

Project :
Designer :
Filename : D:\Eigene Dateien\VEIT Modell-YACHT\FREESHIP\FORUM RG65\Ranger1-1VHR.fbm

Design length : 6.500 [m]
Length over all : 6.500 [m]
Design beam : 1.120 [m]
Beam over all : 1.107 [m]
Design draft : 0.380 [m]
Midship location : 3.250 [m]
Water density : 1.025 [t/m3]
Appendage coefficient : 1.0000

Volume properties:

Displaced volume : 1.032 [m3]
Displacement : 1.058 [tonnes]
Total length of submerged body : 6.405 [m]
Total beam of submerged body : 0.923 [m]
Block coefficient : 0.4596
Prismatic coefficient : 0.5656
Vert. prismatic coefficient : 0.6365
Wetted surface area : 6.271 [m2]
Longitudinal center of buoyancy : 3.026 [m]
Longitudinal center of buoyancy : -3.500 [%]
Vertical center of buoyancy : 0.234 [m]

Midship properties:

Midship section area : 0.285 [m2]
Midship coefficient : 0.8127

Waterplane properties:

Length on waterline : 6.405 [m]
Beam on waterline : 0.923 [m]
Waterplane area : 4.268 [m2]
Waterplane coefficient : 0.7220
Waterplane center of floatation : 2.989 [m]
Entrance angle : 90.000 [degr.]
Transverse moment of inertia : 0.214 [m4]
Longitudinal moment of inertia : 9.957 [m4]

Initial stability:

Transverse metacentric height : 0.442 [m]
Longitudinal metacentric height : 9.879 [m]

Lateral plane:

Lateral area : 1.589 [m2]
Longitudinal center of effort : 3.160 [m]
Vertical center of effort : 0.229 [m]

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

Layer	Area [m2]	Thickness	Weight [tonnes]	COG X [m]	COG Y [m]	COG Z [m]
Layer 0	15.988	0.000	0.000	3.523	0.000	0.526

Sectional areas:

Location [m]	Area [m2]
0.000	0.000
0.650	0.059
1.300	0.160
1.950	0.253
2.600	0.296
3.250	0.285
3.900	0.241
4.550	0.173
5.200	0.094
5.850	0.027

NOTE 1: Draft (and all other vertical heights) is measured above the lowest point of the hull! (Z= 0.000)
NOTE 2: All calculated coefficients based on actual dimensions of submerged body.