : 0.430 m
 Distance from bow to wind area CoG : 3.991 m

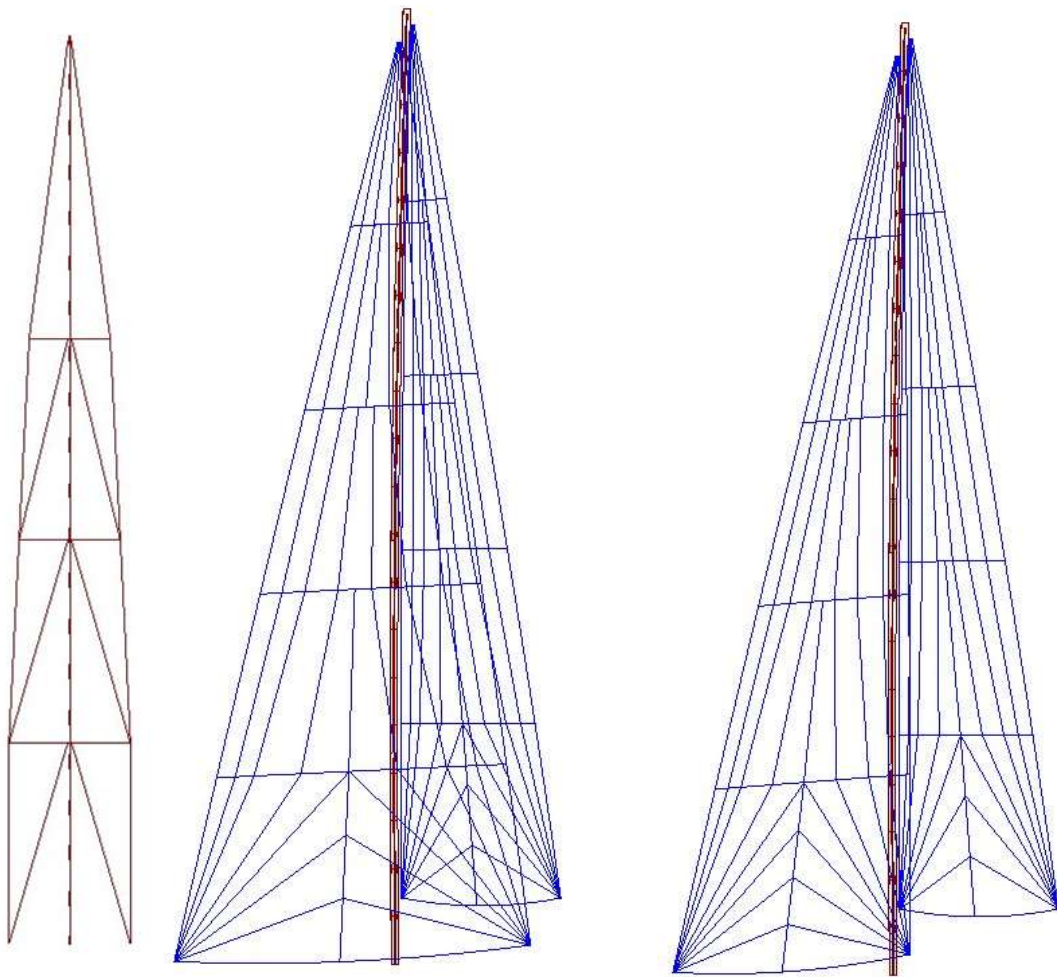
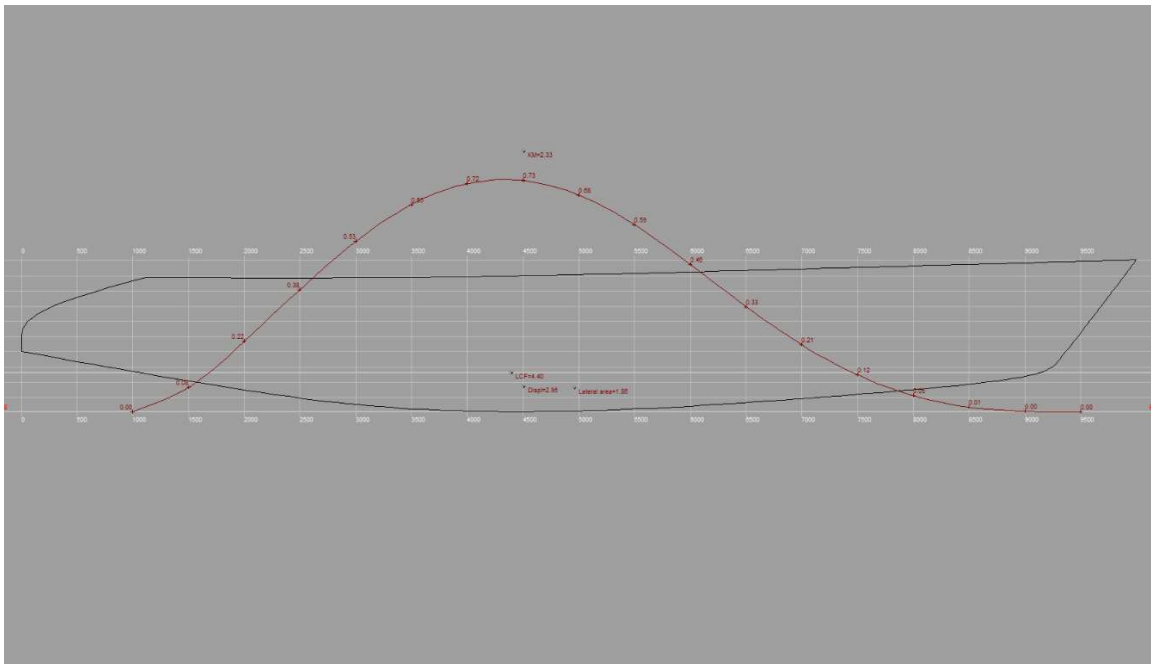
The following layer properties are calculated for both sides of the ship:

Layer	Area m ²	Thickness mm	Weight tonnes	COG X m	COG Y m	COG Z m
hull	46.915	40.000	1.689	3.895	0.000	2.167
deck	19.540	30.000	0.528	4.825	0.000	2.842
Trapezoidal keel NACA63	3.148	0.000	1.150	4.494	0.000	0.912
Trapezoidal rudder NACA	0.933	0.000	0.050	0.307	0.000	1.603
Cabin	8.790	25.000	0.198	4.303	0.000	3.065
Total	83.913		3.615	4.132	0.000	2.388

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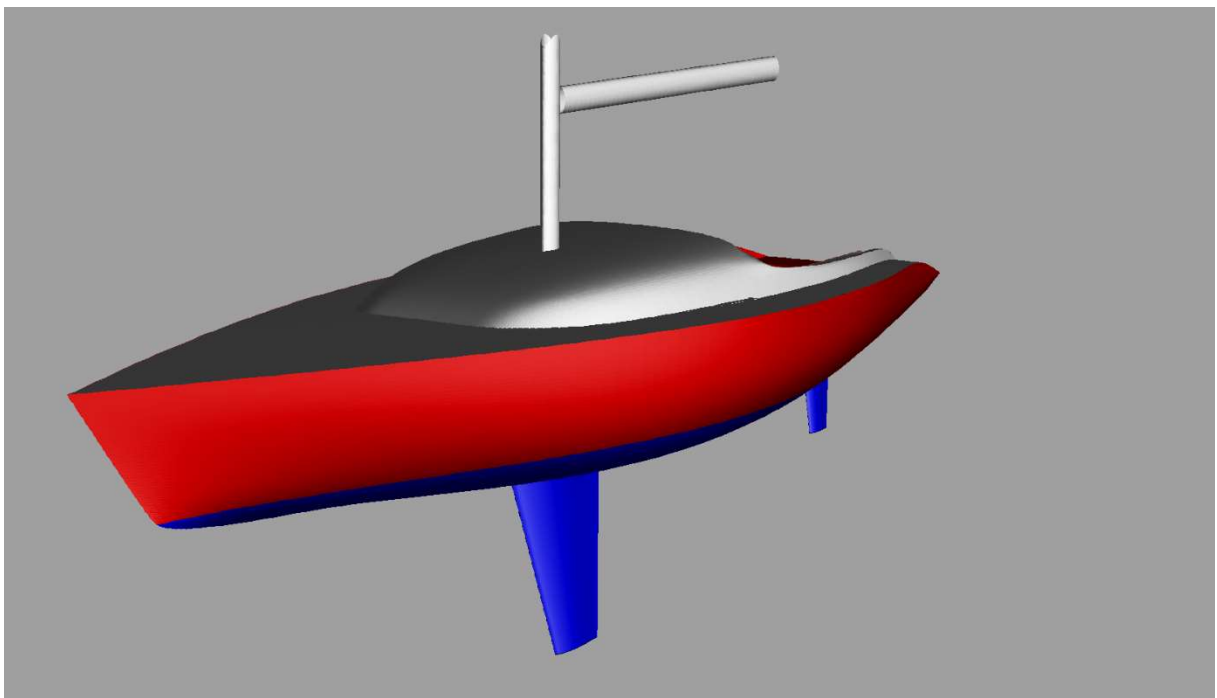
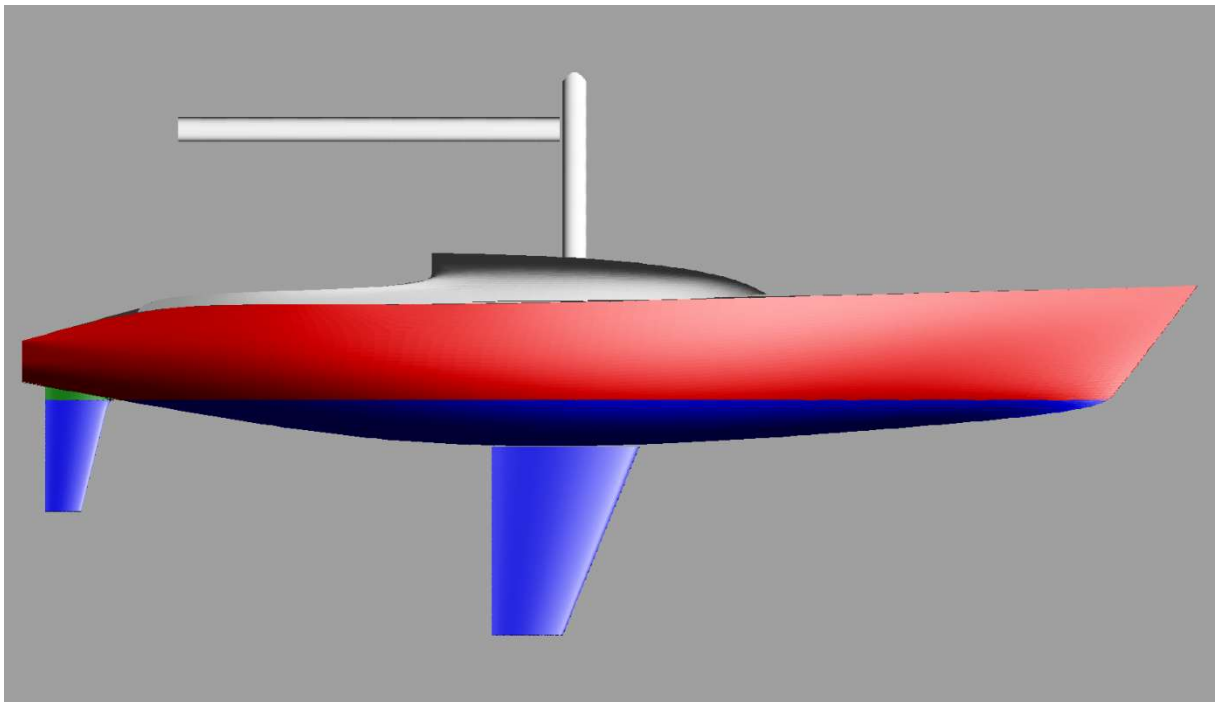


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Main 28m² High Aspect 42m² Genua 150% 62m²

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