2026 03

Velocity prediction examples with « Gene-VPP Sailboat 3.5 »

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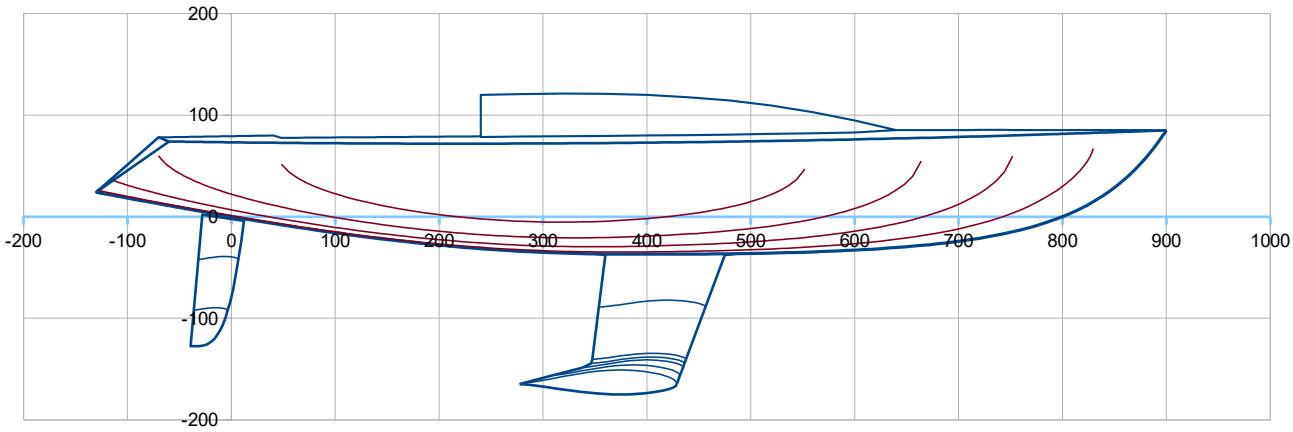
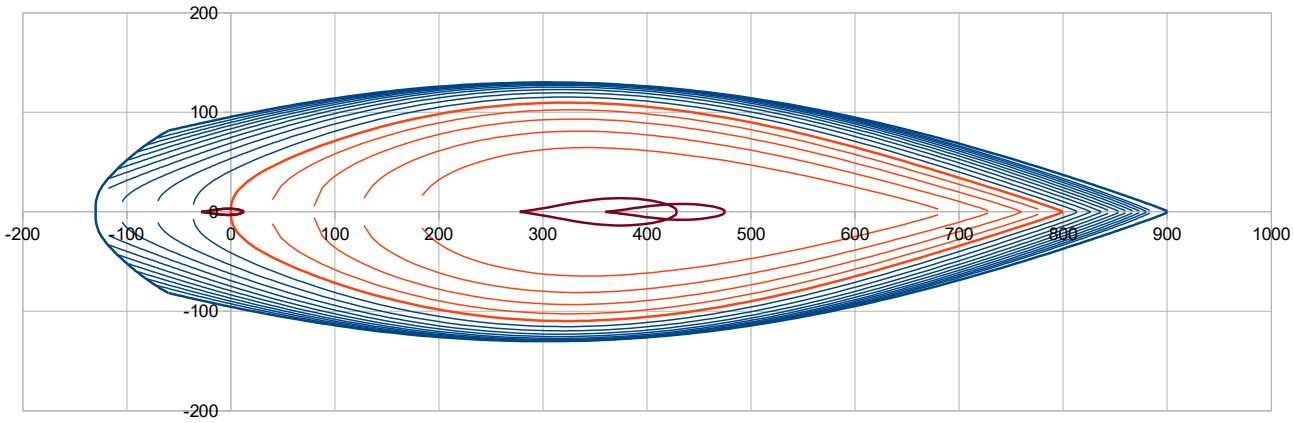
« Gene-VPP 3.5 » spreadsheet application is here illustrated through these 13 examples :

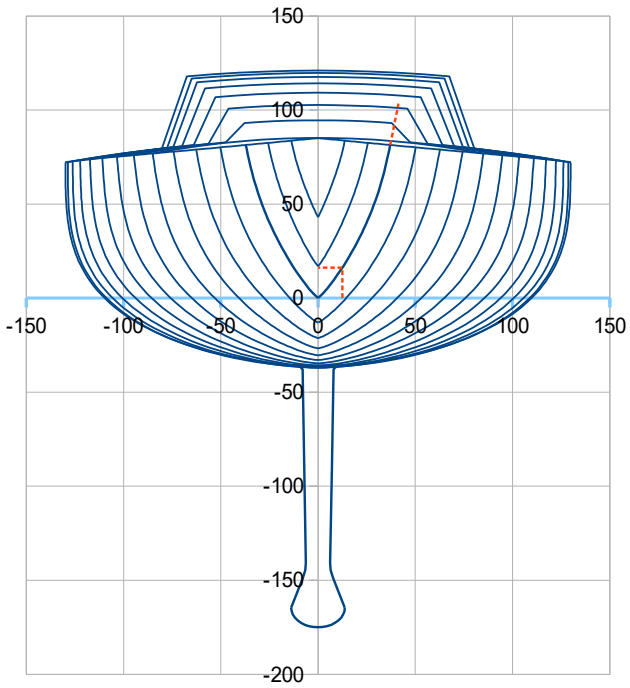
- **V1 modern classic sailboat** (the reference boat in « Gene-Hull Sailboat 3.3 »)
- **Boat U1** modern style sailboat
- **Classic 6m JI**, inspired by this metric class with a classic approach
- **T37**, inspired by Tina / Dick Carter
- **M32**, inspired by Melges 32 / Reichel Pugh
- **T10**, inspired by Tofinou 10 / Joubert-Nivelt
- **Dolfi 22,5** , inspired by 15m2 SNS swiss class
- **Dolfi 32S**, inspired by Beneteau Figaro III / VPLP
- **Syd 38**, inspired by Sydney 38 / Murray Burns Dovell
- **MO24**, inspired by the Moore 24,
- **ULDB 50**, inspired by the Swede 55 / Knud Reimers
- **DH17**, inspired by the Drak Harbor 17,5 / B.B. Crowninshield
- **AL29**, inspired by Aloa 29 / J.M. Finot

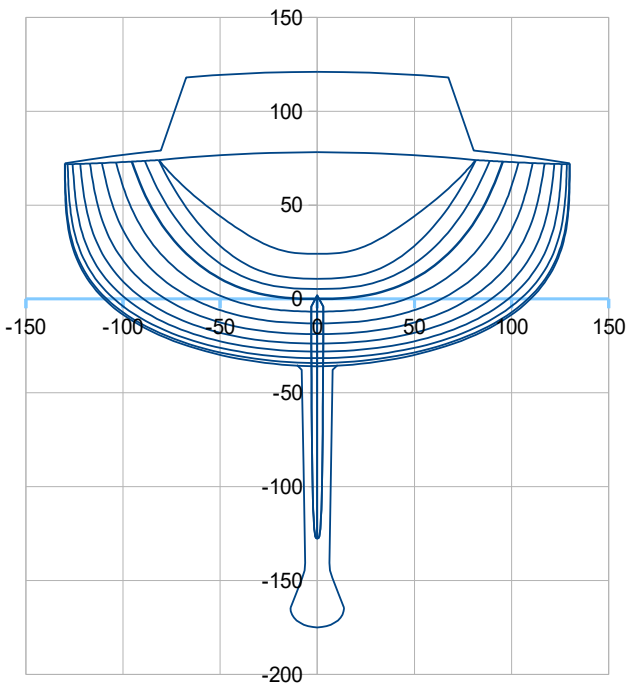
Boat V1 modern classic daysailer

Loa 10,30 m ; Lwl 8,00 m ; B 2,60 m ; Draft 1,75 m ; Displacement : 26743kg ; Keel-bulb 1090 kg



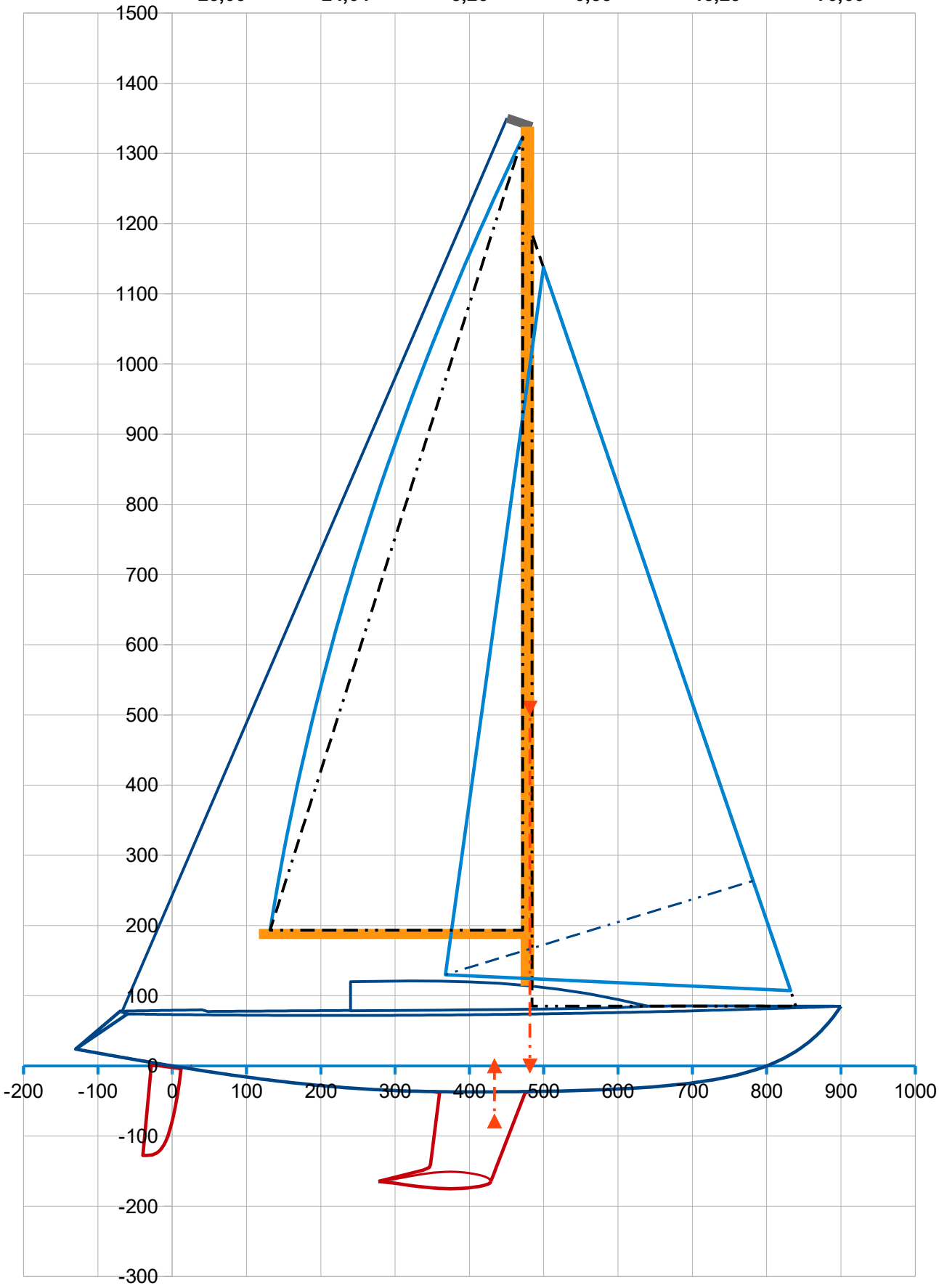






V1 Sailplan

For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	23,06	24,04	5,26	0,85	13,23	70,00	6,31



Gene-VPP data for V1 with a crew weight of 300 kg at X 2,0 m Y 1,0 m (i.e. sit windward) and Z 0,85 m

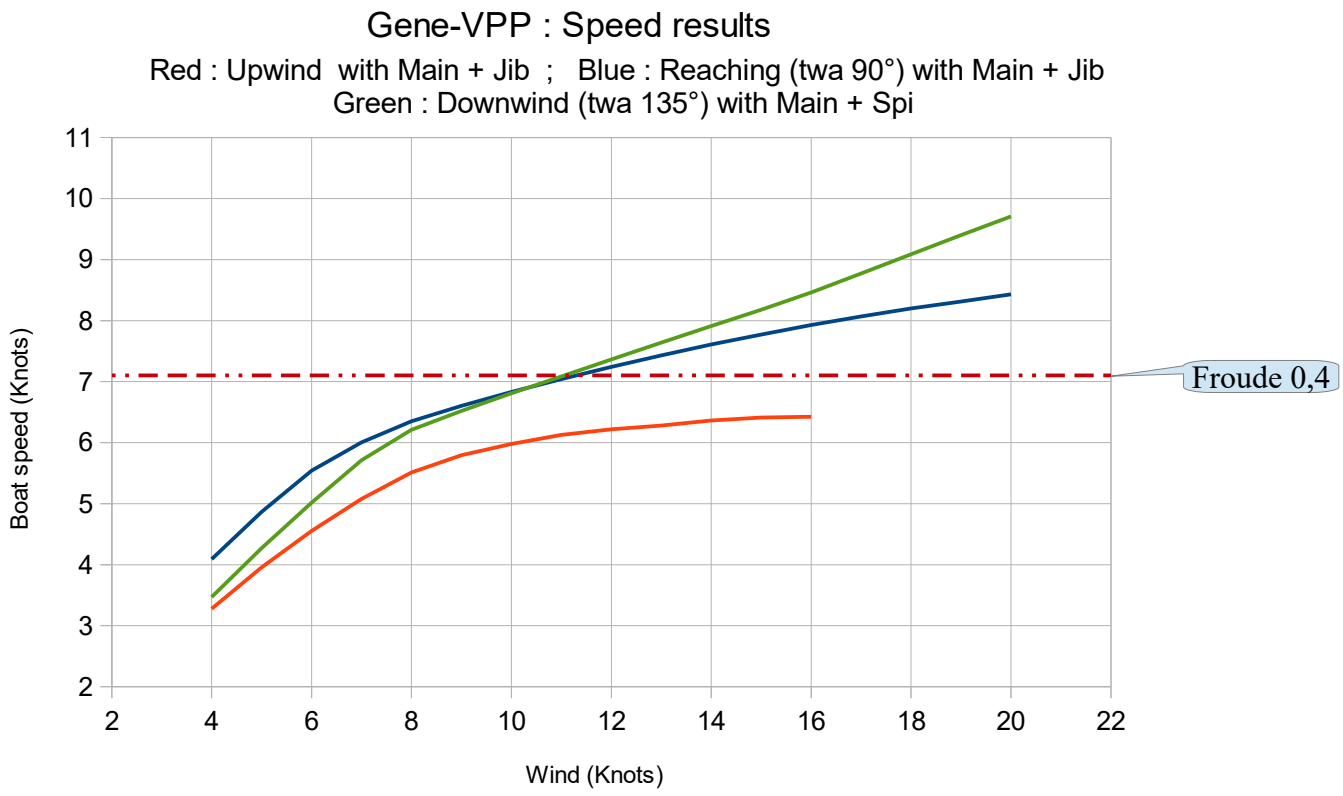
Input >>> this table which is a copy/special paste from Gene-Hull Sailboat 3.5 :

For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
8,26	2,24	0,39	2,60	0,54	47,34	12,50	23,06	24,04	5,26	0,85	13,23	70,00	6,31	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,09749	2,37	1,15	0,05190	1,30	1,55	0,28	0,01486	0,91	0,40	2973	1,77			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
2,943	12,158	15,144		18,25	17,51	17,08								

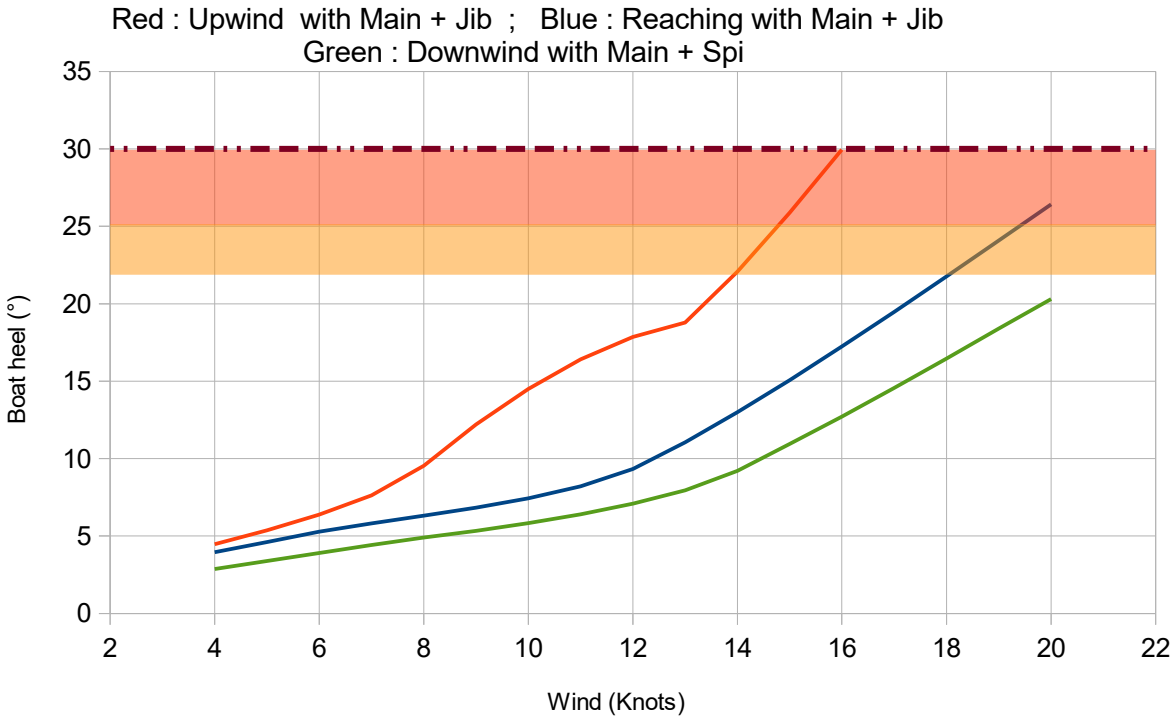
Other input data are about warnings for the heel angles, the apparent wind speed aws (i.e. for the limit of resistance of a sail canvas, in Knots) and the convergence issue of the VPP algorithms :

lot of heel (°)	22,00	max aws	30,00	Convergence issue	0,2
overheel (°)	25,00				1

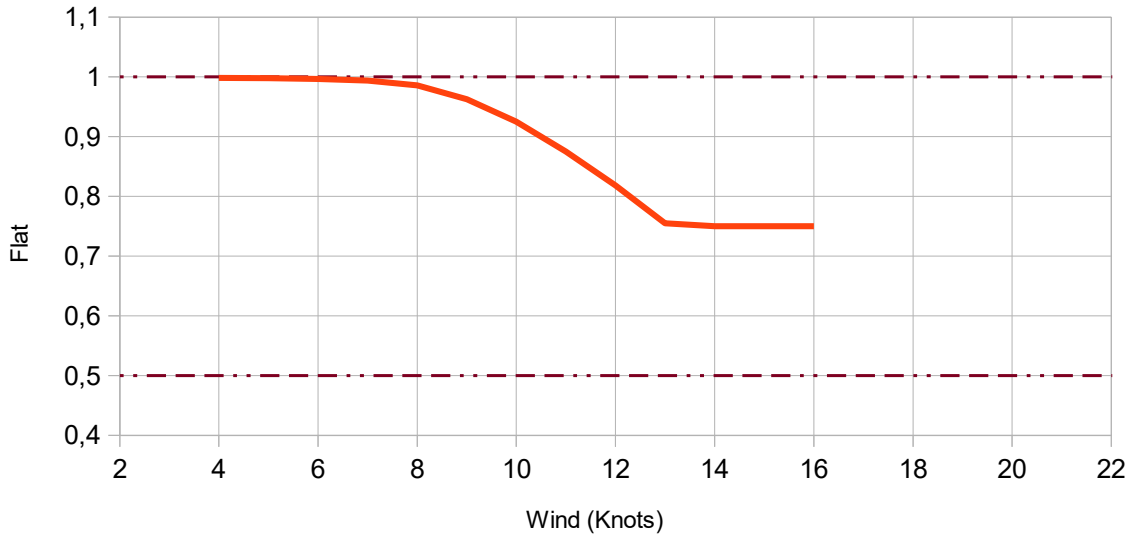
Output >>> curves (speed, heel angle, sails flat parameter, righting moment, drag) + new for this 3.5 version : speed table (to build using various twa in input, see the user guide) and speed polar



Gene-VPP : Heel results

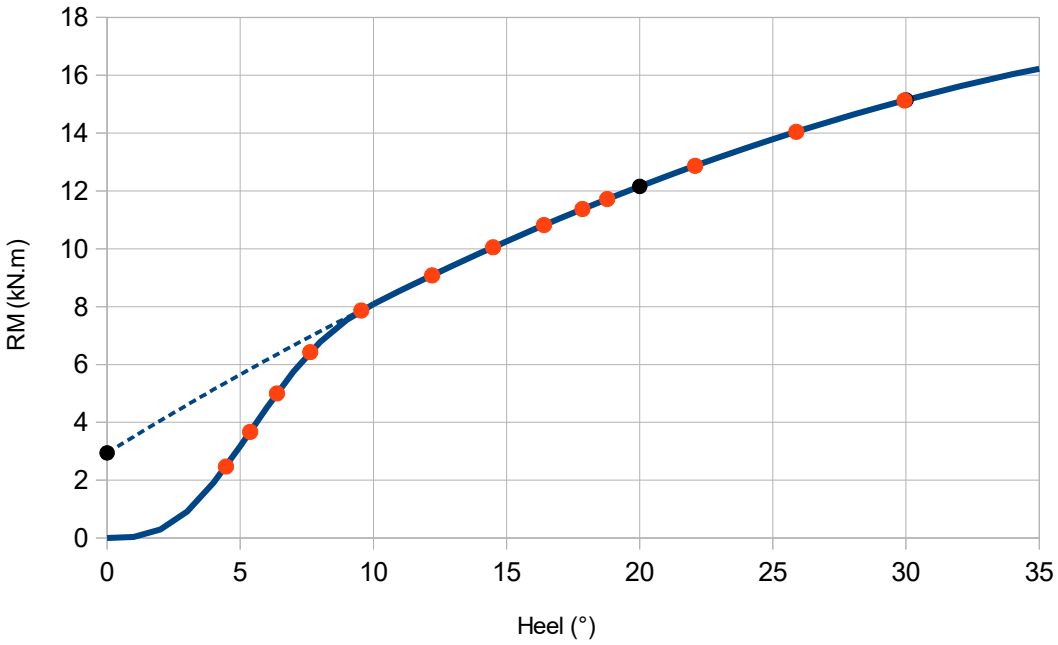


Gene-VPP : Flat optimum when upwind



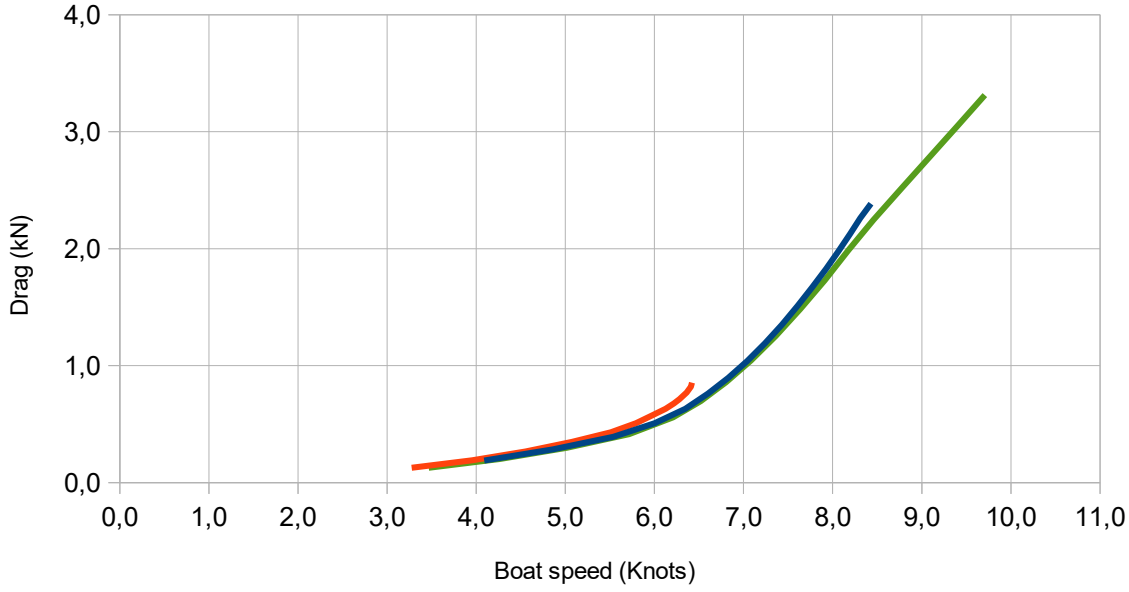
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

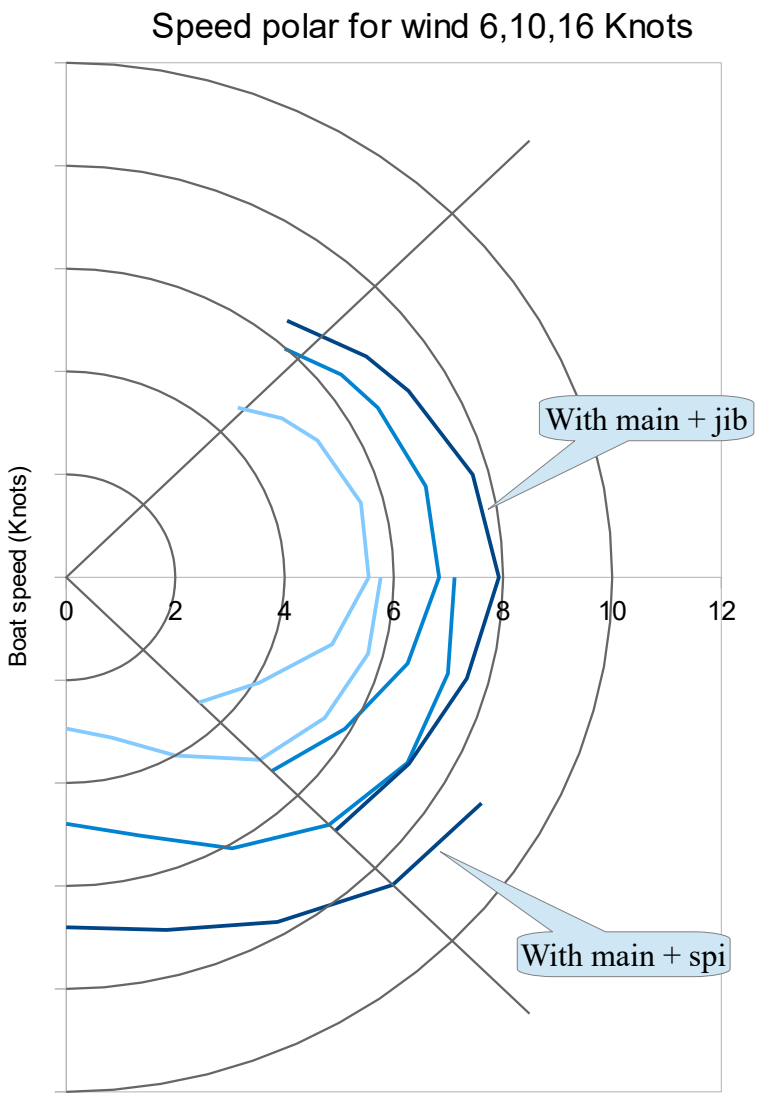


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi



Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,55	5,51	5,98	6,22	6,36	6,42	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	5,01	5,95	6,39	6,63	6,83	6,97	
60	5,31	6,19	6,59	6,84	7,06	7,24	
75	5,59	6,37	6,82	7,15	7,44	7,71	
90	5,54	6,35	6,83	7,24	7,61	7,93	8,43
105	5,04	5,95	6,47	6,87	7,25	7,60	8,16
120	4,09	5,10	5,90	6,44	6,86	7,25	7,93
135	3,44	4,43	5,33	6,04	6,55	6,97	7,75
With Mainsail + Spi (sym or asym)							
90	5,76	6,61	7,11	7,46			
105	5,73	6,63	7,24	7,71	8,05		
120	5,47	6,51	7,22	7,83	8,36	8,78	
135	5,02	6,21	6,81	7,36	7,91	8,46	9,71
150	4,00	5,16	6,08	6,70	7,22	7,74	8,94
165	3,23	4,25	5,20	6,01	6,60	7,10	8,07
180	2,94	3,89	4,79	5,65	6,30	6,81	7,73



The flat parameter influences the performance when sailing close hauled upwind. The flat minimal value which you input in the table

Flat mini
0,75

depends of the quality of your sails.

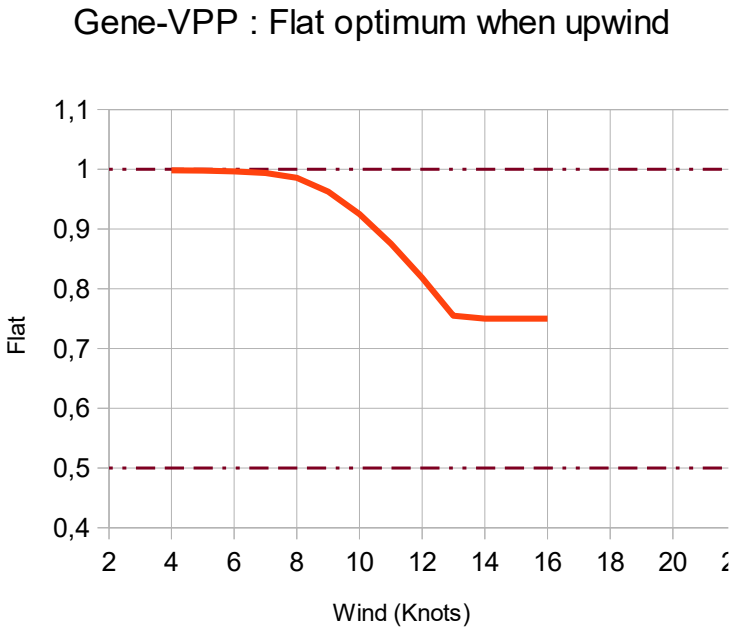
Roughly, you can put ~ 0,75 for average dacron sails up to ~ 0,6 for high quality flat cut sails.

>>> Results comparison with these two different values :

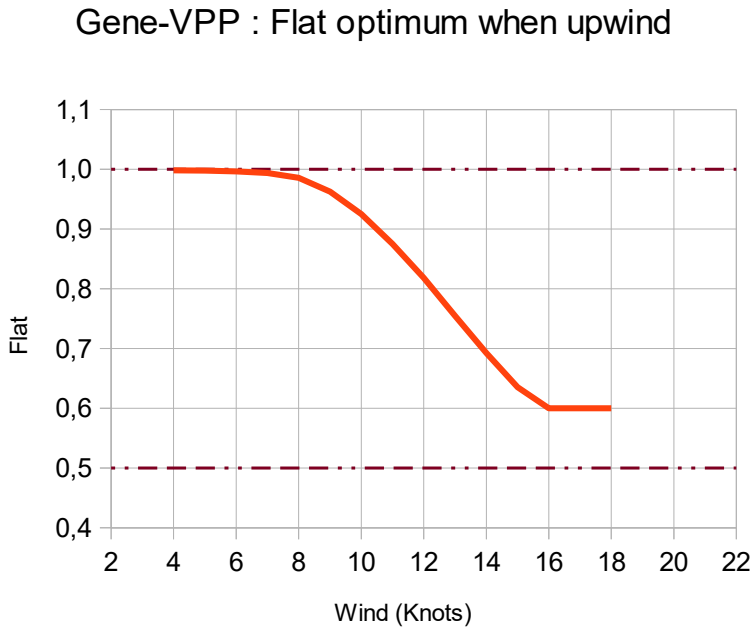
	Upwind on calm water							
	Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
	Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Flat mini 0,75	Vboat (Knts)	4,55	5,51	5,98	6,22	6,36	6,42	
	Heel (°)	6,4	9,5	14,5	17,9	22,1	29,9	
Flat mini 0,60	Vboat (Knts)	4,55	5,51	5,98	6,22	6,32	6,39	
	Heel (°)	6,4	9,5	14,5	17,9	19,4	21,0	

>>> The difference appears by breeze, flatter sails allow a lower heel angle and probably a more reliable speed prediction in these conditions.

When Flat mini input is 0,75 :

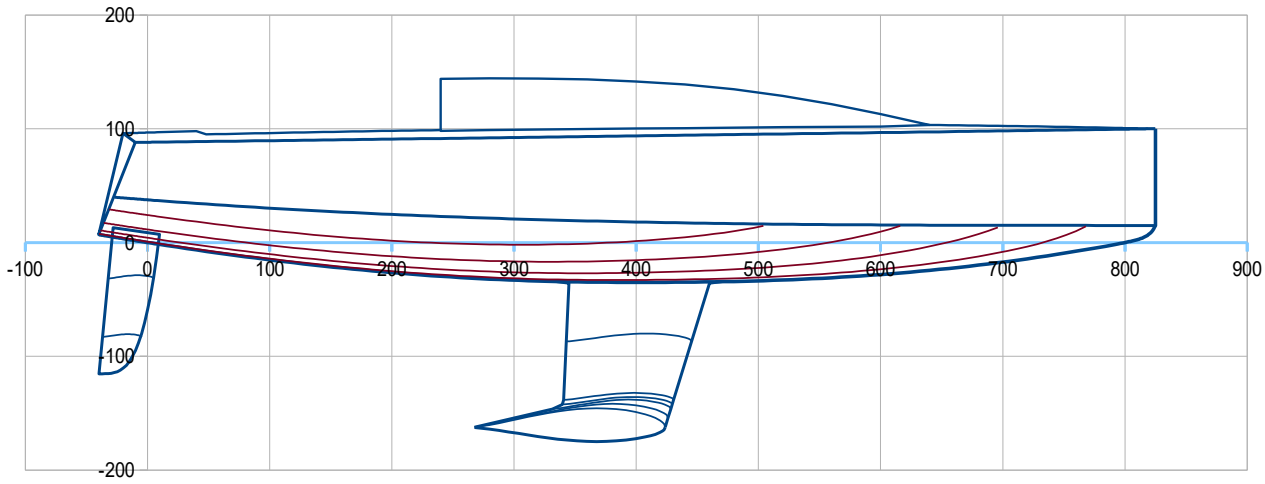


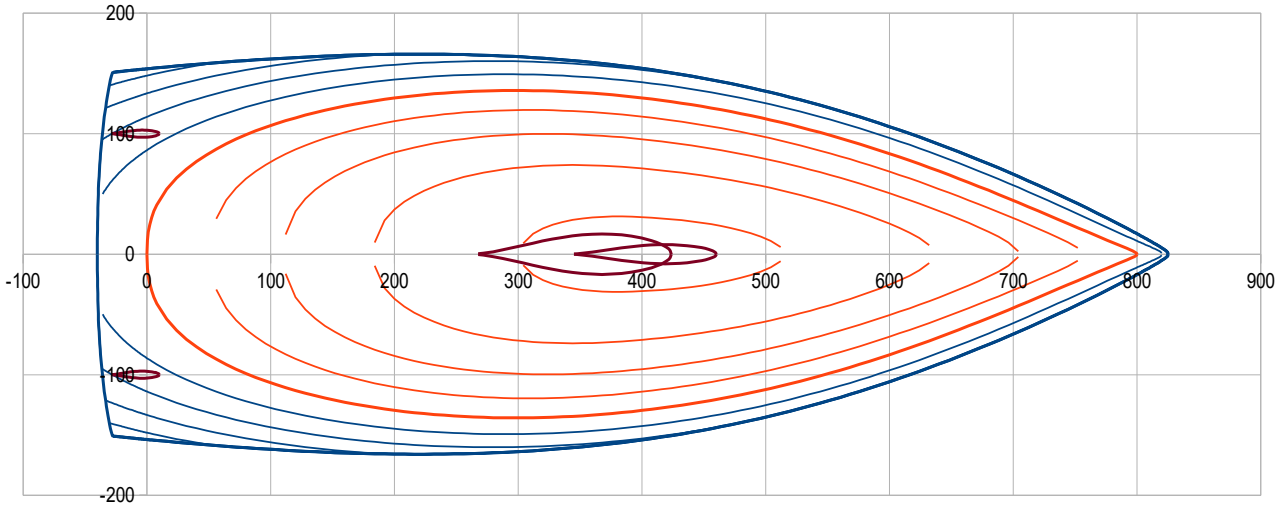
When Flat mini input is 0,60 :

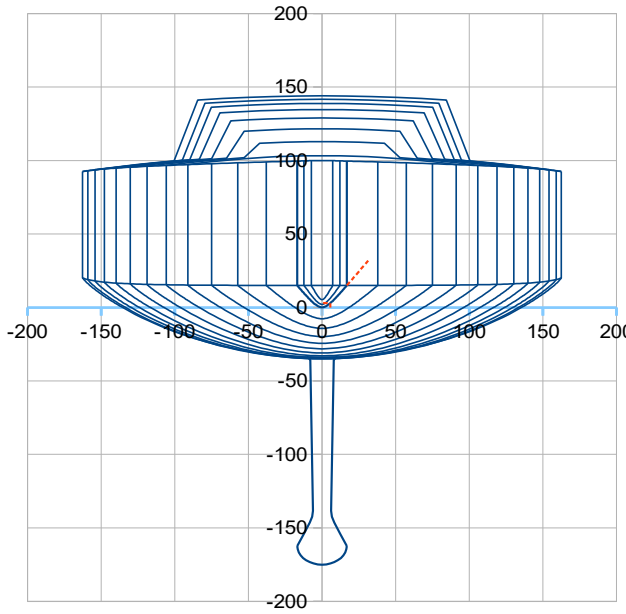


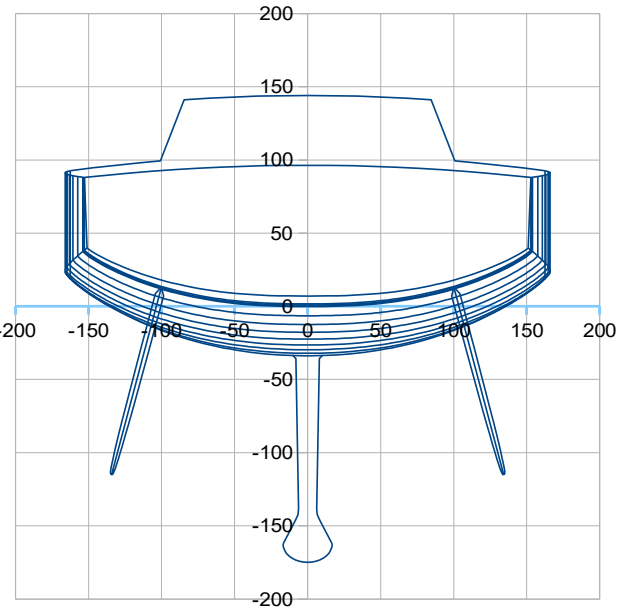
Boat U1 modern style sailboat

Loa 8,65 m ; Lwl 8,00 m ; Boa 3,32 m ; Draft 1,75 m ; Displacement : 3103 kg ; Keel-bulb 1198 kg



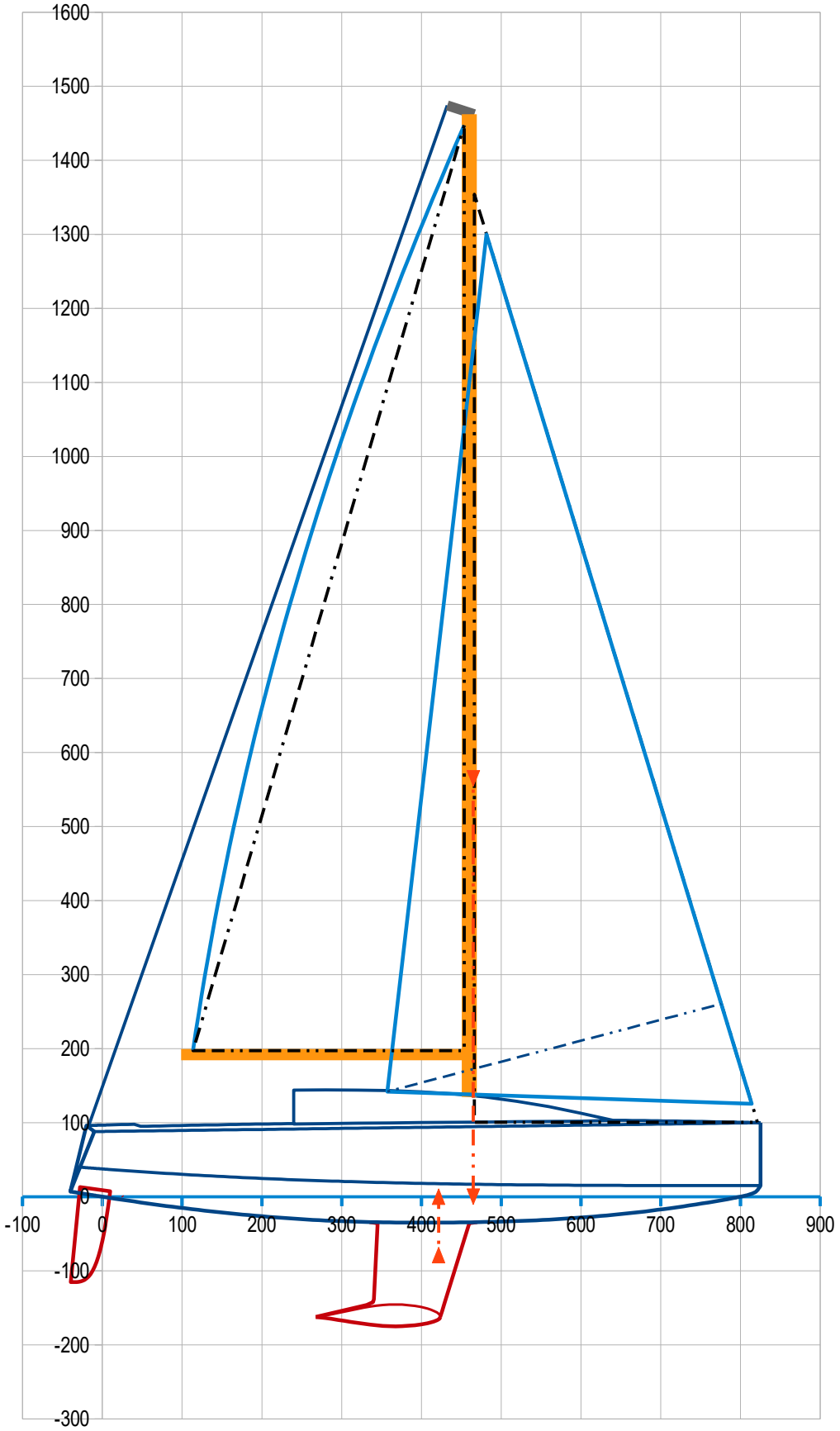






Sailplan :

For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	25,51	27,11	5,81	1,00	14,47	80,00	6,97



Gene-VPP input data for U1 with a crew weight of 300 kg at X 2,0 m Y 1,0 m (i.e. sit windward) and Z 0,85 m

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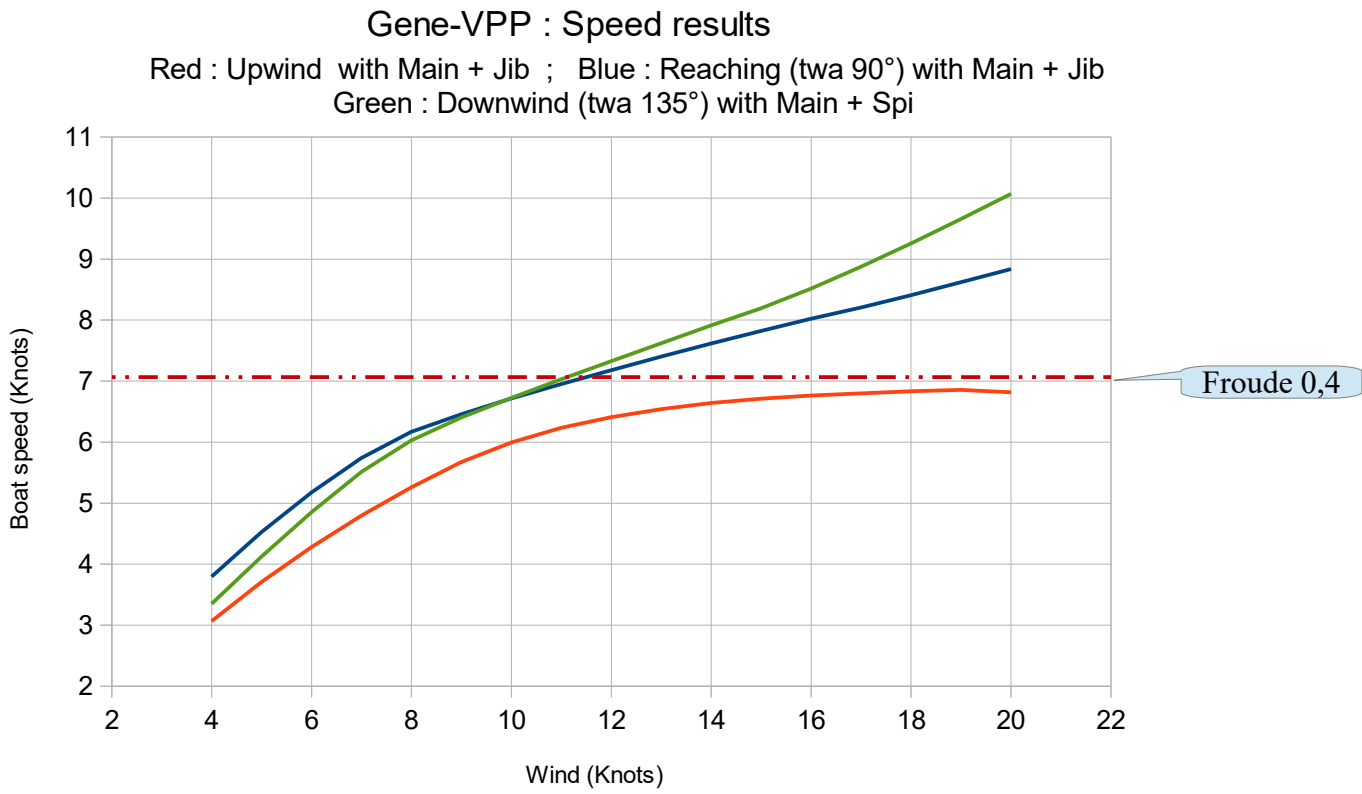
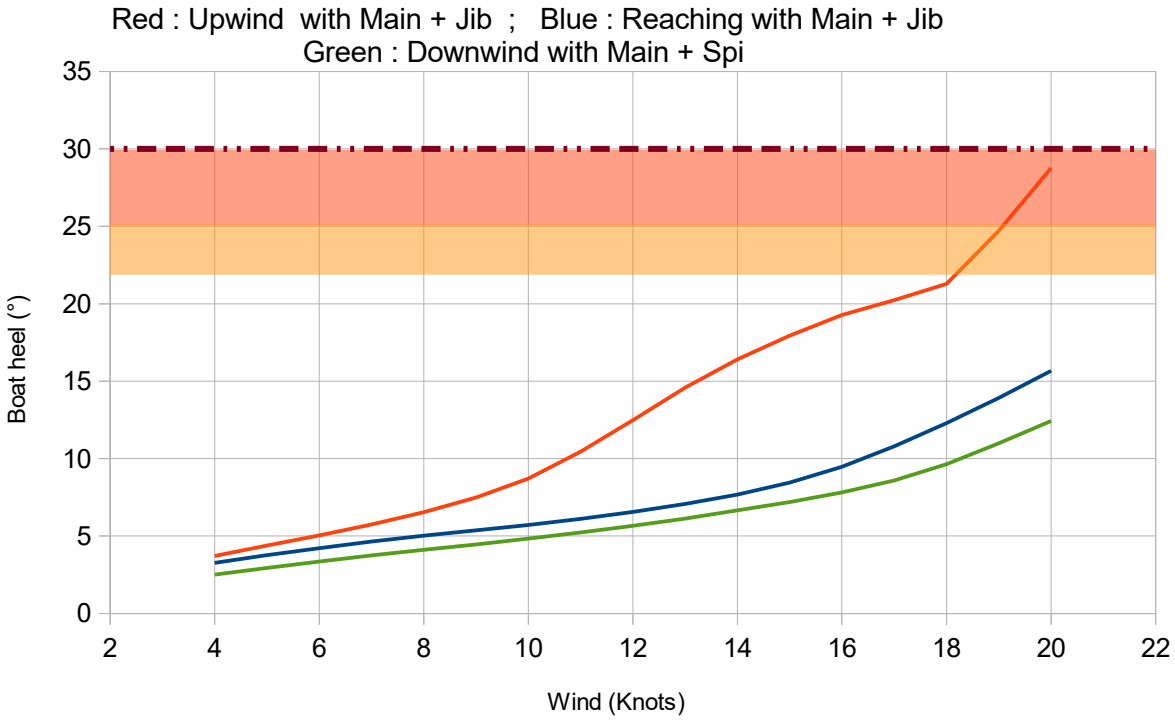
8,17	2,80	0,37	3,32	0,56	46,28	16,24	25,51	27,11	5,81	1,00	14,47	80,00	6,97	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,09729	2,36	1,15	0,06679	1,50	1,60	0,34	0,02790	1,79	0,38	3403	1,77			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
2,943	23,163	27,380		22,59	19,16	19,60								

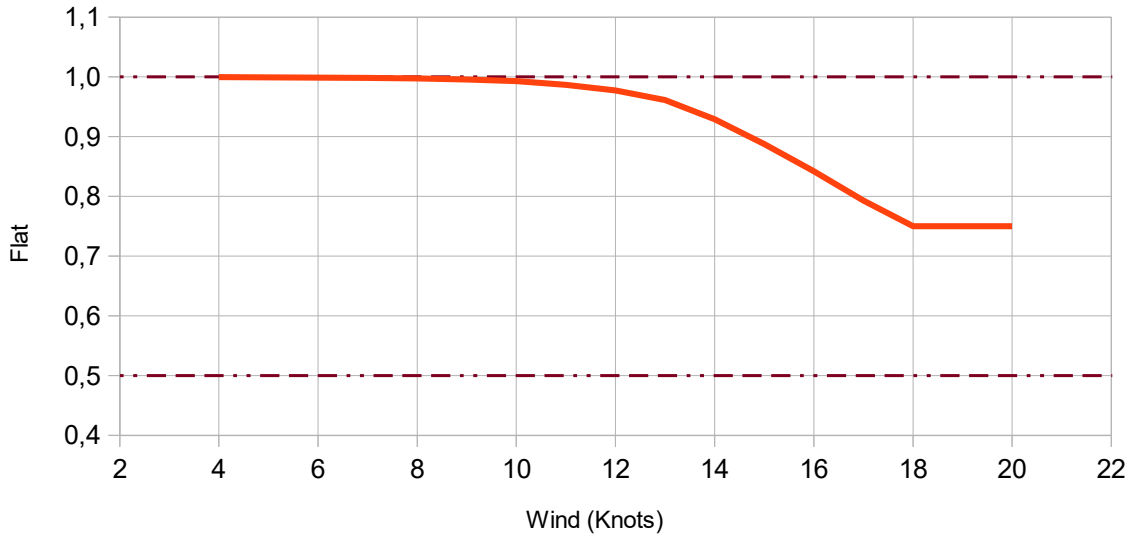
Output >>> curves (speed, heel angle, sails flat parameter, righting moment, drag) + new for this 3.5 version : speed table (to build using various twa in input, see the user guide) and speed polar



Gene-VPP : Heel results

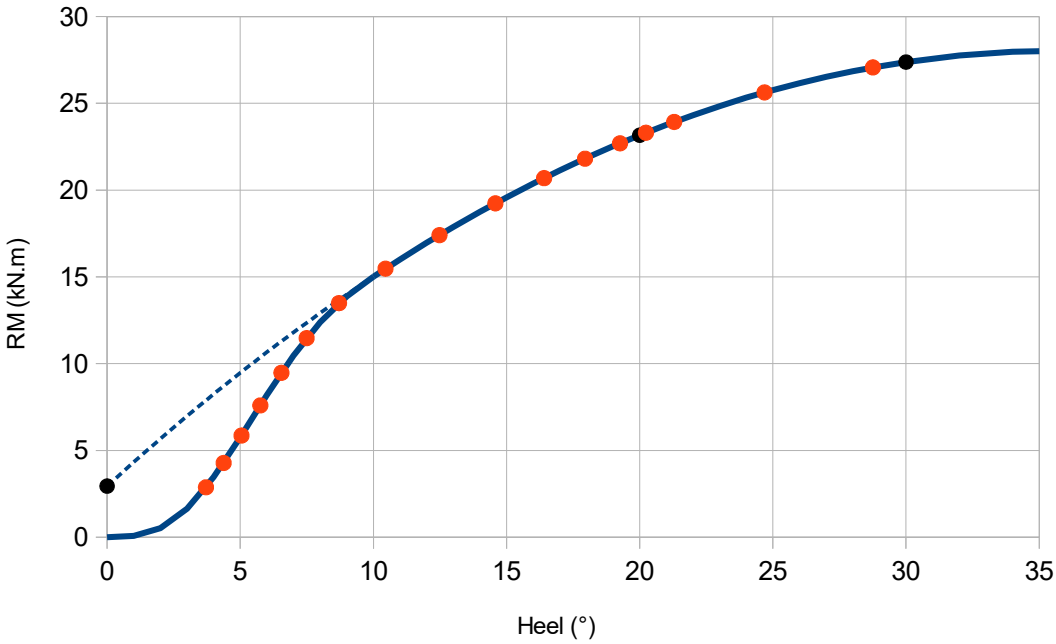


Gene-VPP : Flat optimum when upwind



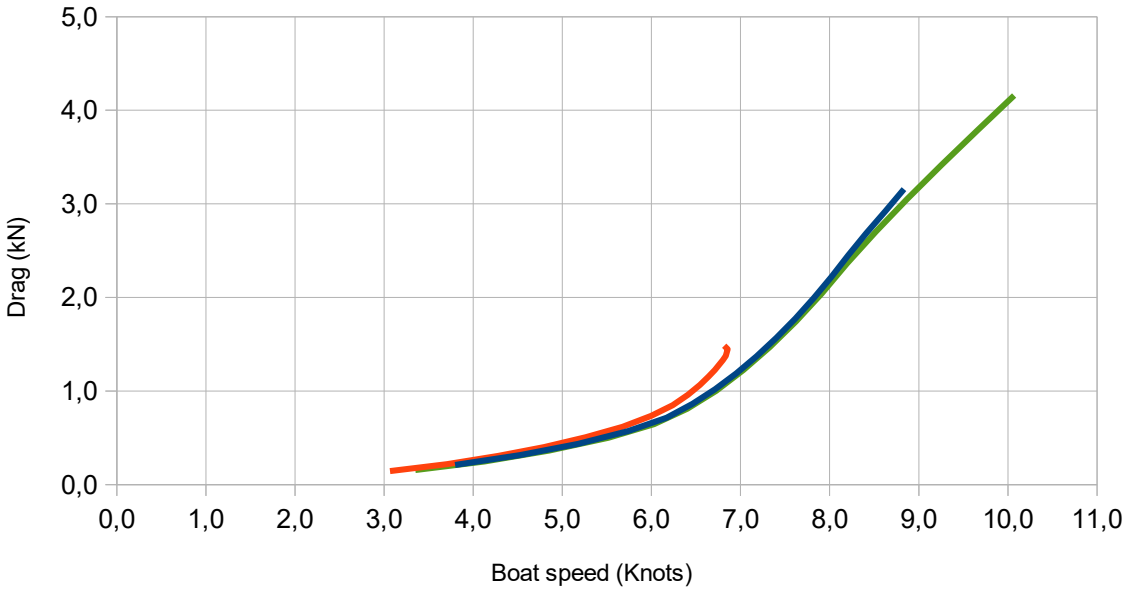
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

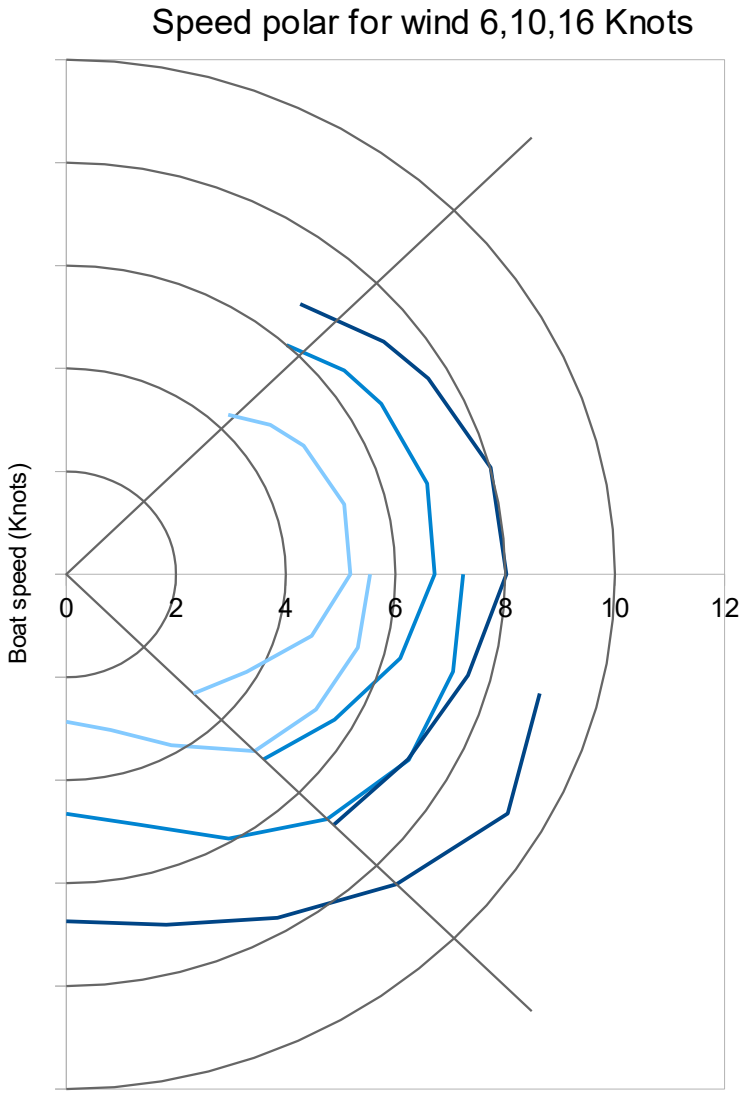


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

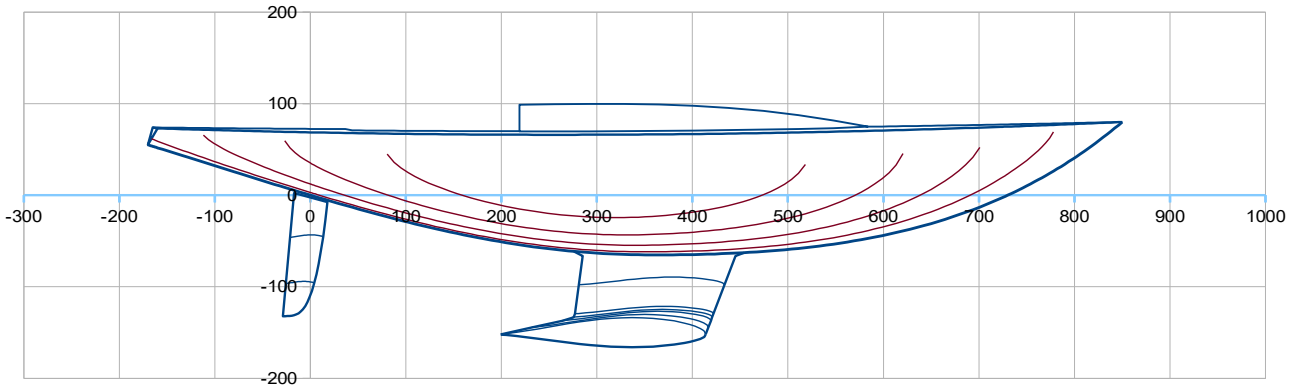


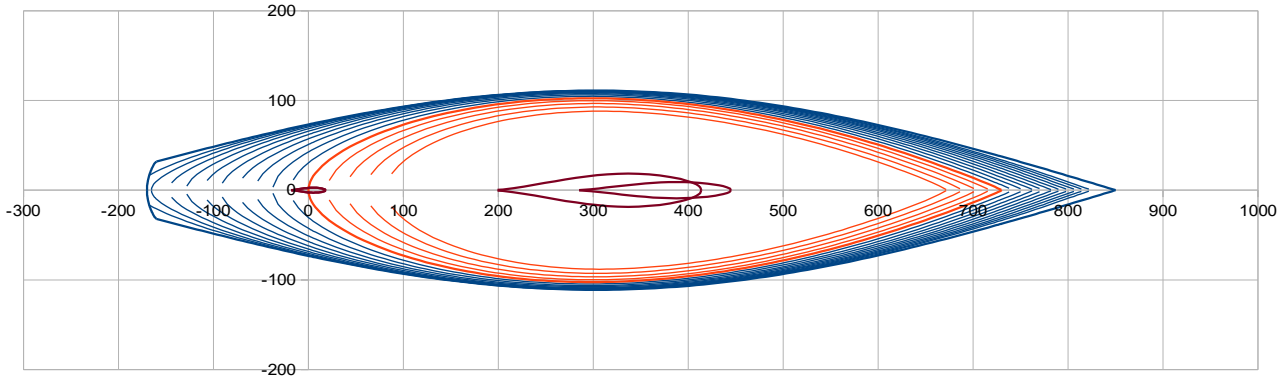
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,28	5,26	6,00	6,41	6,64	6,76	6,82
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,72	5,77	6,43	6,85	7,15	7,34	7,55
60	5,00	6,04	6,63	7,07	7,39	7,62	7,90
75	5,25	6,24	6,81	7,29	7,69	8,01	8,59
90	5,18	6,17	6,72	7,18	7,62	8,02	8,83
105	4,63	5,64	6,30	6,76	7,18	7,58	8,32
120	3,79	4,77	5,65	6,29	6,76	7,19	8,00
135	3,28	4,22	5,08	5,86	6,44	6,89	7,71
With Mainsail + Spi (sym or asym)							
90	5,54	6,56	7,23	7,77	8,14		
105	5,50	6,56	7,30	7,93	8,48	8,93	
120	5,25	6,42	7,21	7,93	8,63	9,29	10,28
135	4,85	6,03	6,73	7,33	7,91	8,52	10,07
150	3,83	4,95	5,93	6,61	7,17	7,70	8,86
165	3,13	4,11	5,03	5,88	6,52	7,05	8,03
180	2,87	3,78	4,65	5,48	6,20	6,74	7,70

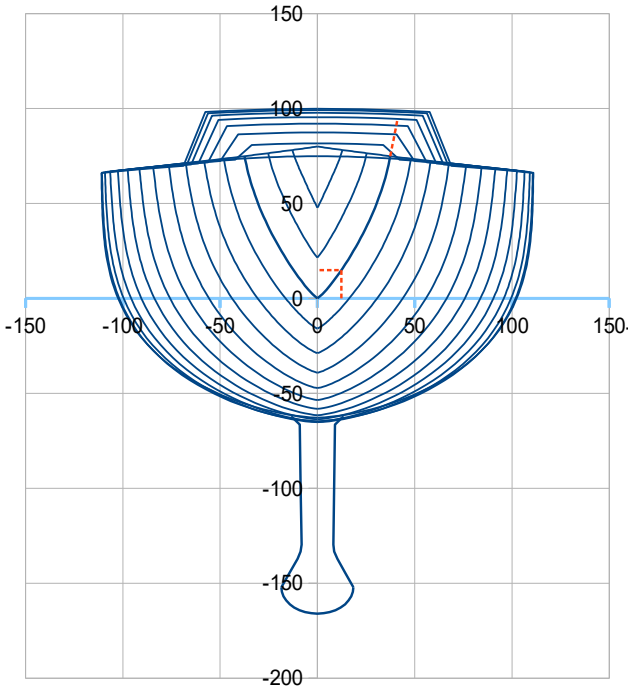


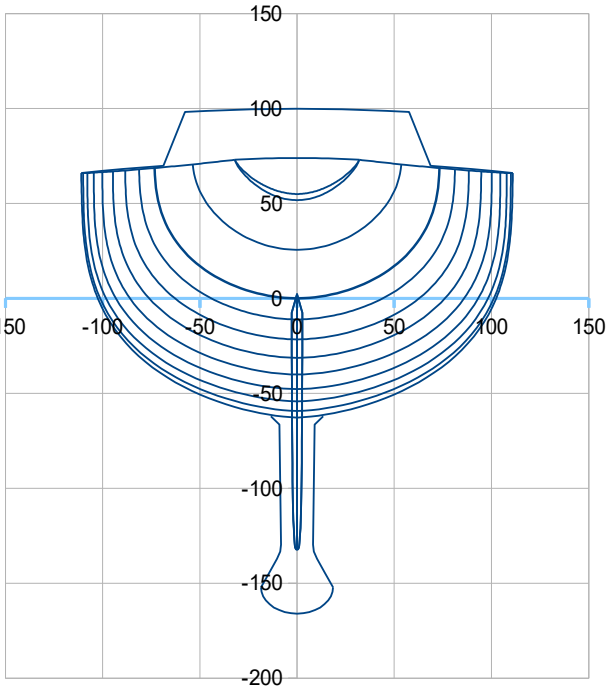
Classic 6mJI

Loa 10,30 m ; Lwl 7,30 m ; B 2,22 m ; Draft 1,66 m ; Light weight : 4022 kg ; Ballast : 2018 kg



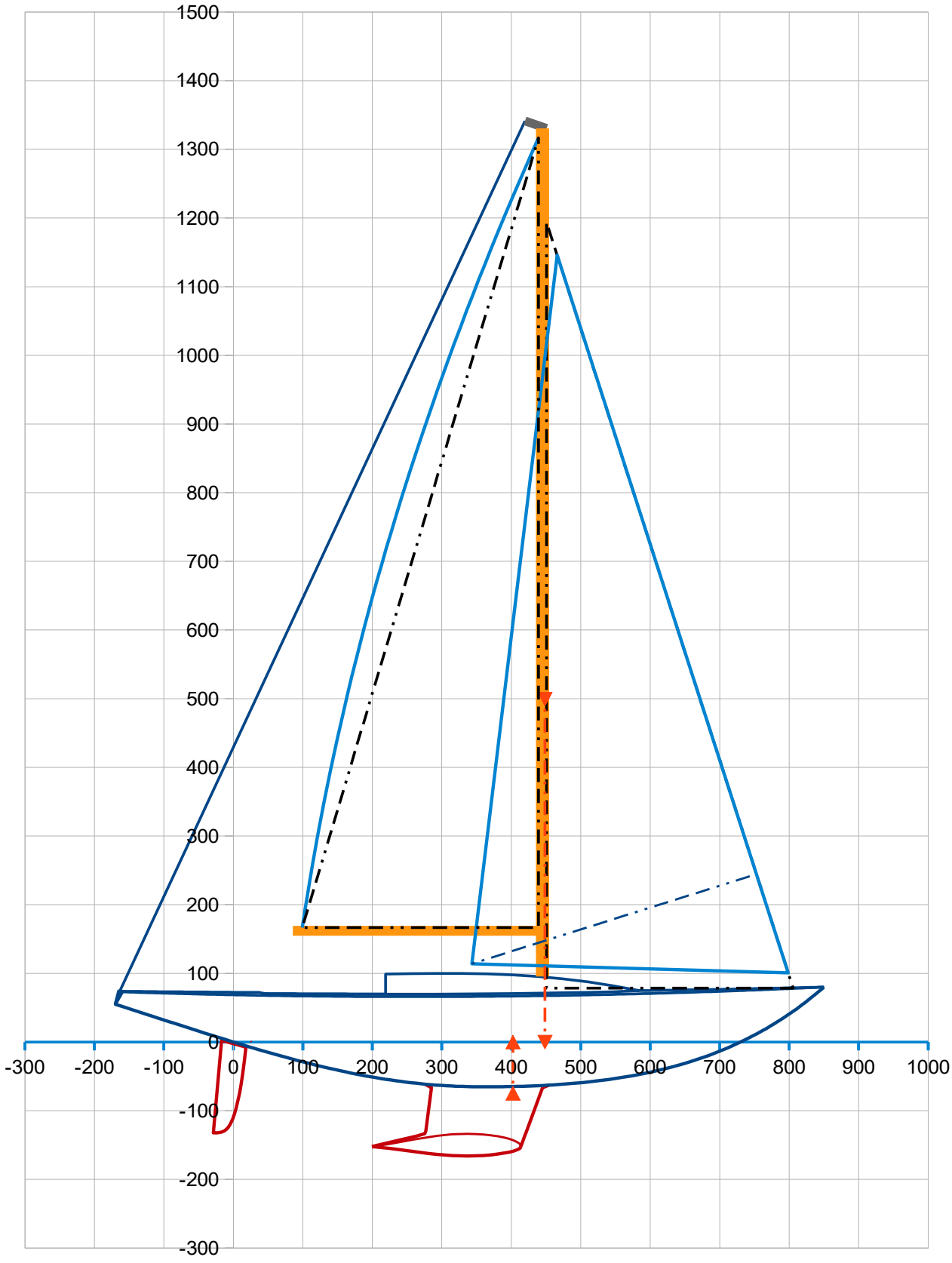






Sailplan :

ır Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	23,47	24,05	5,15	0,78	13,17	70,00	6,18

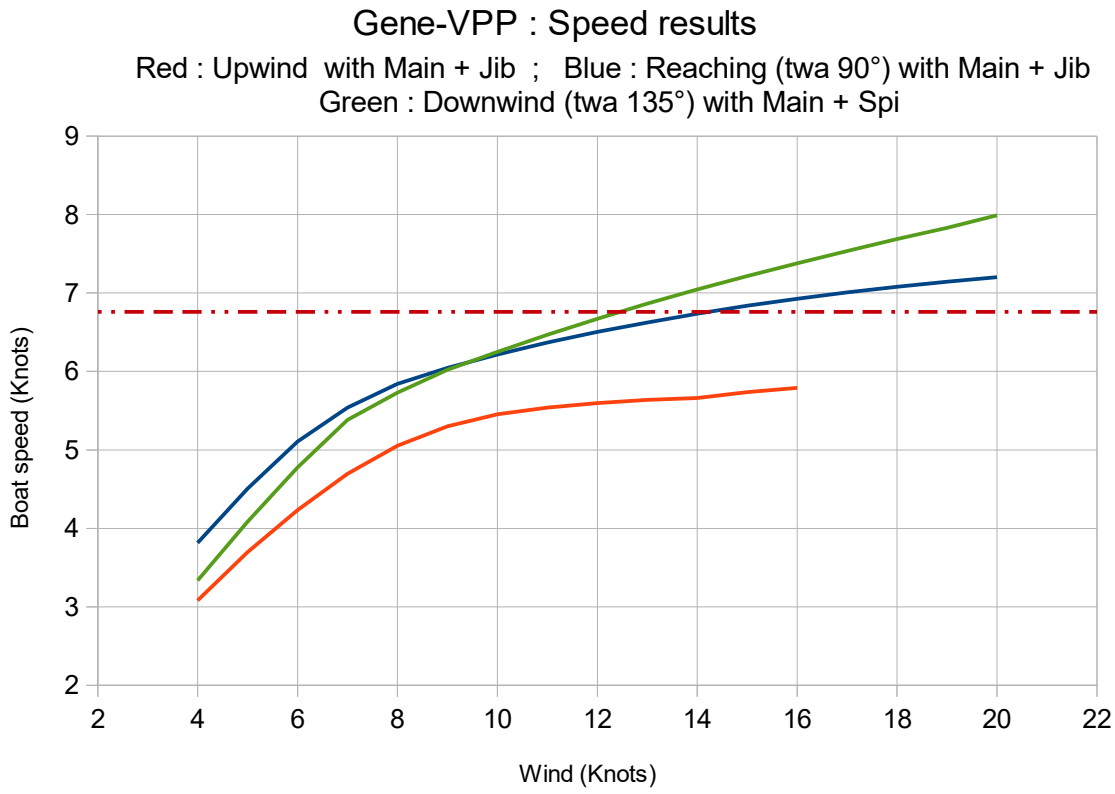


Gene-VPP data for Classic 6mJI with a loading of 360 kg (crew sit windward) :

Input >>> this table which is a copy/special paste from Gene-Hull Sailboat 3.5 :

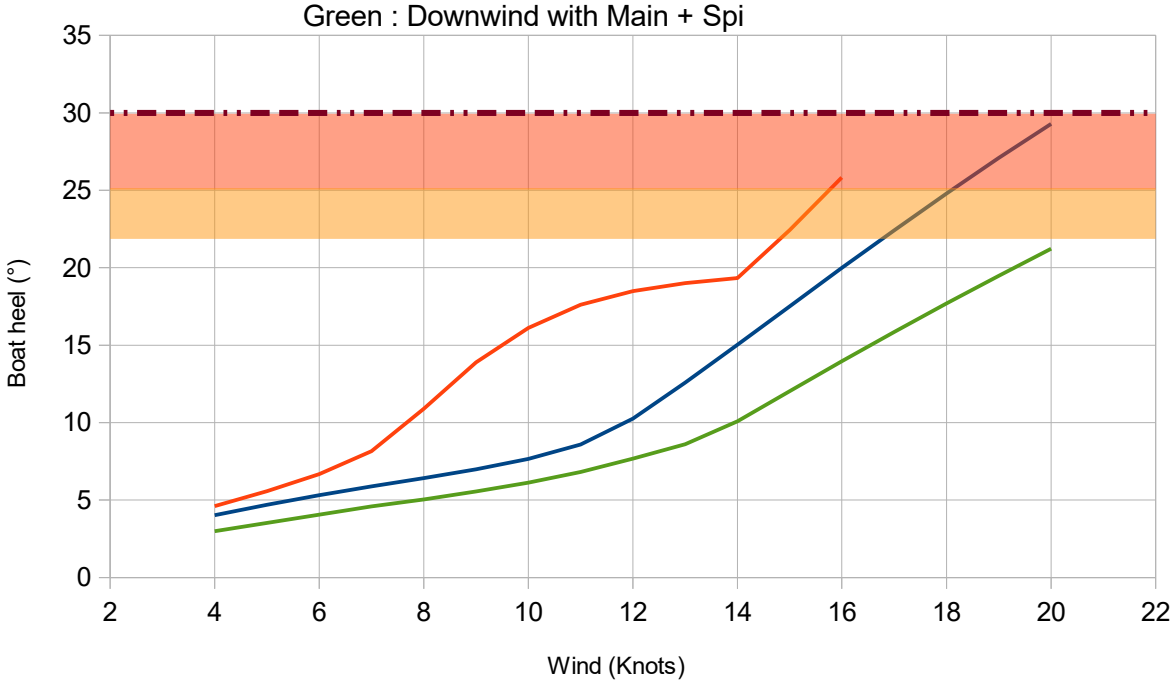
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
7,48	2,08	0,68	2,22	0,54	47,65	11,05	23,47	24,05	5,15	0,78	13,17	70,00	6,18	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,6
0,10716	2,29	1,60	0,10883	2,20	2,20	0,37	0,01200	0,84	0,35	4382	1,69			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
3,532	9,789	12,462		19,04	19,02	19,06								

Output >>> curves (speed, heel angle, sails flat parameter, righting moment, drag) **+ new for this 3.5 version : speed table (to build using various twa in input, see the user guide) and speed polar**

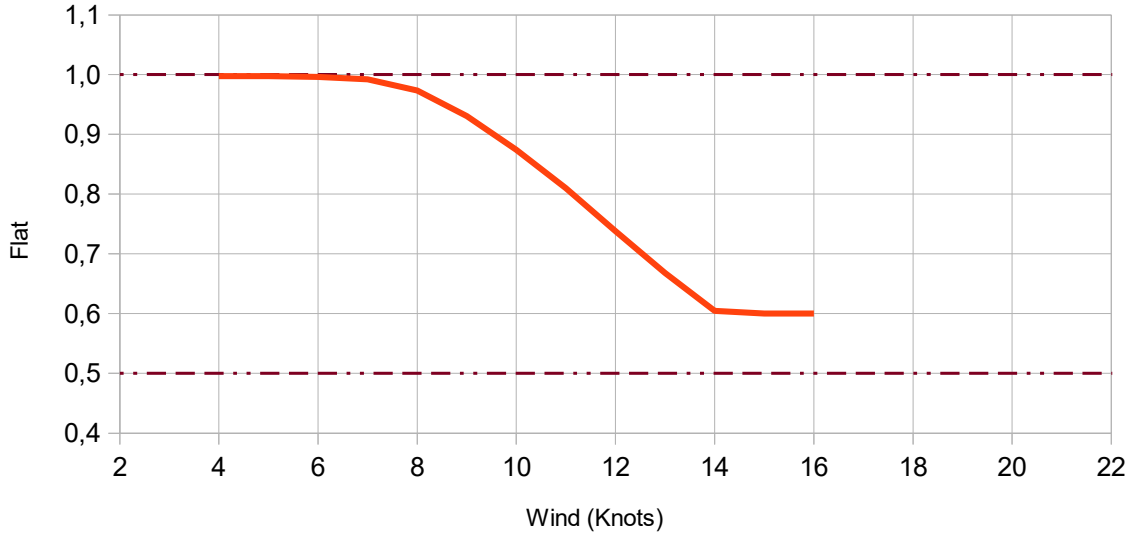


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

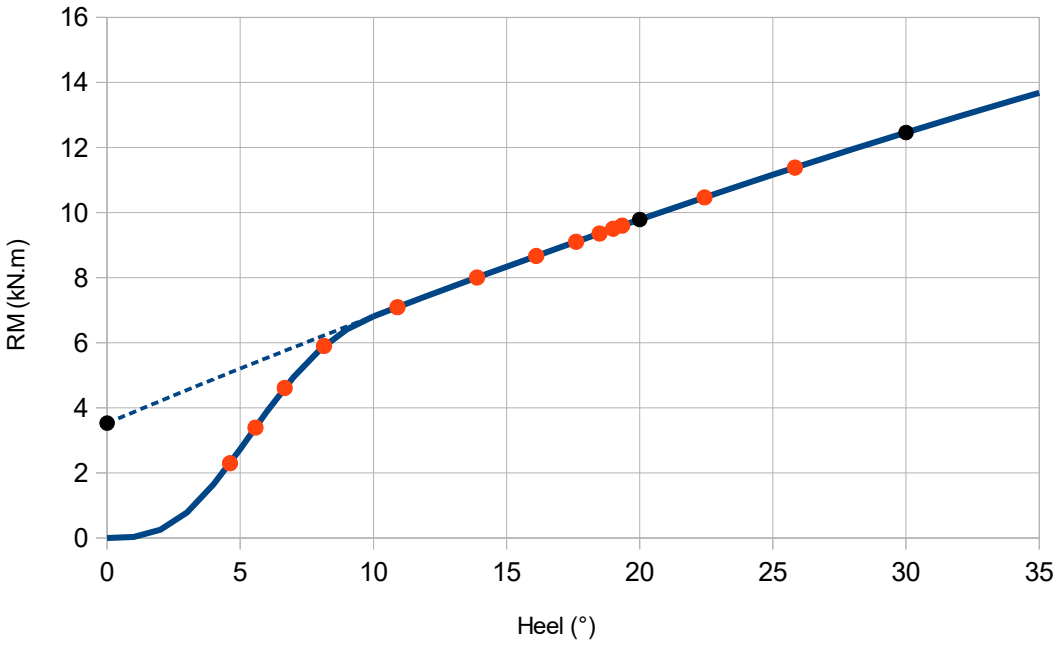


Gene-VPP : Flat optimum when upwind



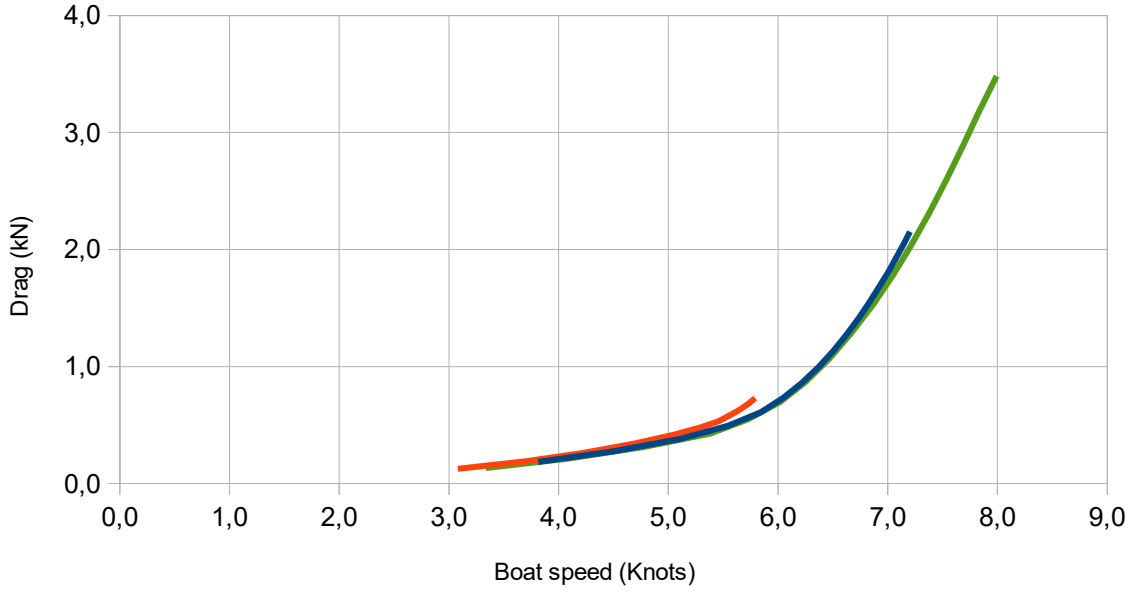
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

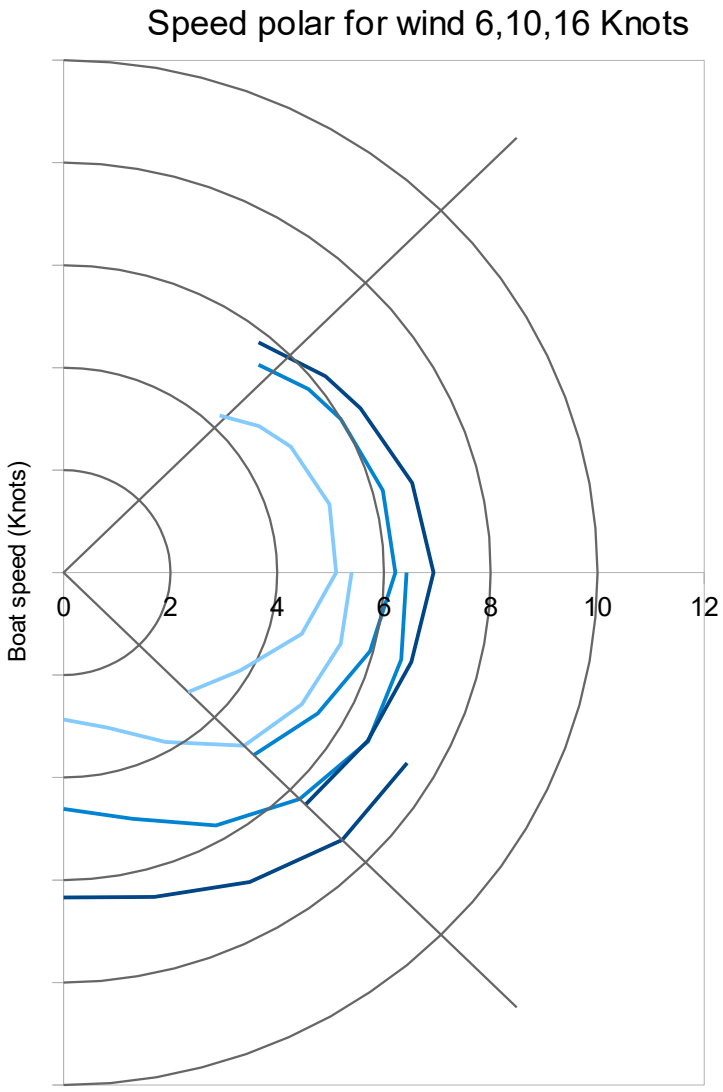


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

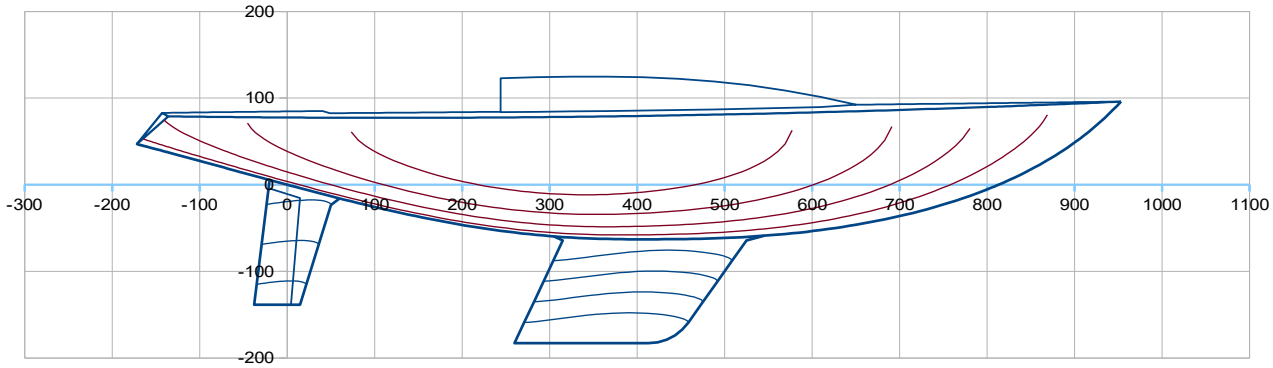


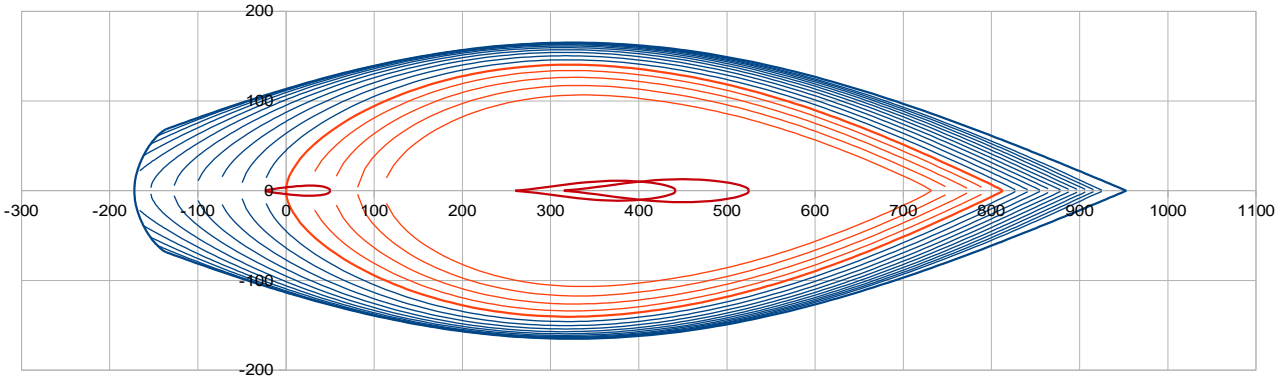
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,23	5,05	5,46	5,60	5,66	5,79	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,64	5,48	5,82	5,99	6,08	6,22	
60	4,91	5,67	5,99	6,16	6,27	6,42	
75	5,15	5,87	6,19	6,41	6,58	6,76	
90	5,11	5,84	6,22	6,50	6,74	6,93	7,20
105	4,62	5,48	5,94	6,25	6,53	6,74	7,06
120	3,82	4,74	5,49	5,96	6,29	6,57	7,01
135	3,30	4,21	5,03	5,66	6,09	6,40	6,96
With Mainsail + Spi (sym or asym)							
90	5,39	6,08	6,42	6,64			
105	5,37	6,13	6,55	6,85			
120	5,15	6,05	6,59	6,97	7,22	7,43	
135	4,78	5,73	6,25	6,67	7,05	7,38	7,99
150	3,82	4,88	5,70	6,21	6,61	6,97	7,68
165	3,13	4,09	4,97	5,69	6,17	6,55	7,24
180	2,87	3,77	4,61	5,41	5,95	6,34	7,02

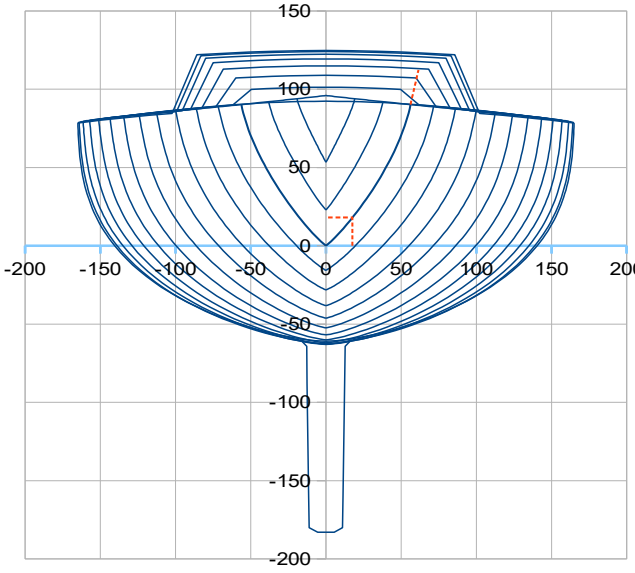


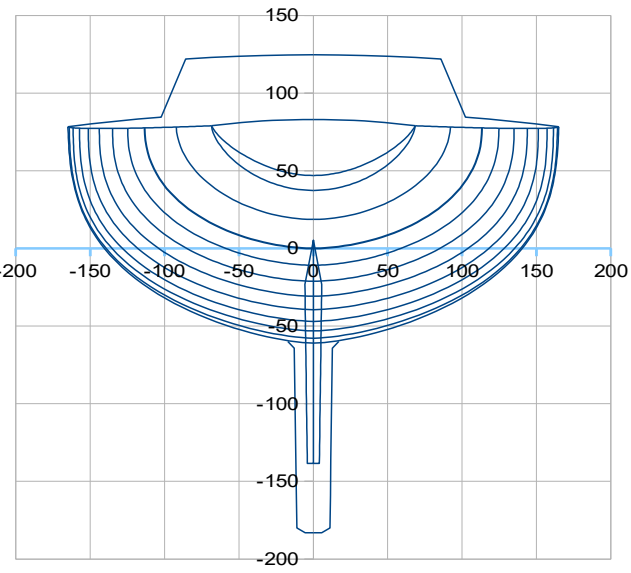
T37, inspired by Tina / Dick Carter

Loa 11,25 m ; Lwl 8,13 m ; B 3,30 m ; Draft 1,83 m ; Light weight : 5671 kg ; Ballast : 2664 kg



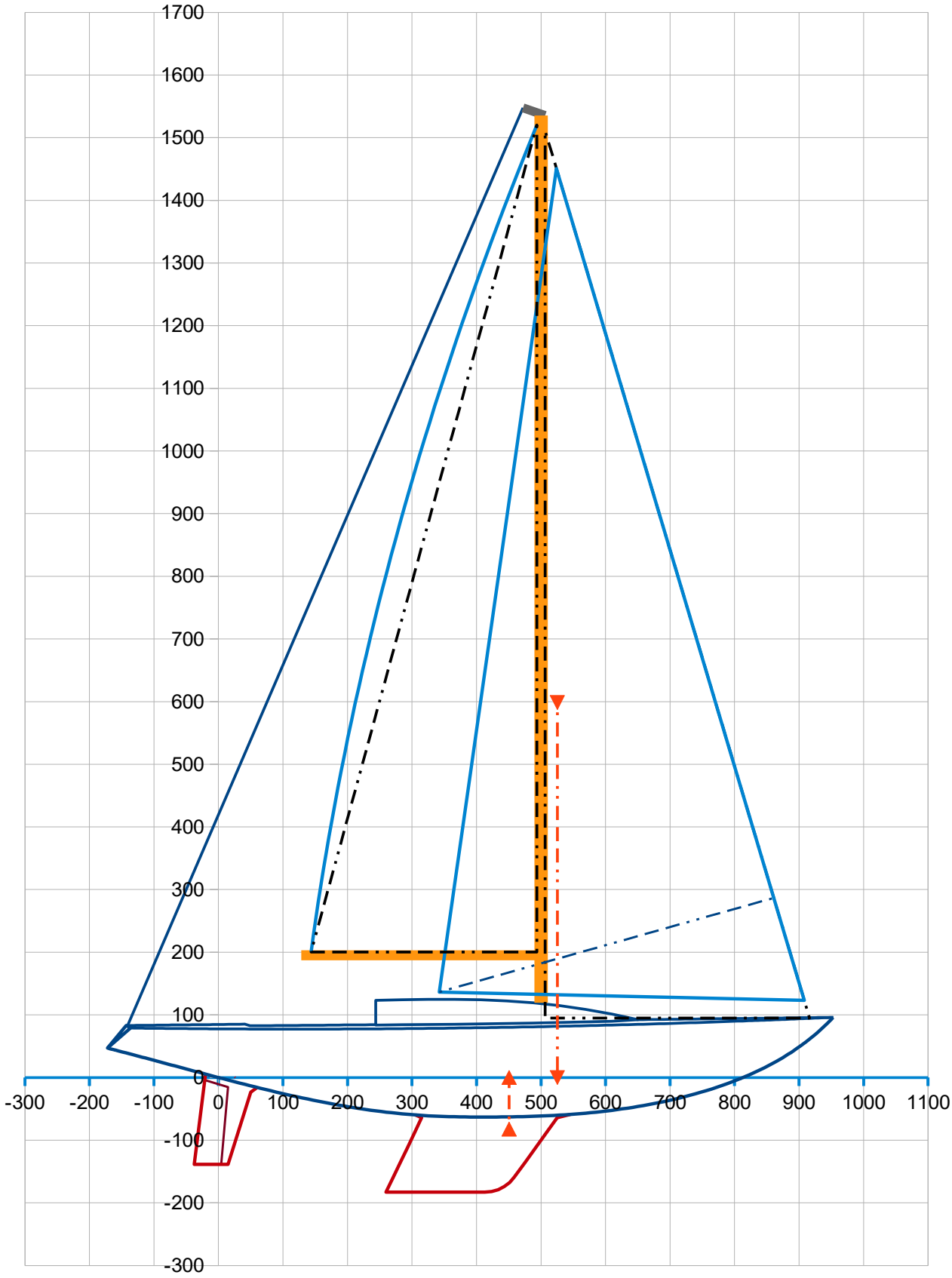






Sailplan :

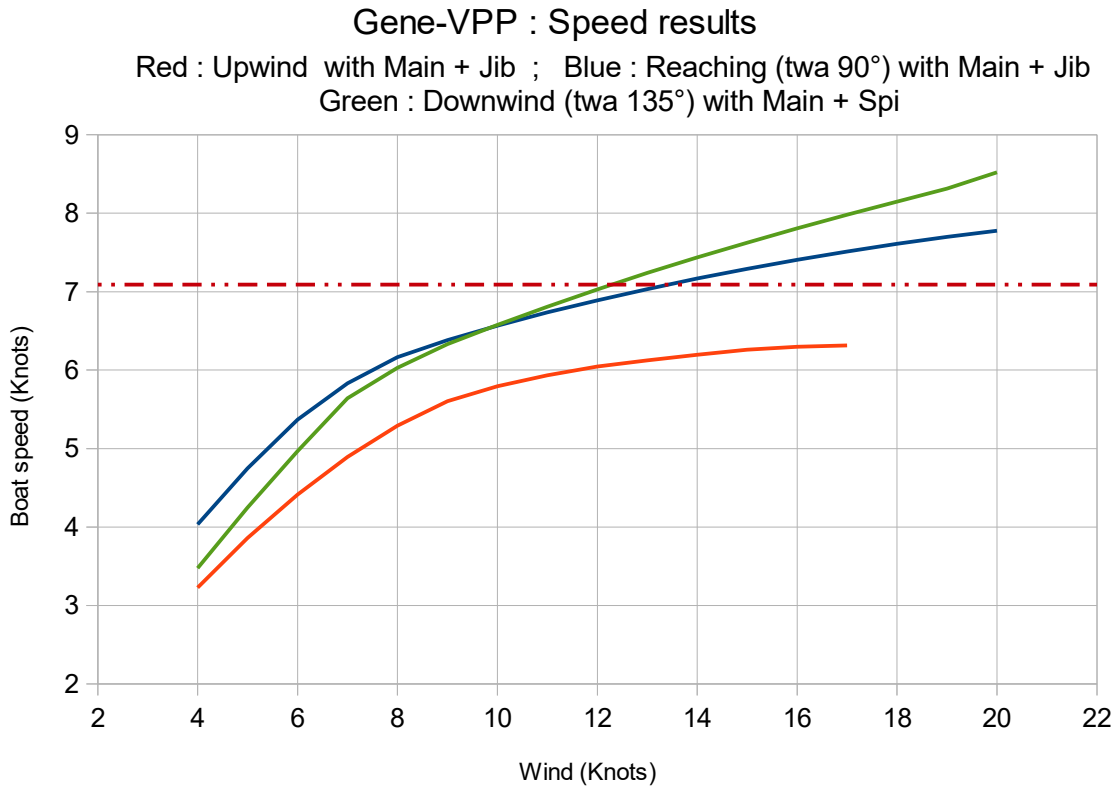
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	27,74	38,32	6,13	0,95	15,20	100,00	7,35



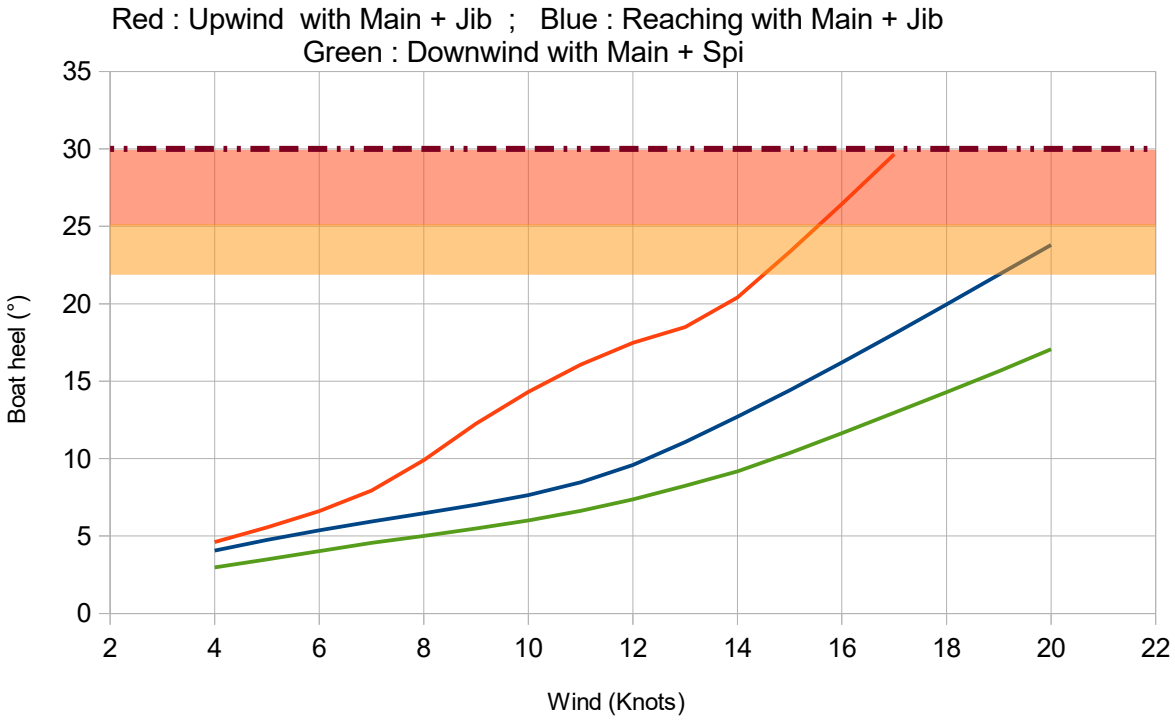
Gene-VPP input data for T47 with a loading of 300 kg (crew sit windward) :

For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
8,23	2,84	0,65	3,30	0,54	47,04	16,09	27,74	38,32	6,13	0,95	15,20	100,00	7,35	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,36490	4,99	2,10	0,00000	0,00	0,00	0,00	0,05646	1,73	0,70	5971	1,85			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
2,943	20,743	27,400		24,98	24,40	24,17								

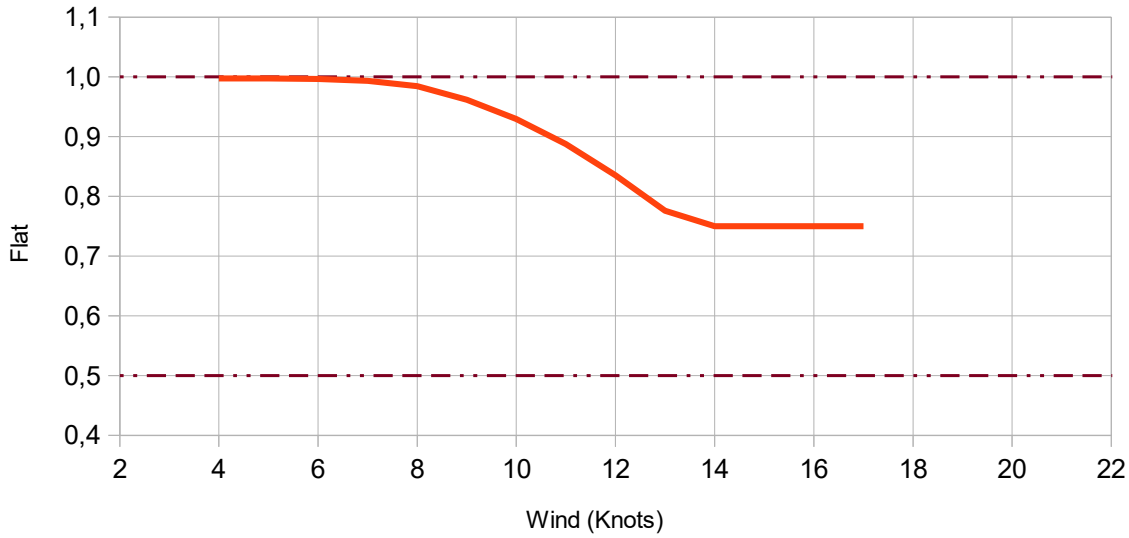
>>> Output :



Gene-VPP : Heel results

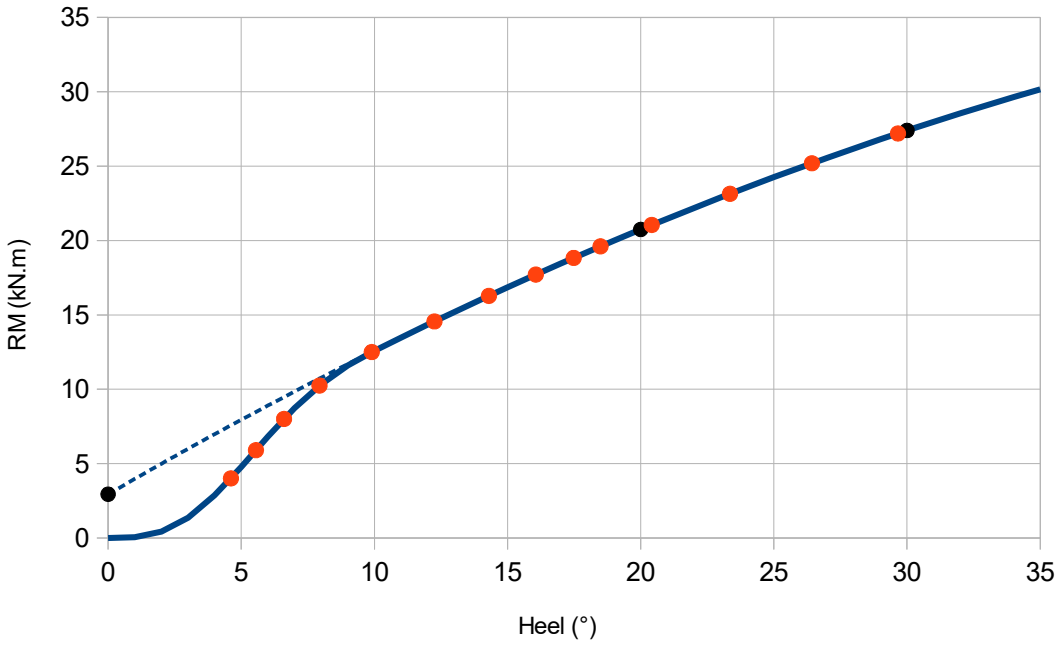


Gene-VPP : Flat optimum when upwind



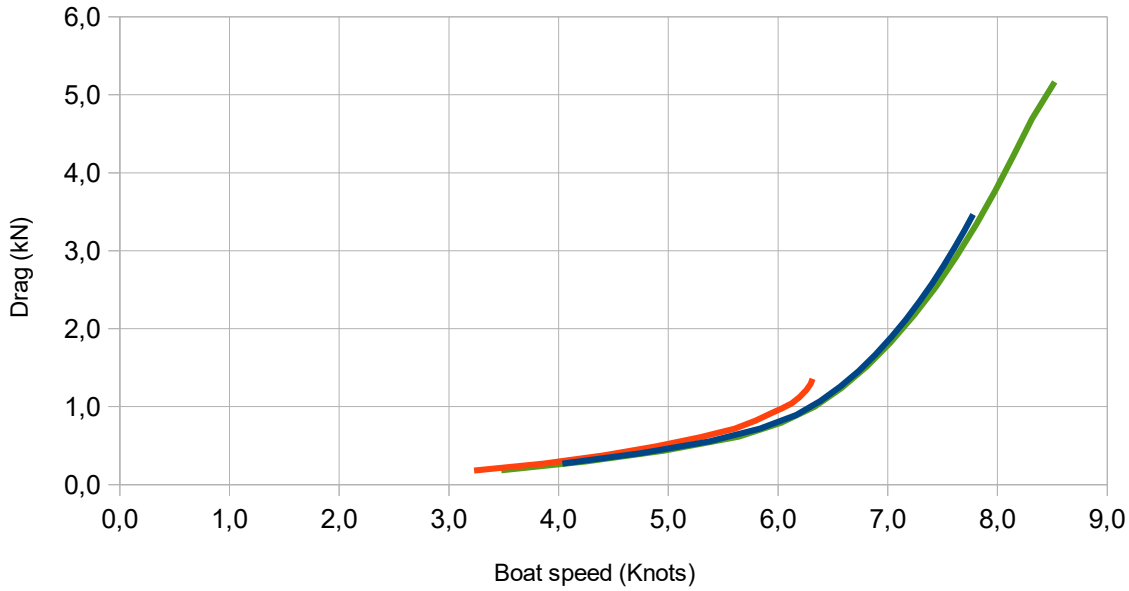
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

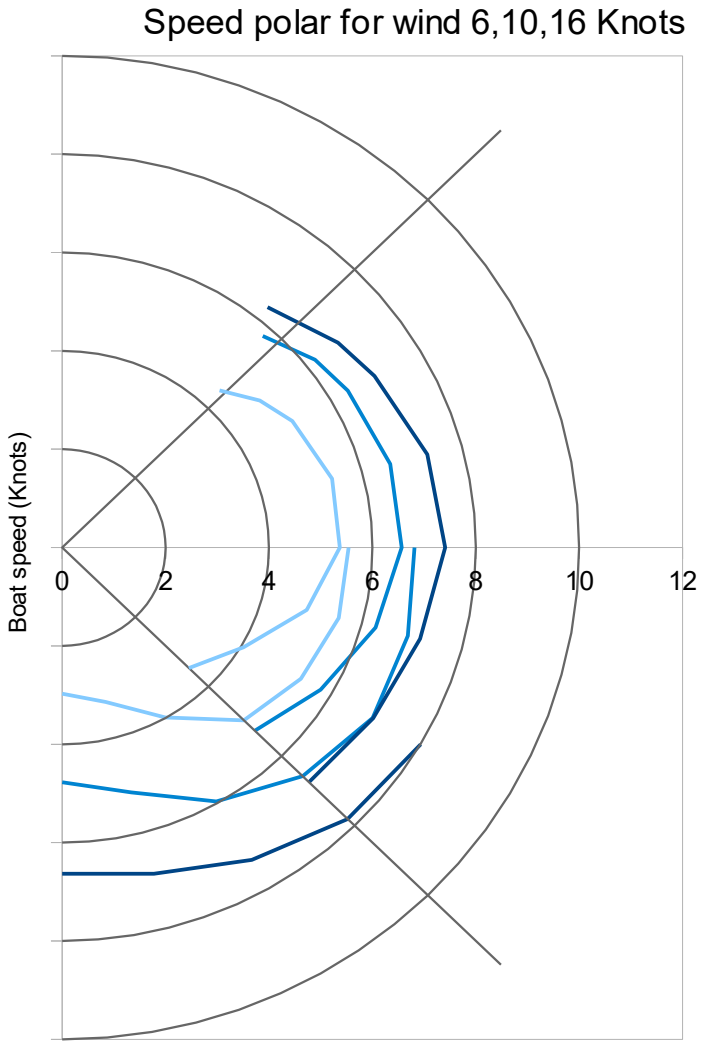


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

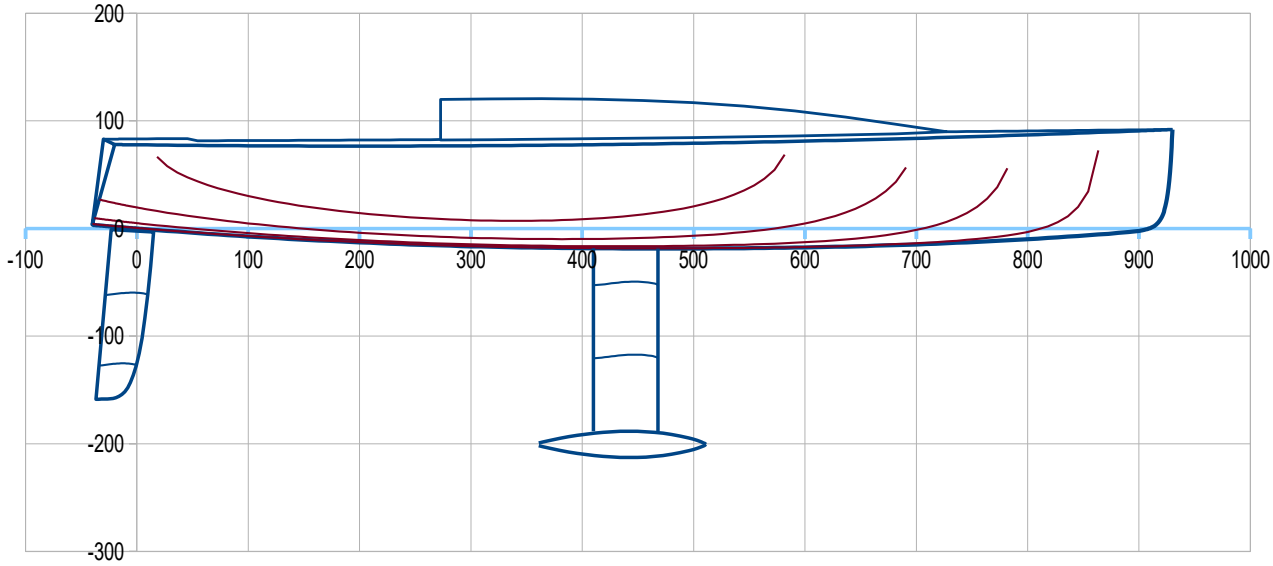


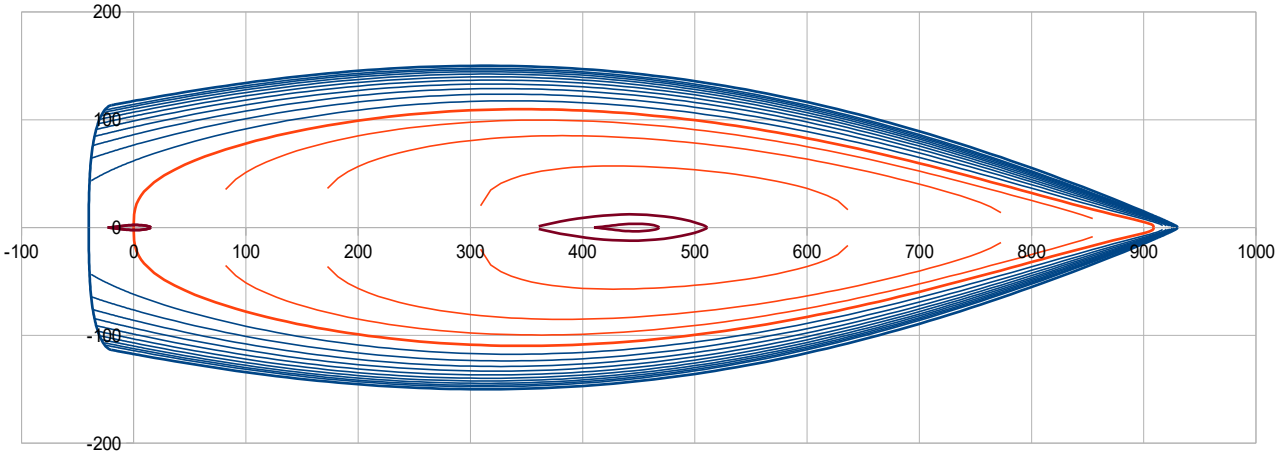
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,41	5,29	5,79	6,04	6,20	6,30	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,85	5,76	6,21	6,43	6,60	6,77	
60	5,14	5,98	6,38	6,61	6,79	6,98	
75	5,41	6,19	6,57	6,85	7,08	7,31	
90	5,37	6,16	6,57	6,89	7,17	7,41	7,78
105	4,90	5,78	6,28	6,61	6,91	7,17	7,59
120	4,05	5,00	5,78	6,28	6,63	6,94	7,46
135	3,47	4,41	5,27	5,94	6,40	6,75	7,35
With Mainsail + Spi (sym or asym)							
90	5,54	6,36	6,81	7,14			
105	5,54	6,41	6,92	7,32	7,63		
120	5,33	6,34	6,93	7,42	7,73	8,01	
135	4,97	6,03	6,58	7,03	7,44	7,81	8,52
150	3,99	5,08	5,96	6,51	6,94	7,33	8,07
165	3,25	4,24	5,15	5,92	6,46	6,87	7,60
180	2,97	3,90	4,77	5,59	6,20	6,63	7,37

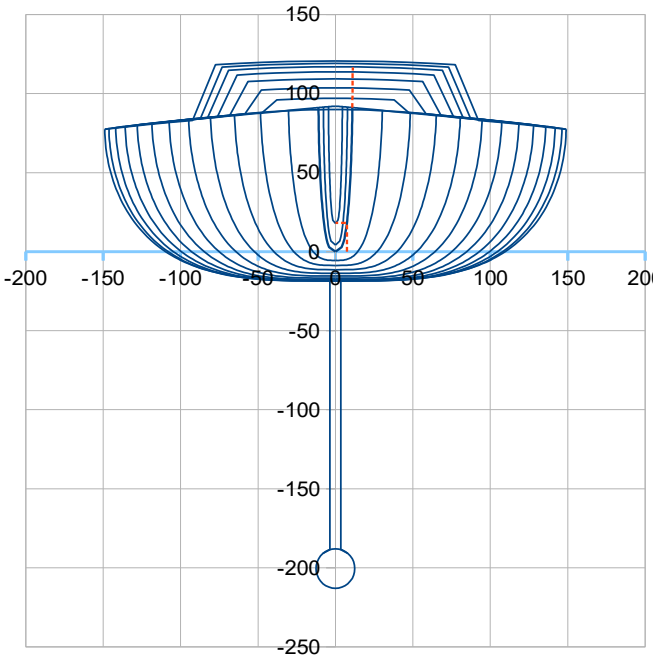


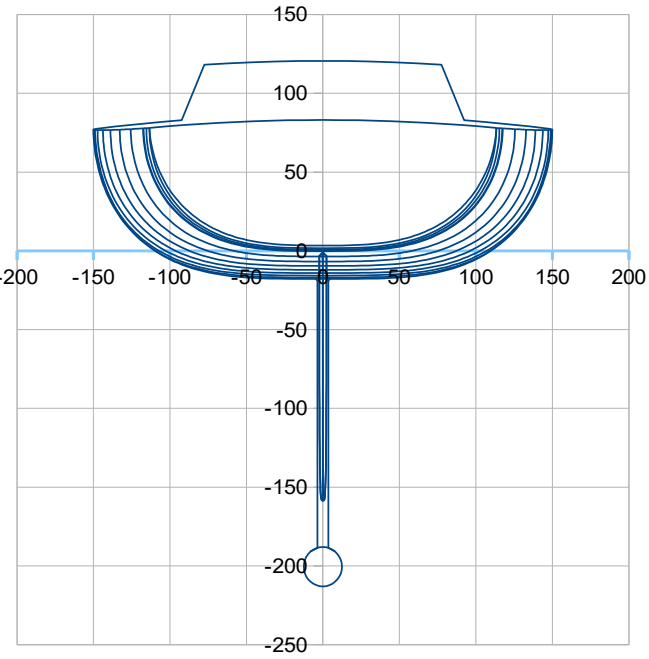
M32, inspired by Melges 32 / Reichel Pugh

Loa 9,70 m ; Lwl 9,09 m ; B 3,00 m ; Draft 2,13 m ; Light weight : 1741 kg ; Ballast : 775 kg



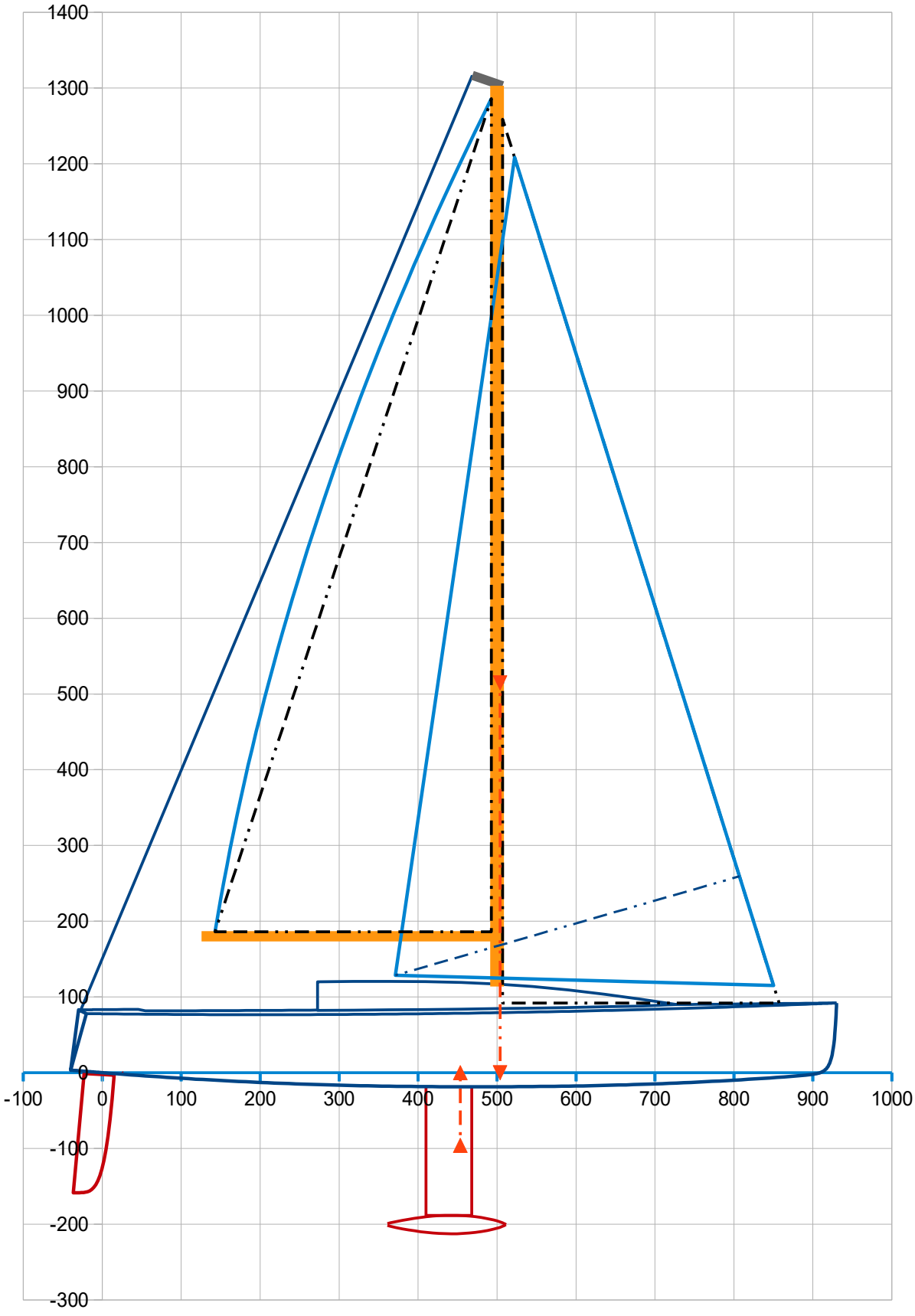






Sailplan :

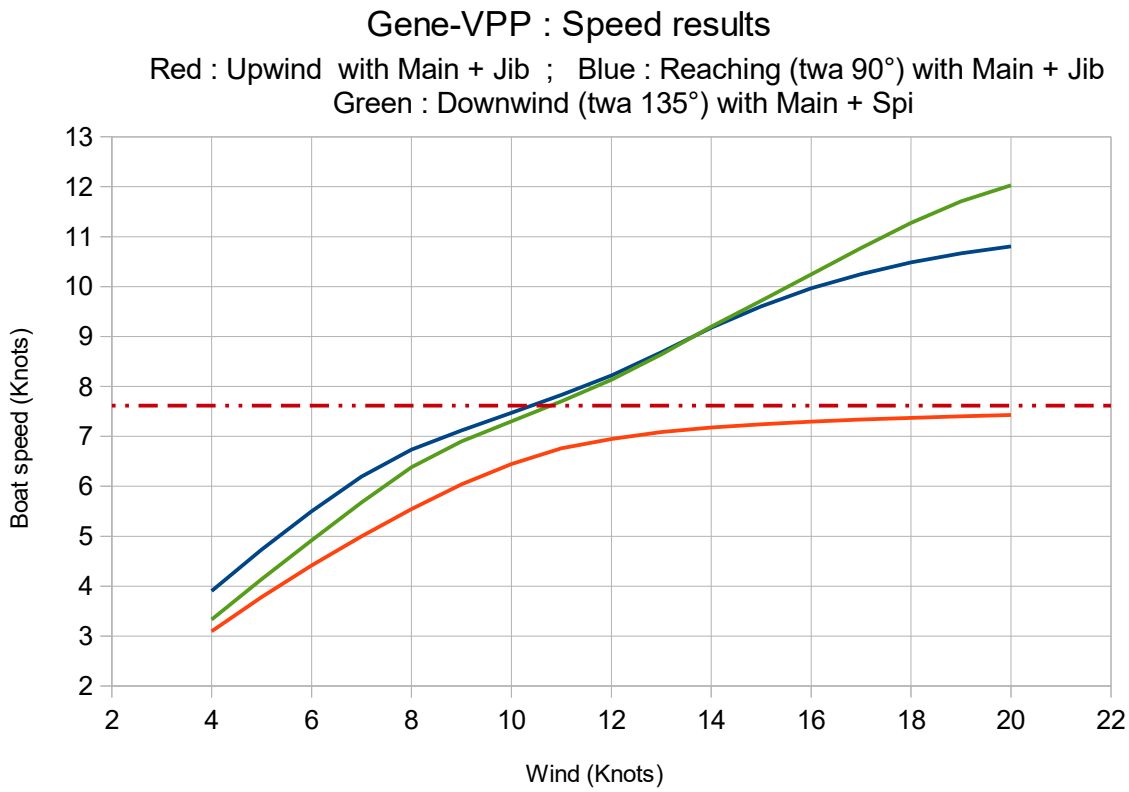
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	23,11	26,64	5,28	0,92	12,86	72,00	6,34



Gene-VPP input data for M32 with a loading of 600 kg (crew sit windward) :

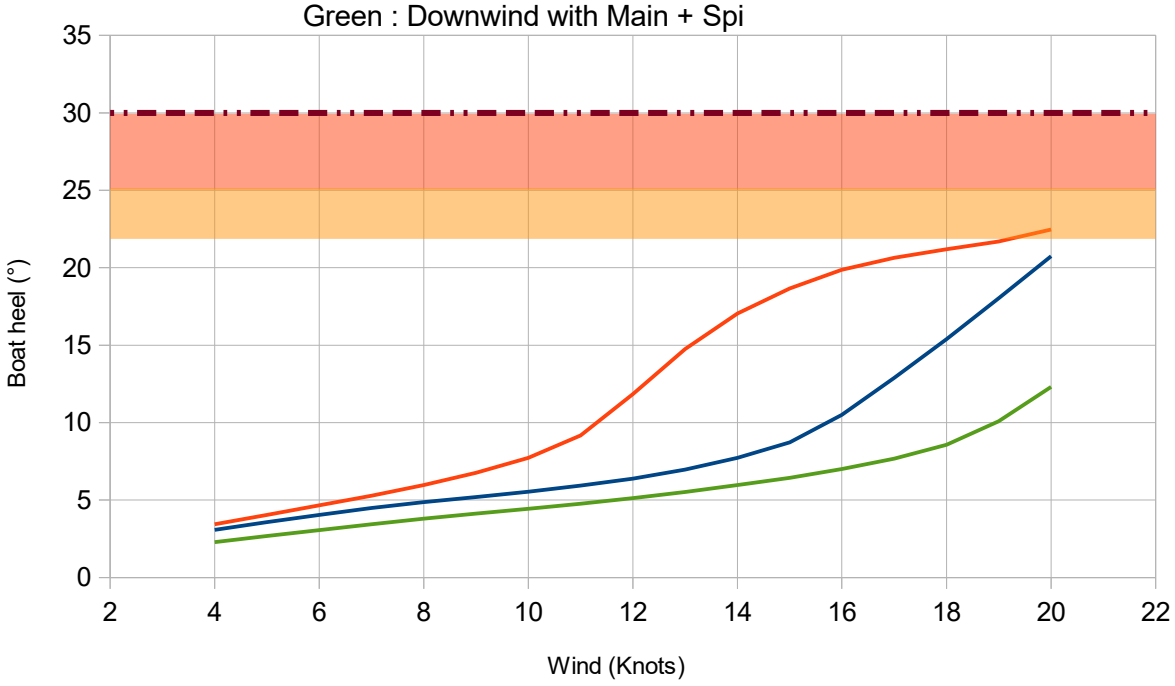
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
9,49	2,32	0,22	3,00	0,57	45,46	15,30	23,11	26,64	5,28	0,92	12,86	72,00	6,34	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,6
0,04471	2,00	0,58	0,03953	0,78	1,50	0,25	0,01562	1,16	0,38	2341	2,17			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
8,240	19,856	21,828		19,84	17,46	16,17								

>>> Output :

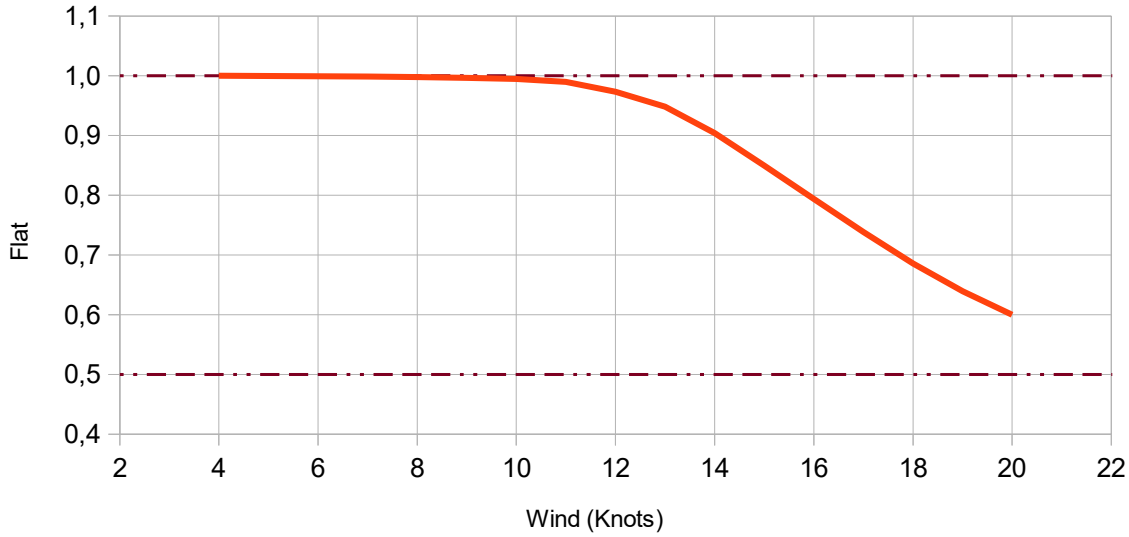


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

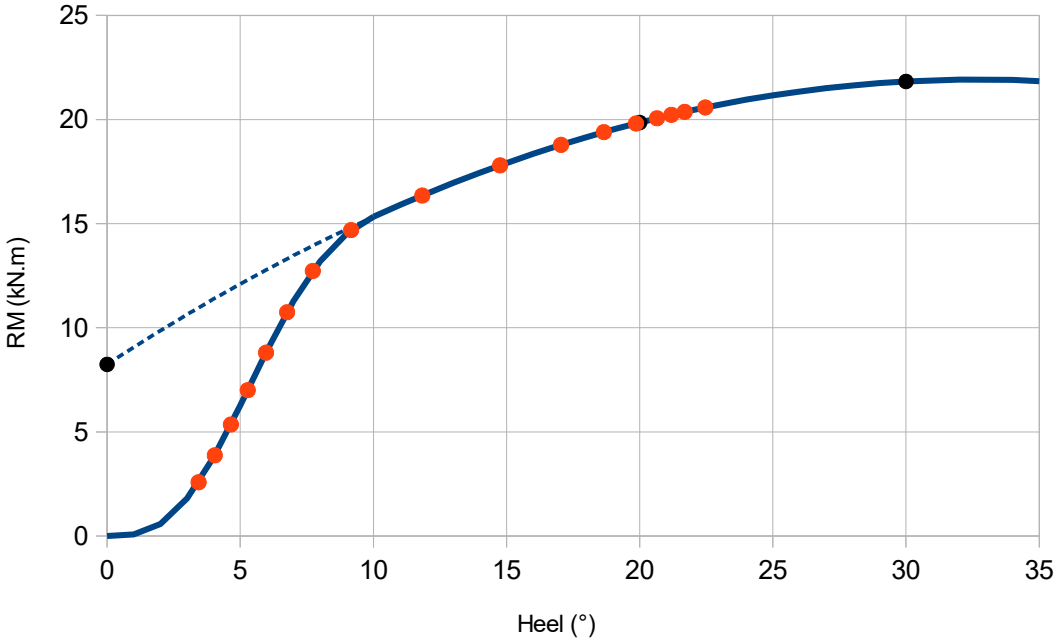


Gene-VPP : Flat optimum when upwind



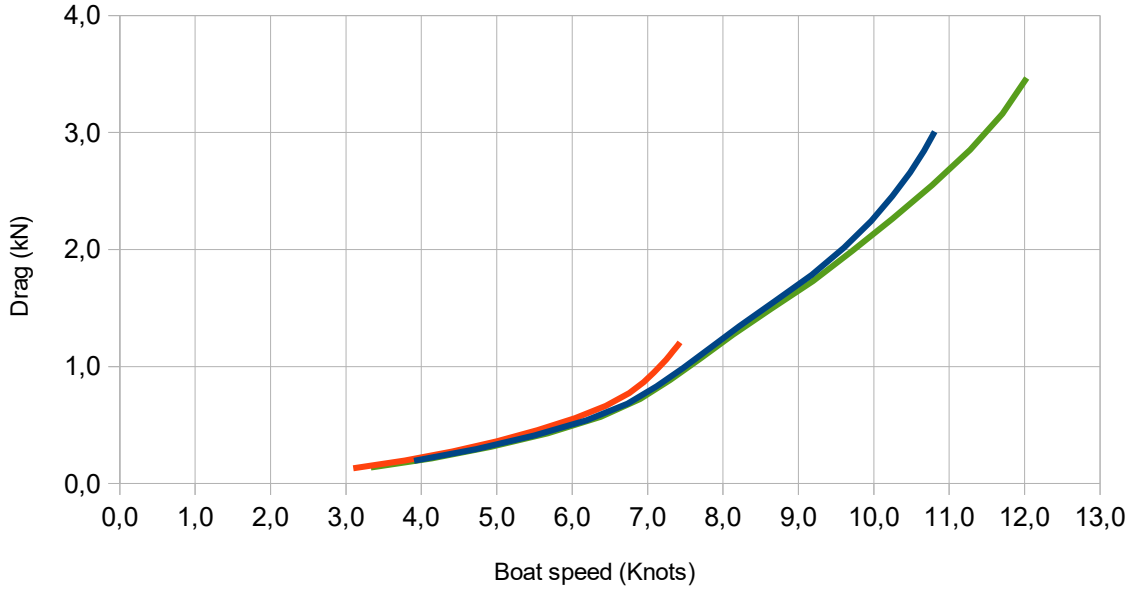
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

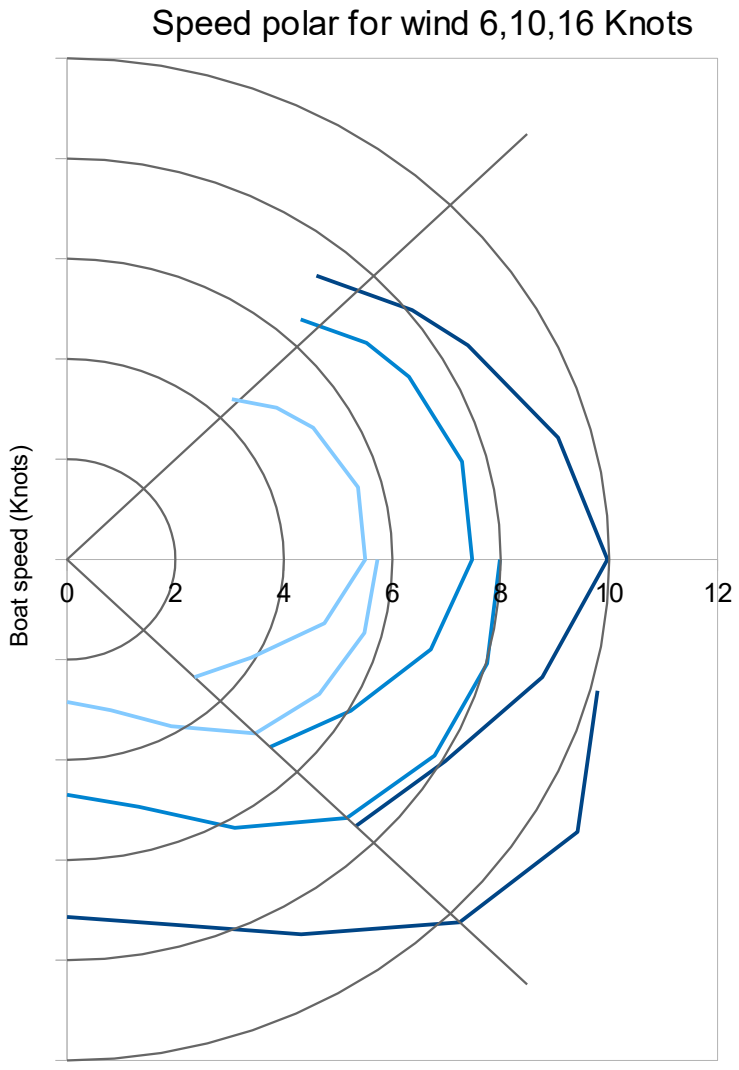


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

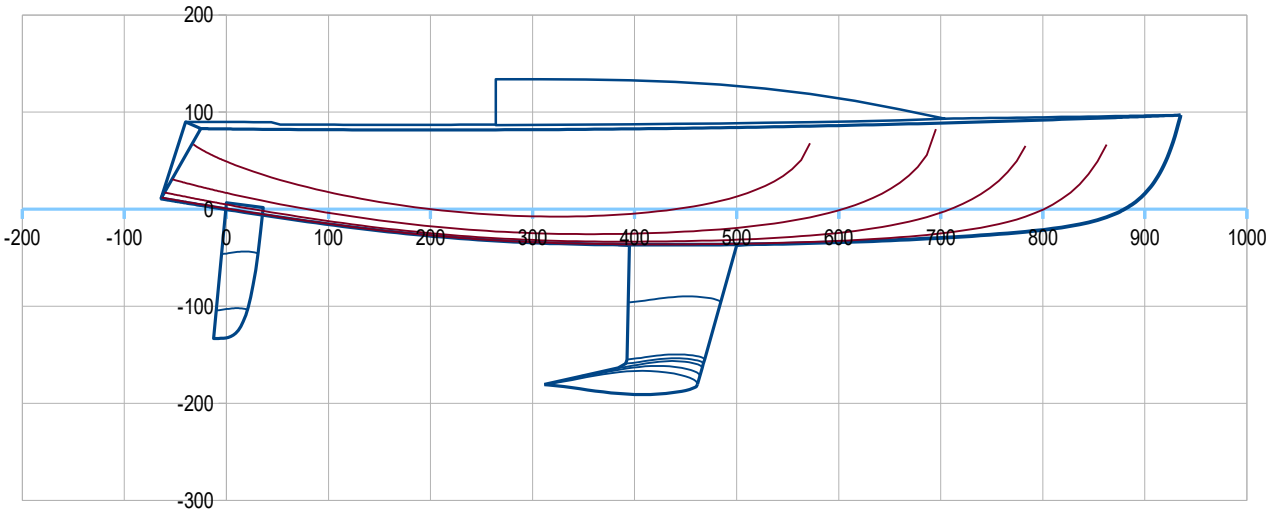


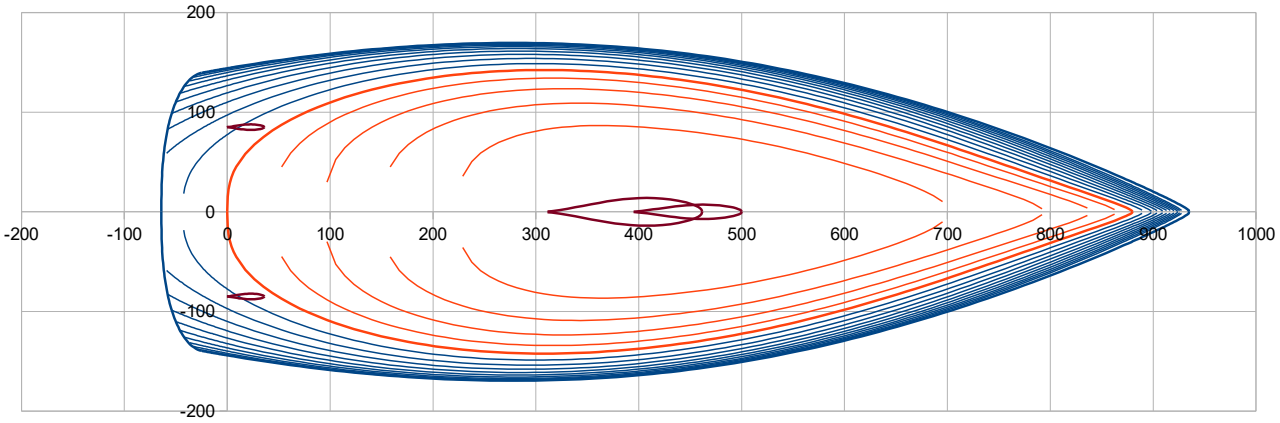
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,41	5,54	6,44	6,95	7,18	7,29	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,91	6,17	7,01	7,54	7,87	8,08	8,34
60	5,25	6,51	7,28	7,87	8,27	8,54	8,88
75	5,56	6,78	7,54	8,29	8,96	9,38	9,87
90	5,50	6,73	7,47	8,22	9,18	9,96	10,81
105	4,92	6,14	6,95	7,55	8,21	9,07	10,57
120	3,92	5,02	6,04	6,84	7,44	8,05	9,56
135	3,33	4,33	5,30	6,21	6,94	7,53	8,89
With Mainsail + Spi (sym or asym)							
90	5,73	7,04	7,98	8,80	9,21		
105	5,68	7,03	8,03	9,12	9,80	10,13	
120	5,38	6,81	7,83	9,02	10,12	10,88	9,87
135	4,92	6,38	7,30	8,13	9,19	10,24	12,03
150	3,85	5,05	6,19	7,06	7,80	8,64	10,54
165	3,12	4,13	5,11	6,07	6,88	7,55	9,08
180	2,85	3,78	4,70	5,59	6,44	7,13	8,46

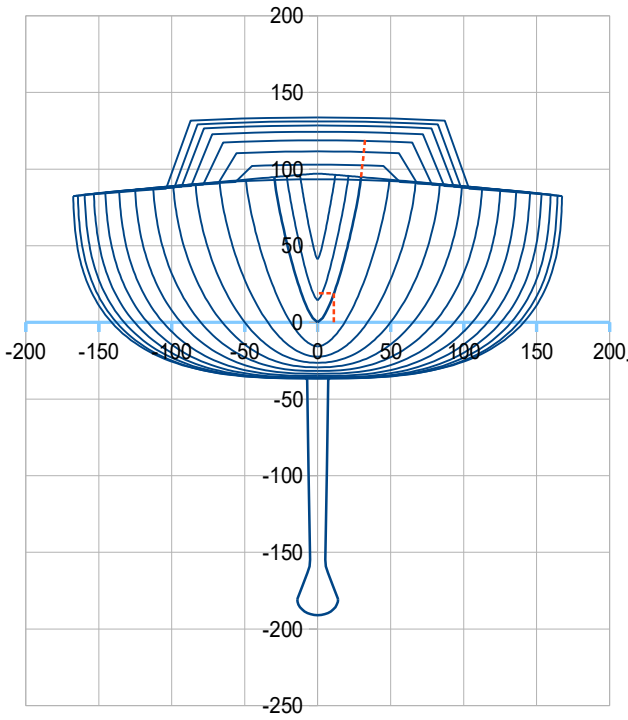


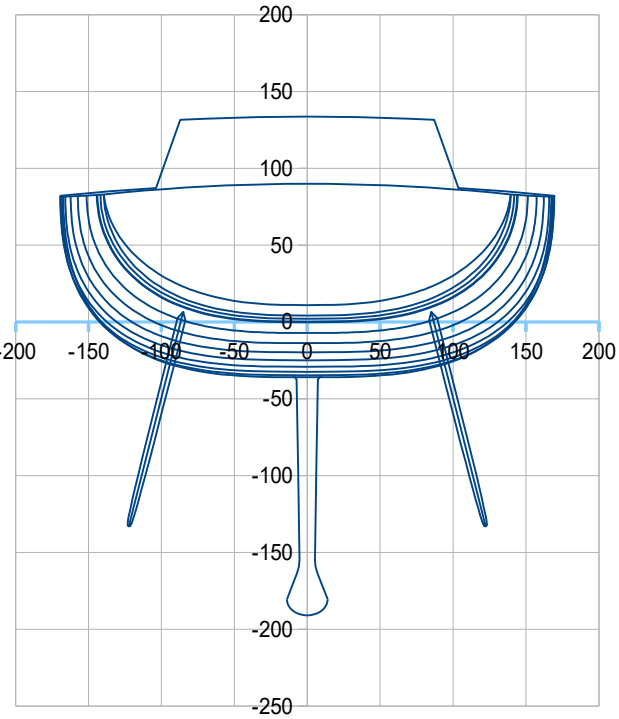
T10, inspired by Tofinou 10 / Joubert - Nivelt

Loa 9,99 m ; Lwl 8,80 m ; B 3,39 m ; Draft 1,91 m ; Light weight : 4208 kg ; Ballast : 1210 kg



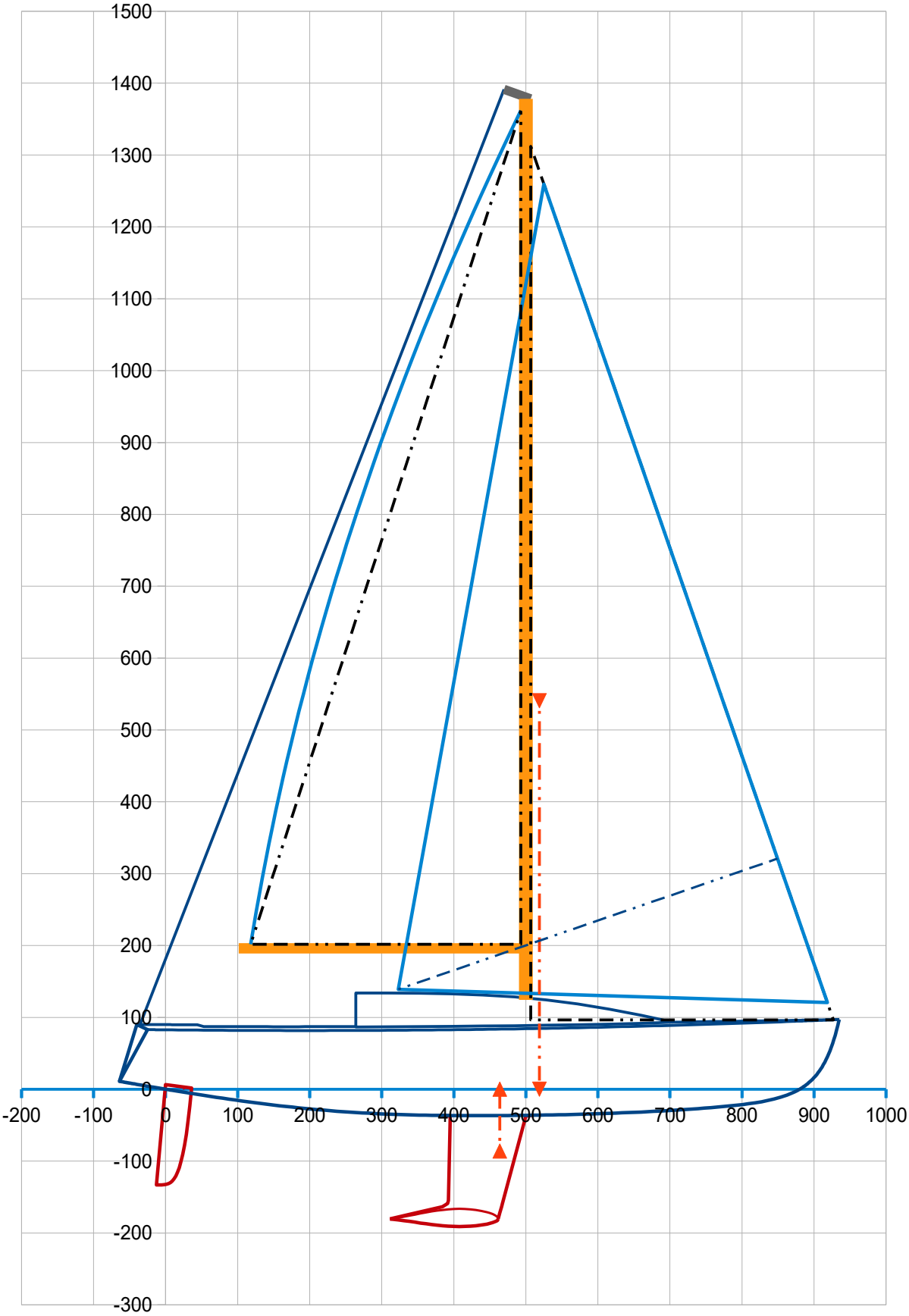






Sailplan :

ır Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	26,11	34,48	5,54	0,96	13,62	90,00	6,64



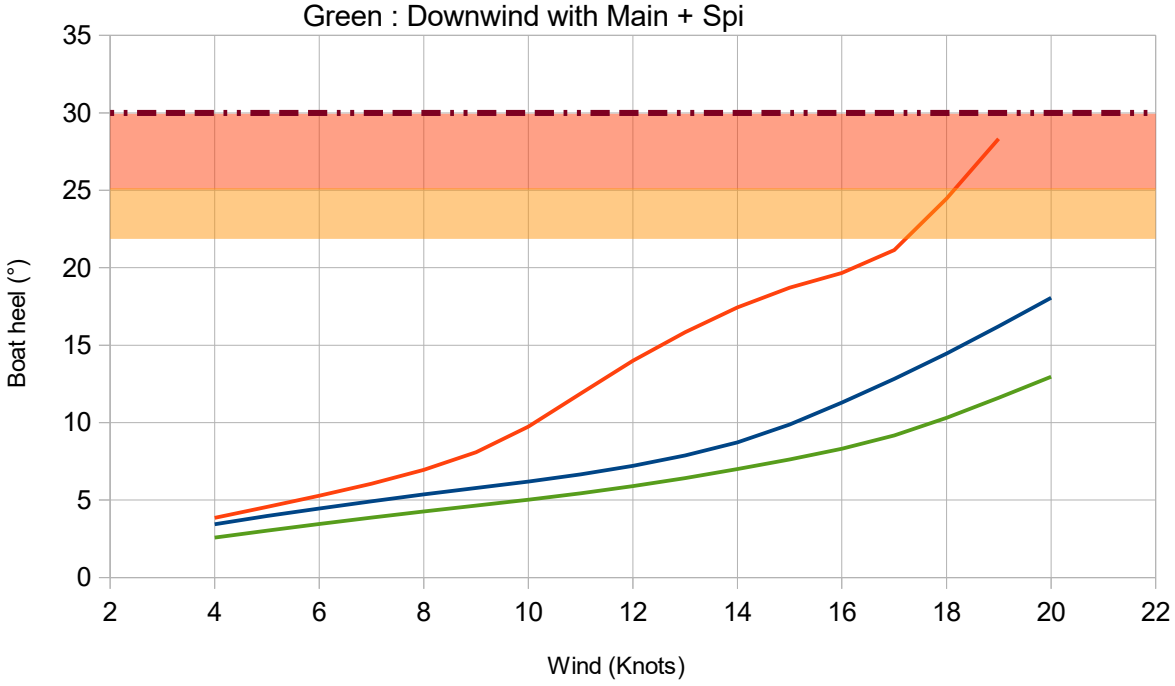
Gene-VPP input data for T10 with a loading of 300 kg (crew sit windward) :

For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
8,99	2,88	0,38	3,39	0,56	46,01	18,05	26,11	34,48	5,54	0,96	13,62	90,00	6,64	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,08699	2,35	1,05	0,05068	1,29	1,54	0,28	0,03002	1,94	0,36	4508	1,92			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
2,943	23,627	28,499		24,91	23,20	22,22								

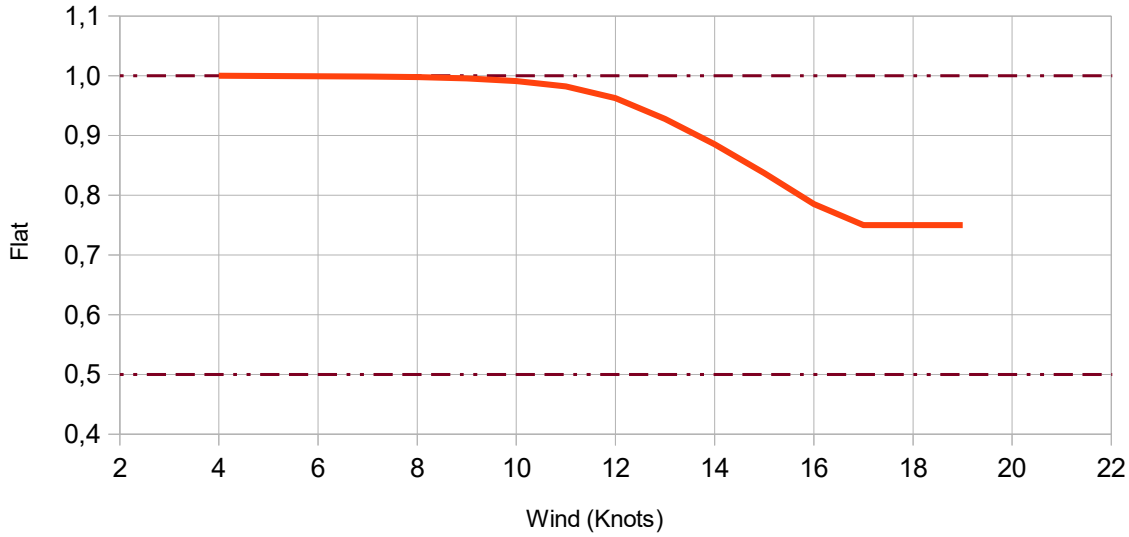
>>> Output :

Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

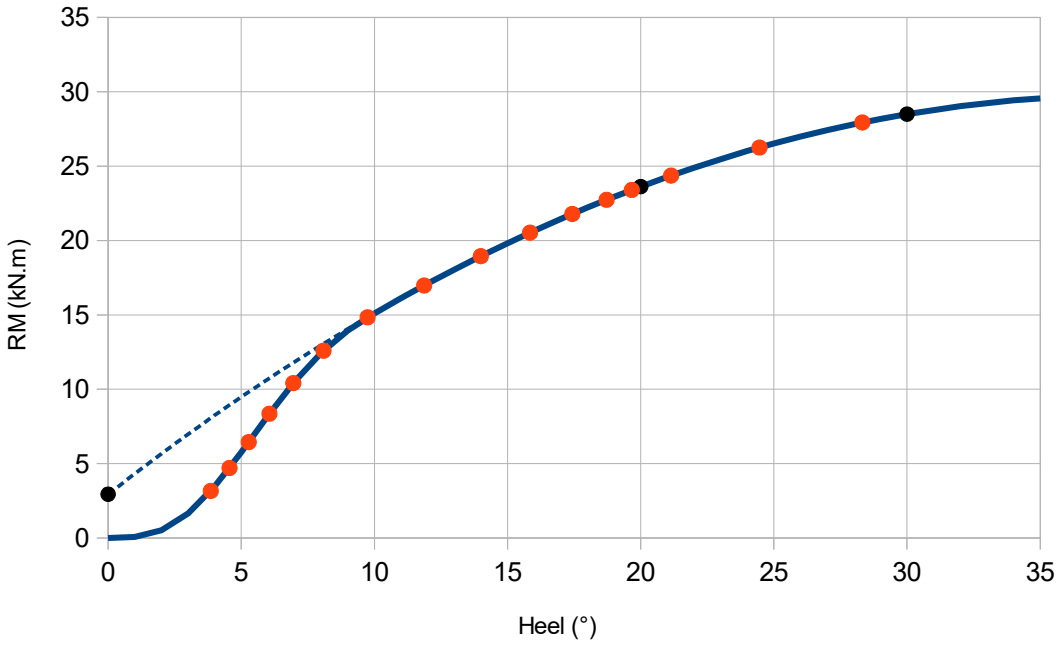


Gene-VPP : Flat optimum when upwind



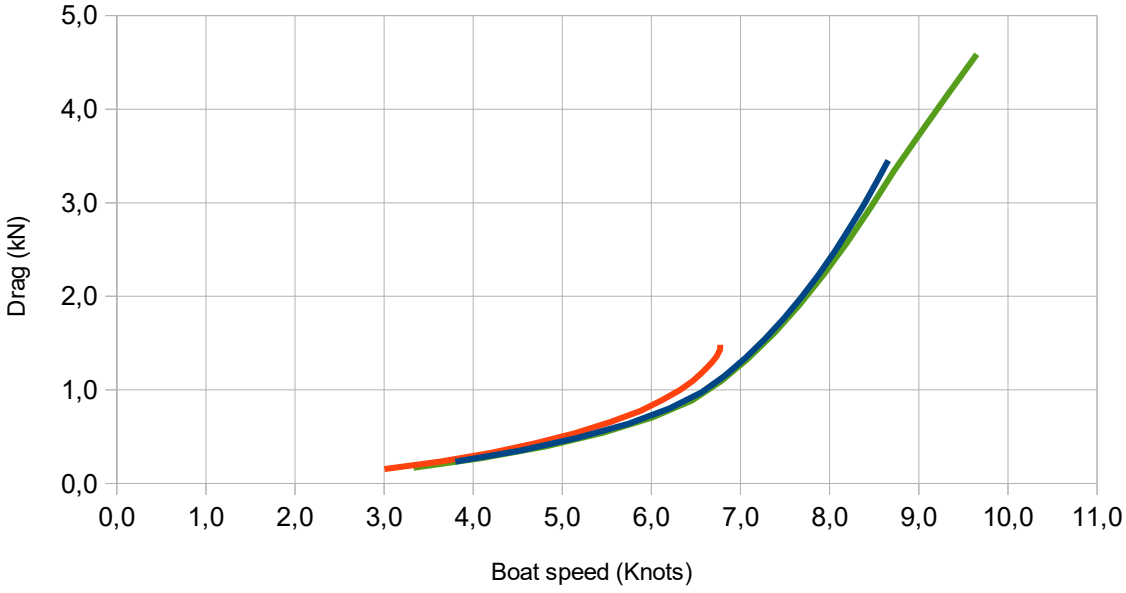
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

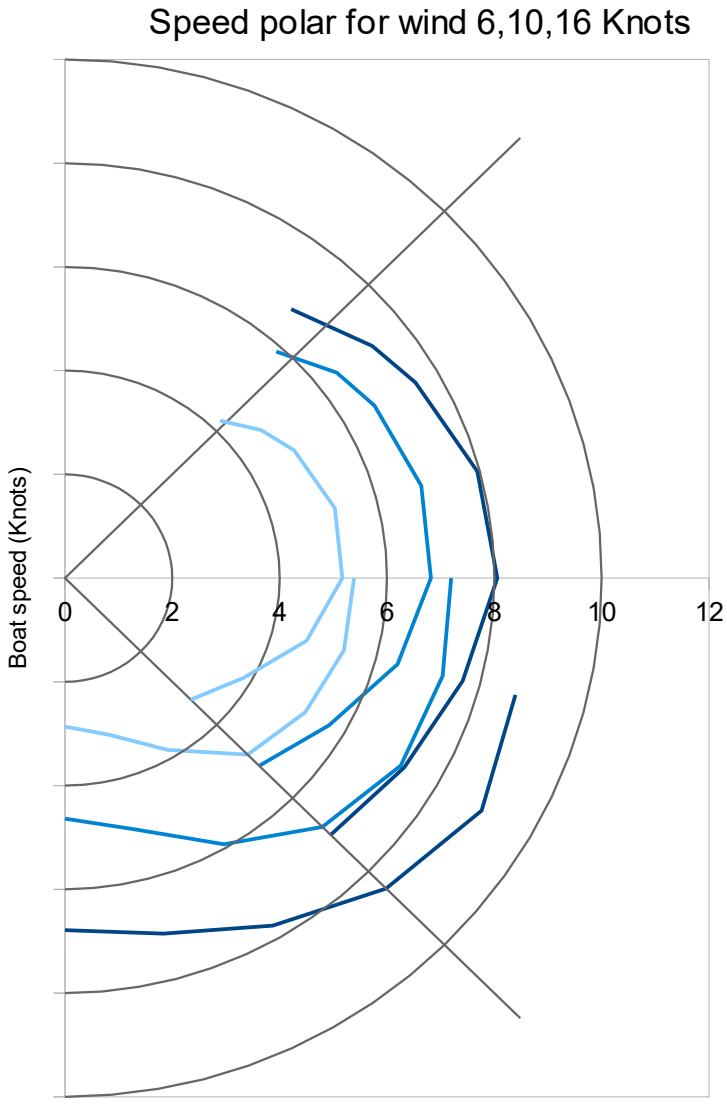


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

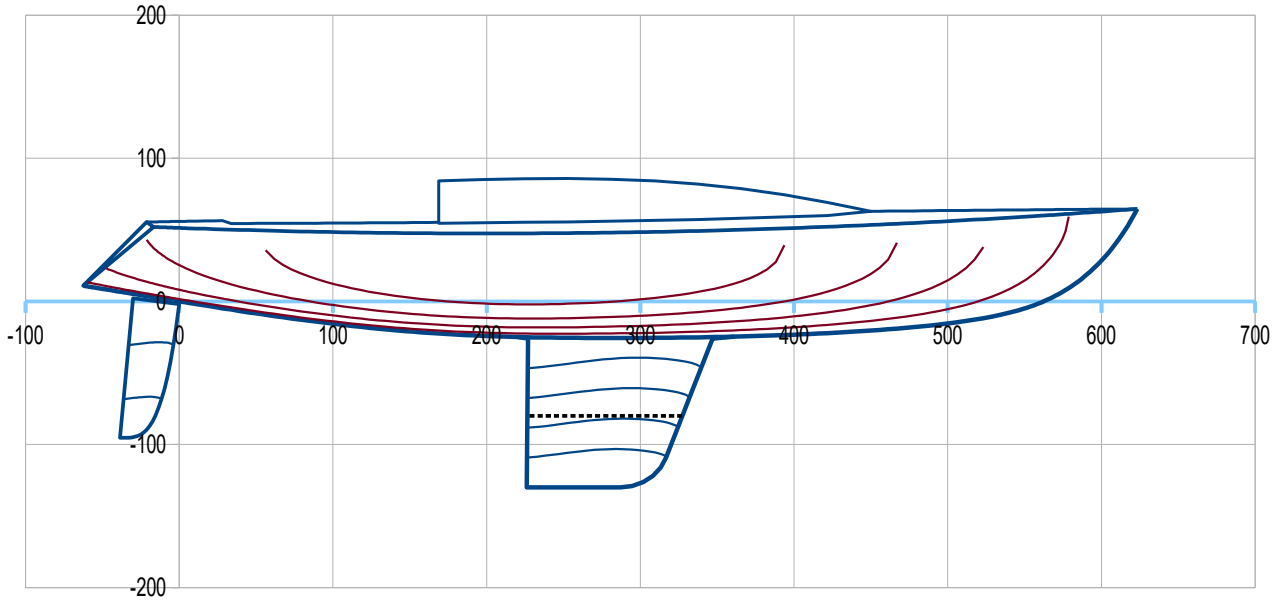


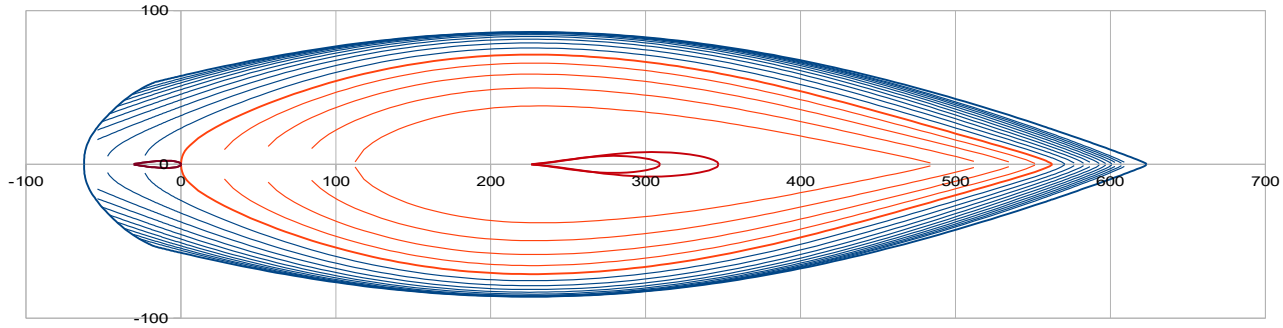
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,19	5,14	5,88	6,32	6,56	6,68	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,64	5,68	6,43	6,83	7,09	7,27	
60	4,93	5,99	6,66	7,06	7,34	7,54	
75	5,21	6,25	6,88	7,32	7,67	7,95	8,44
90	5,17	6,20	6,82	7,27	7,69	8,05	8,66
105	4,66	5,66	6,42	6,88	7,29	7,67	8,33
120	3,84	4,81	5,68	6,40	6,88	7,30	8,06
135	3,32	4,26	5,12	5,92	6,55	7,00	7,80
With Mainsail + Spi (sym or asym)							
90	5,39	6,54	7,20	7,69	8,04		
105	5,38	6,57	7,29	7,87	8,34	8,69	
120	5,17	6,44	7,23	7,91	8,50	8,96	9,77
135	4,81	6,01	6,78	7,37	7,93	8,46	9,65
150	3,82	4,92	5,92	6,67	7,22	7,74	8,74
165	3,13	4,10	5,01	5,87	6,57	7,10	8,05
180	2,86	3,77	4,64	5,46	6,20	6,79	7,73

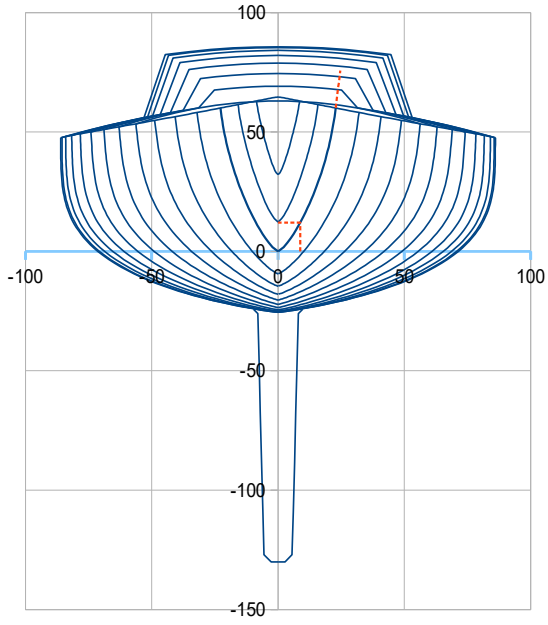


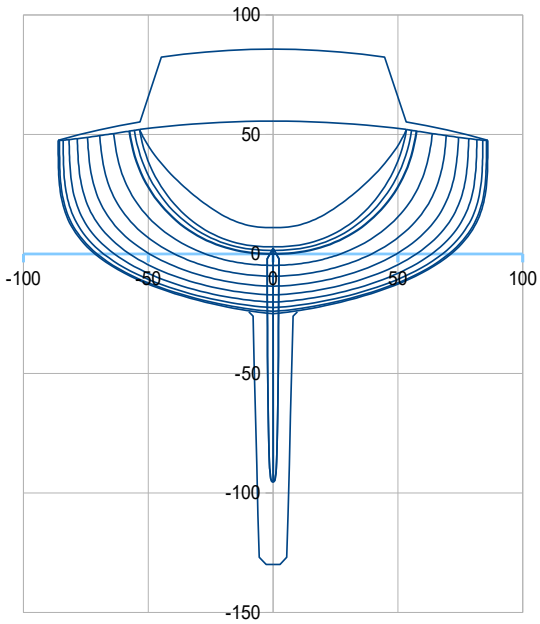
Dolfi 22,5, inspired by 15m2 SNS designs

Loa 6,86 m ; Lwl 5,63 m ; B 1,72 m ; Draft 1,30 m ; Light weight : 837 kg ; Ballast : 416 kg



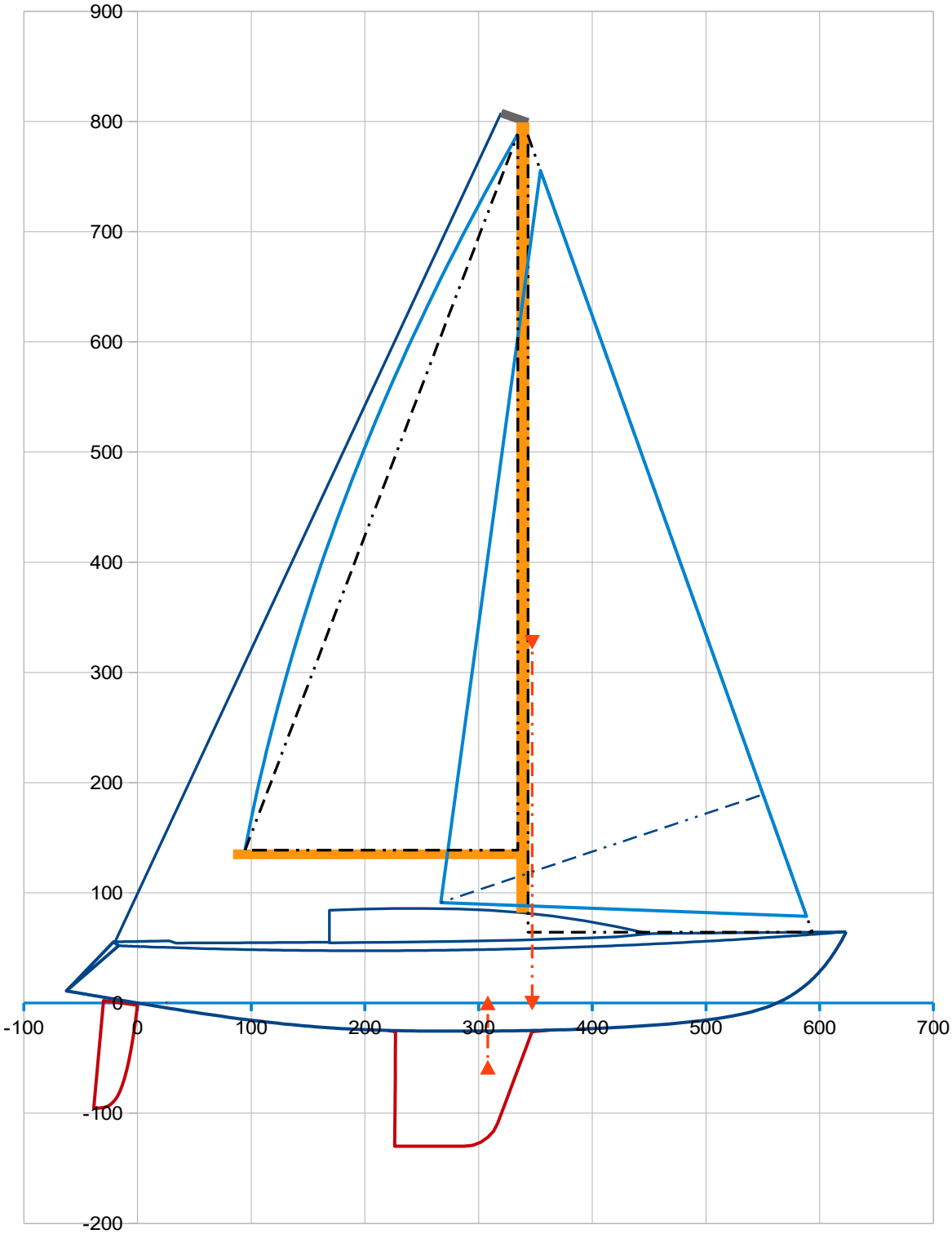






Sailplan :

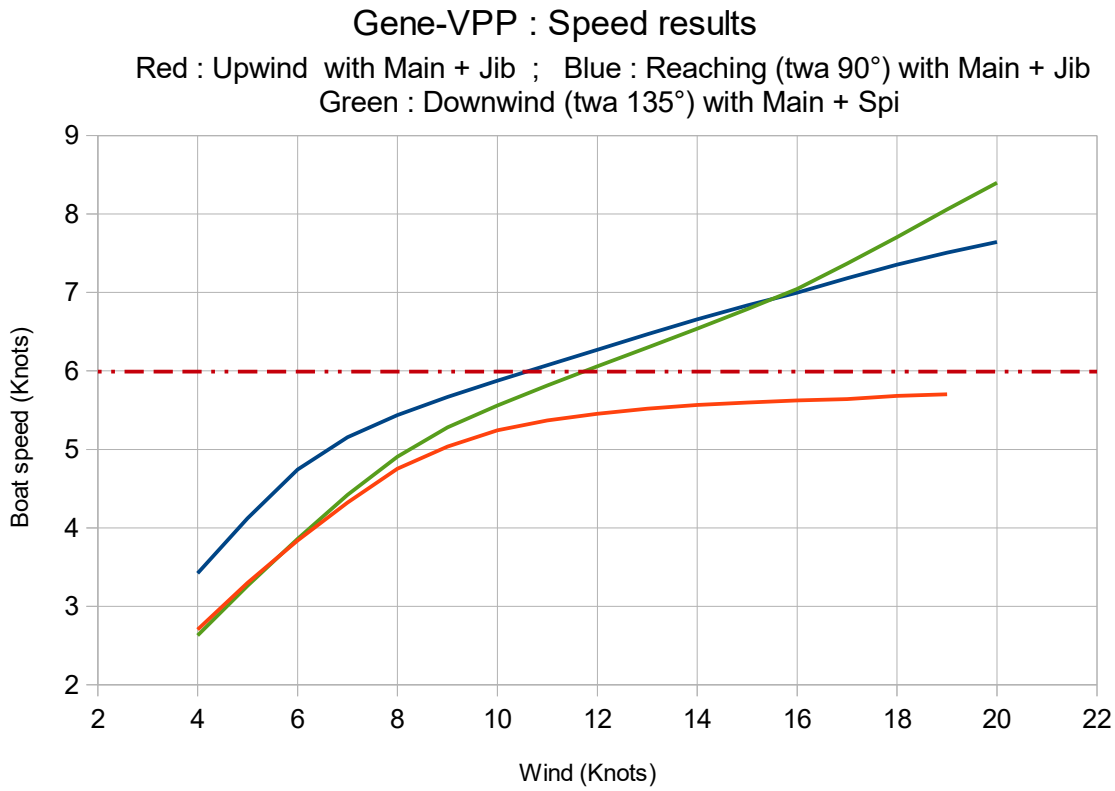
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	9,37	10,96	3,37	0,64	7,89	20,00	4,05



Gene-VPP input data for Dolfi 22,5 with a loading of 160 kg (crew sit windward) :

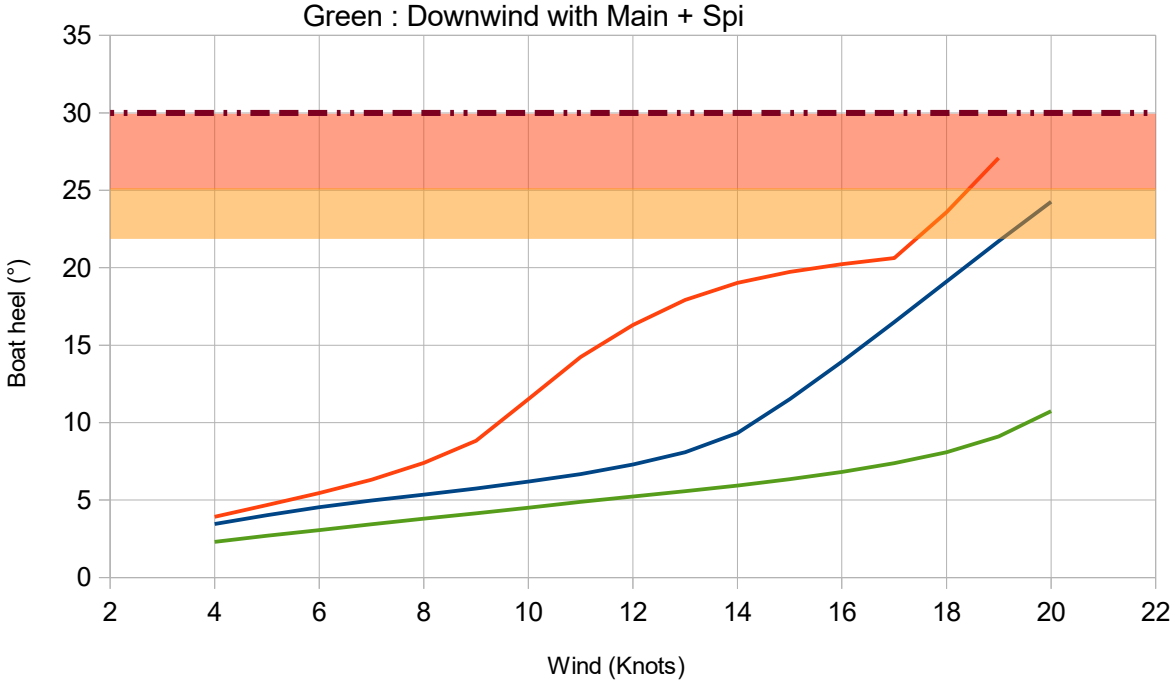
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
5,88	1,49	0,28	1,72	0,54	47,44	5,81	9,37	10,96	3,37	0,64	7,89	20,00	4,05	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,6
0,09406	2,21	1,20	0,00000	0,00	0,00	0,00	0,00684	0,52	0,30	997	1,33			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
1,256	3,373	4,078		9,14	8,81	8,64								

>>> Output :

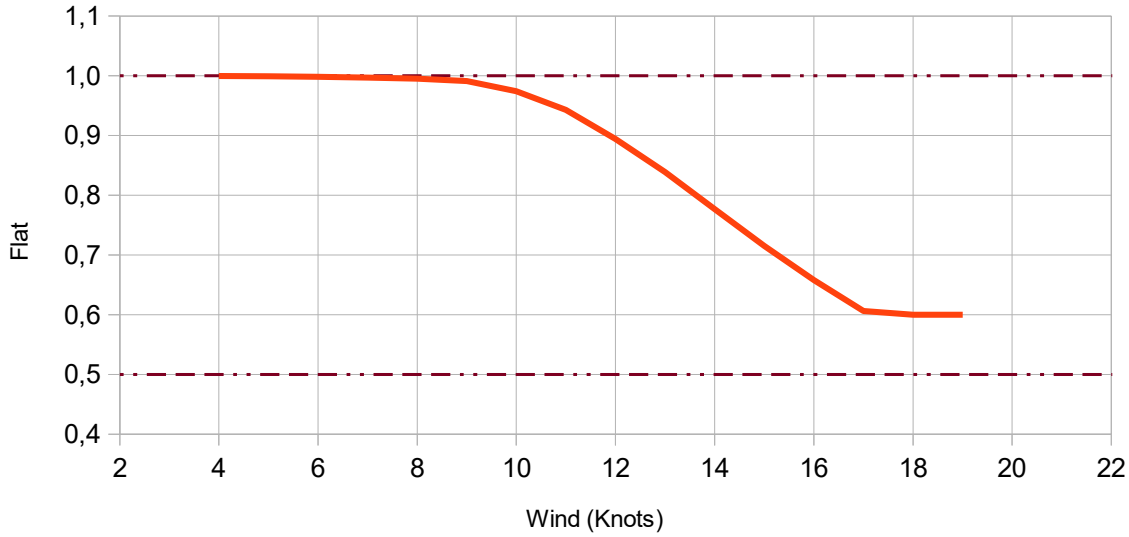


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

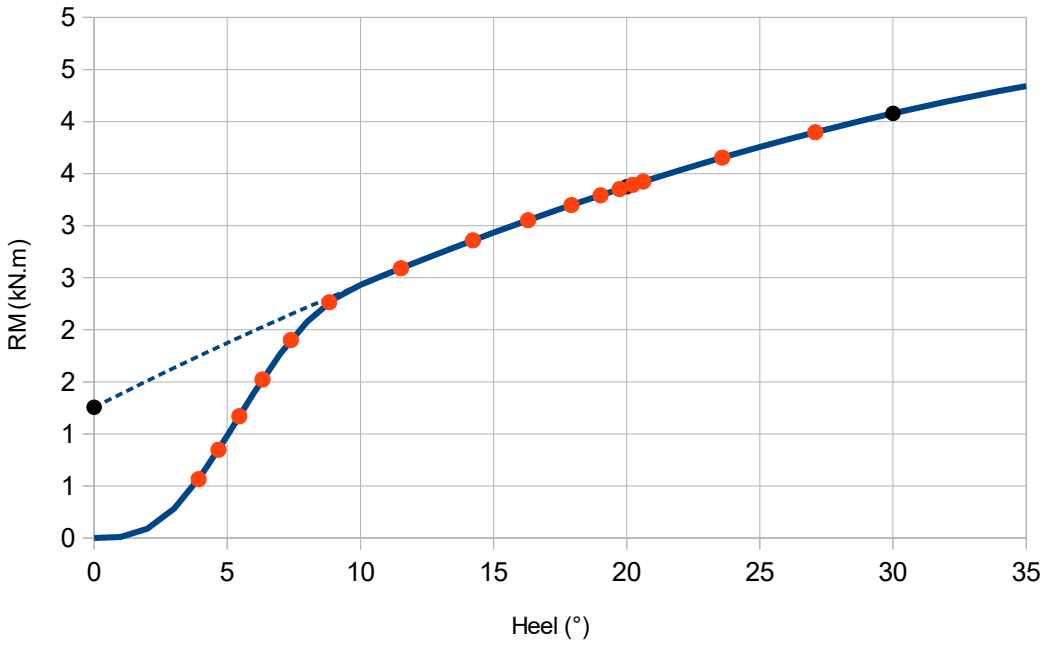


Gene-VPP : Flat optimum when upwind



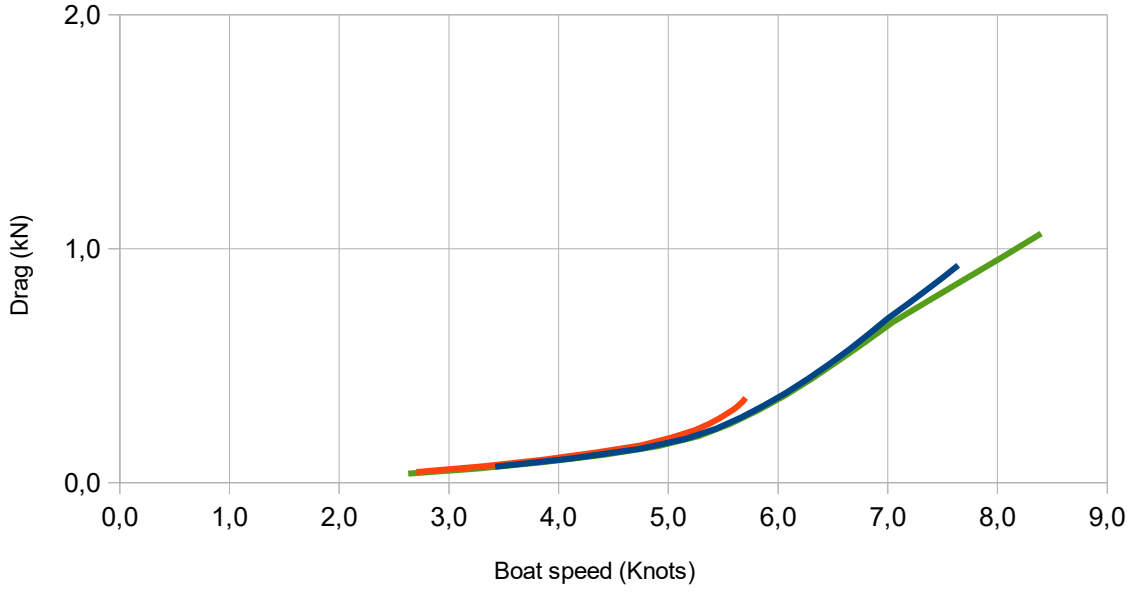
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

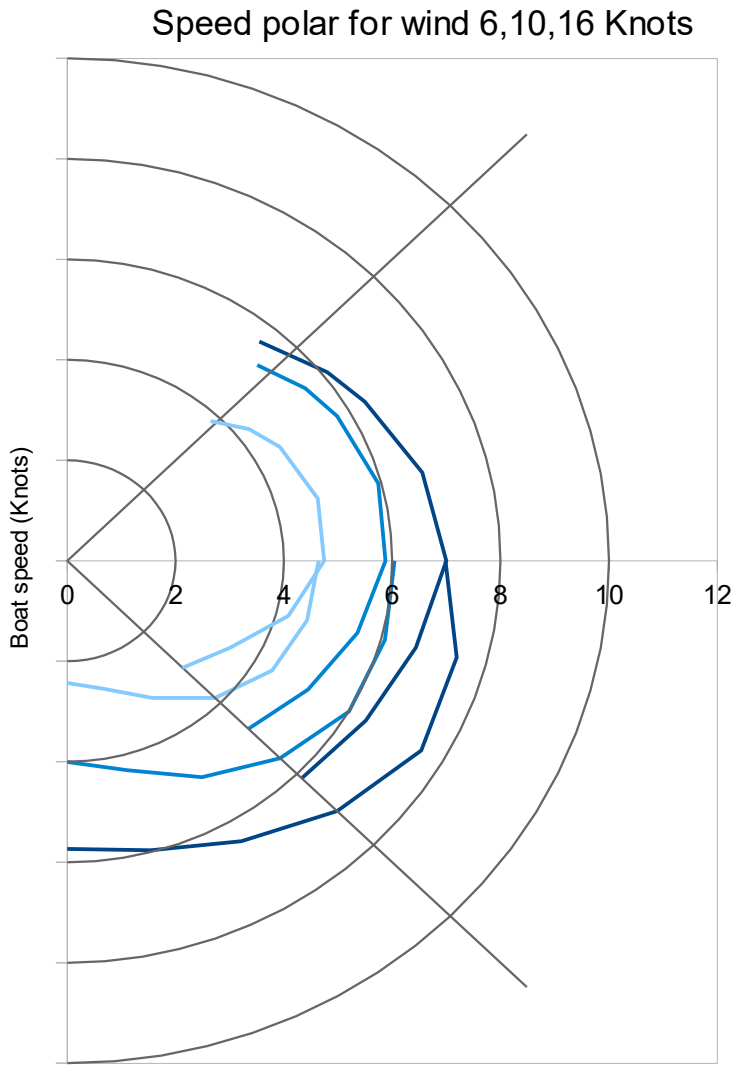


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

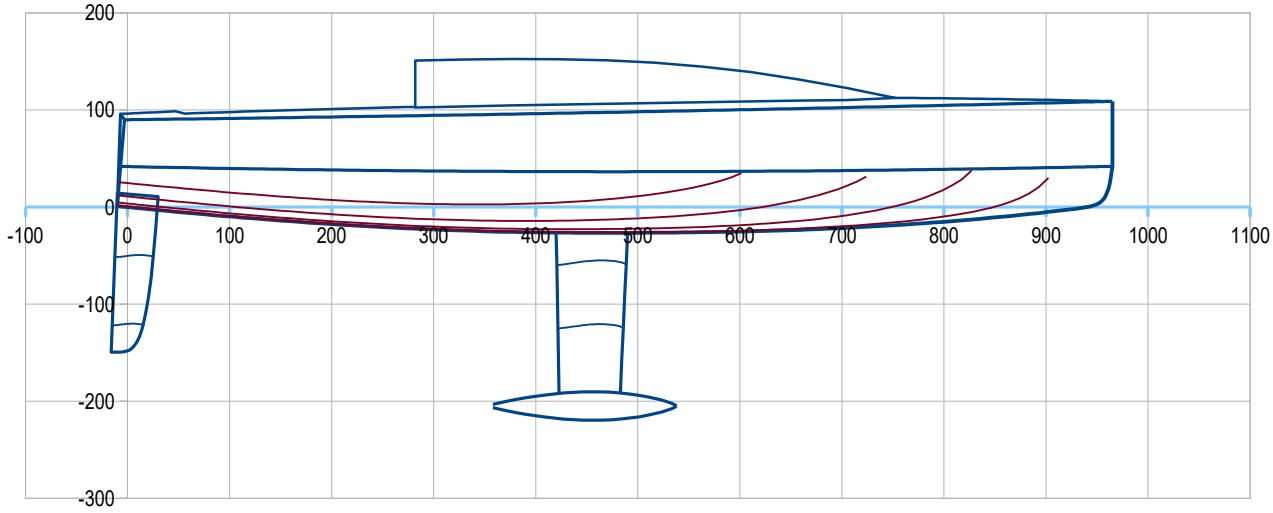


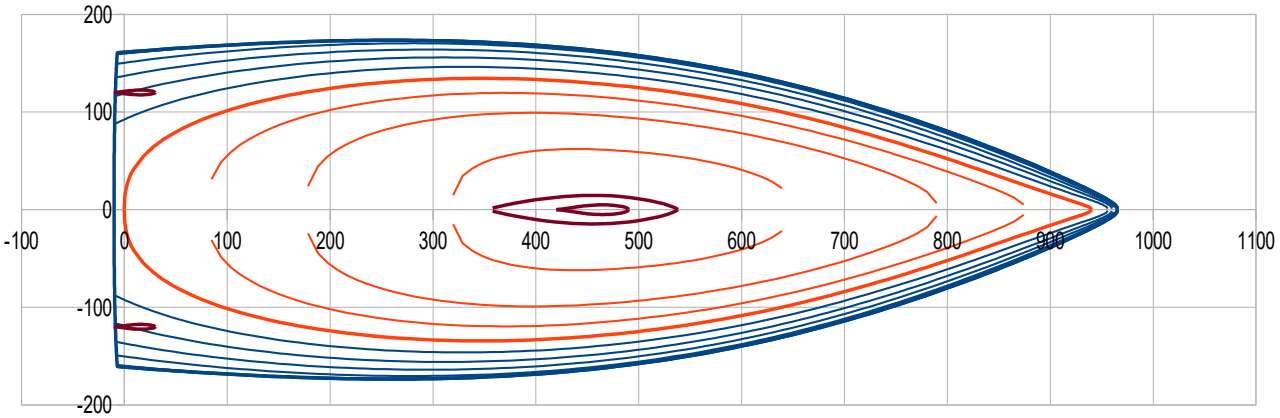
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	3,84	4,75	5,24	5,46	5,57	5,62	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,26	5,14	5,58	5,82	5,98	6,09	
60	4,53	5,33	5,76	6,02	6,21	6,34	
75	4,79	5,49	5,94	6,29	6,56	6,79	7,21
90	4,74	5,44	5,87	6,27	6,66	7,00	7,64
105	4,23	5,08	5,55	5,93	6,30	6,67	7,33
120	3,47	4,41	5,13	5,59	5,98	6,37	7,11
135	3,01	3,91	4,73	5,32	5,74	6,12	6,89
With Mainsail + Spi (sym or asym)							
90	4,64	5,49	6,04	6,46	6,77	6,98	
105	4,59	5,48	6,07	6,60	7,03	7,44	
120	4,37	5,37	6,01	6,52	7,02	7,55	8,40
135	3,86	4,91	5,56	6,06	6,54	7,05	8,40
150	3,15	4,13	4,98	5,55	6,00	6,44	7,45
165	2,64	3,50	4,31	5,03	5,54	5,96	6,78
180	2,43	3,24	4,01	4,74	5,31	5,74	6,52

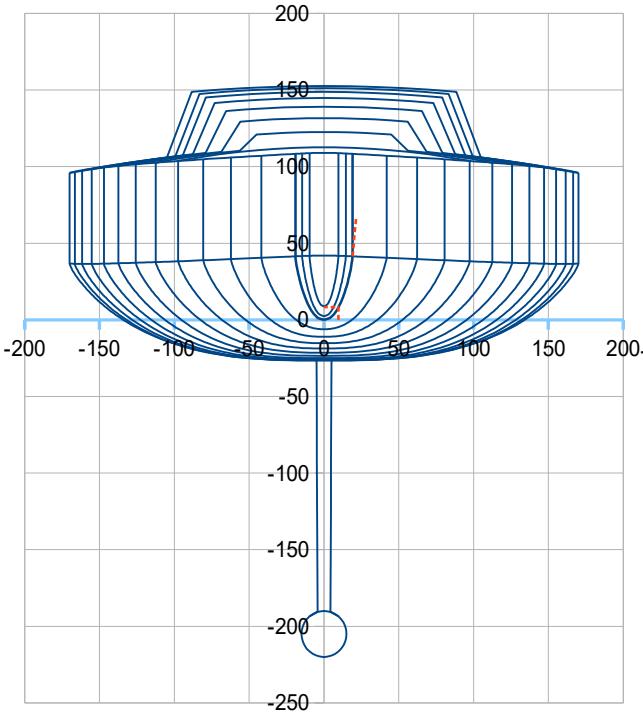


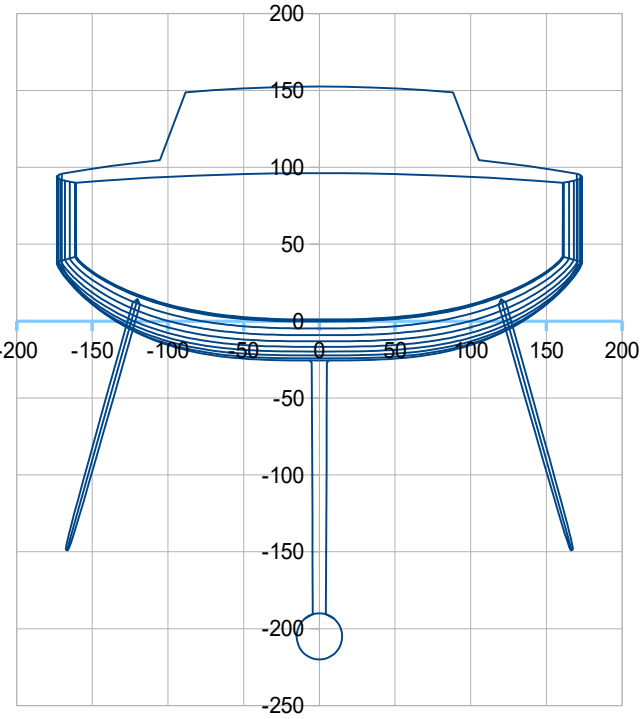
Dolfi 32S, inspired by Beneteau Figaro III / VPLP

Loa 9,75 m ; Lwl 9,40 m ; B 3,47 m ; Draft 2,20 m ; Light weight : 3017 kg ; Ballast : 1248 kg



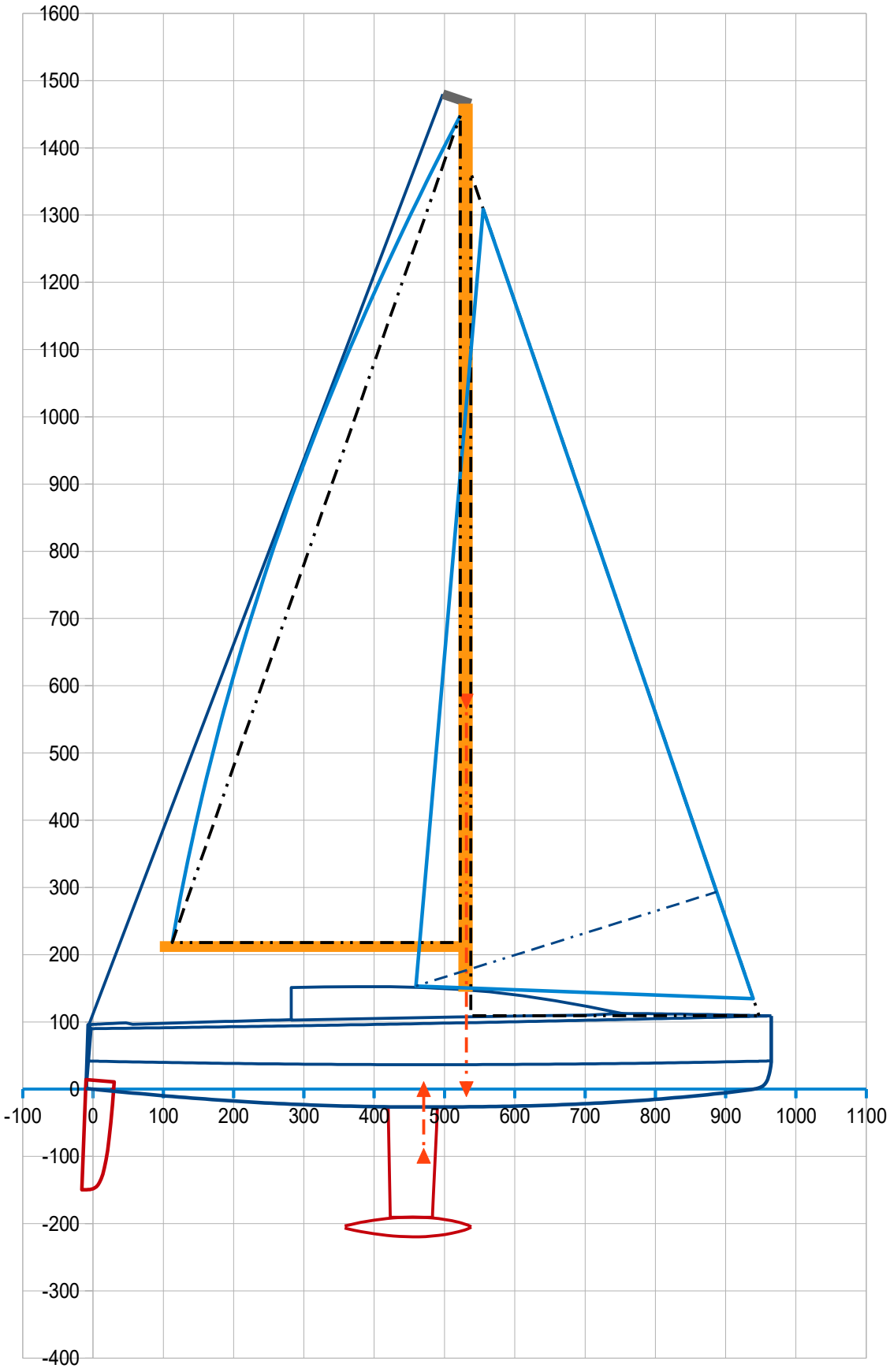






Sailplan :

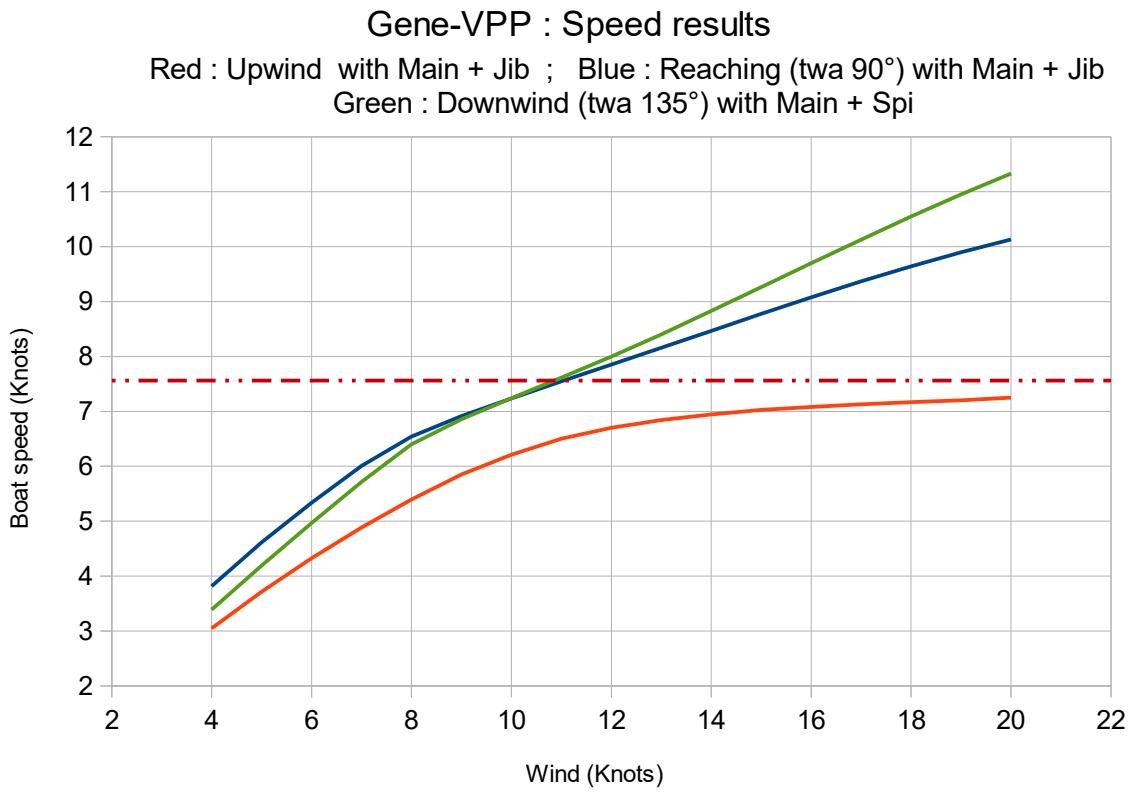
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	30,27	28,35	5,97	1,09	14,48	90,00	7,16



Gene-VPP input data for Dolfi 32S with a loading of 160 kg (crew sit windward) :

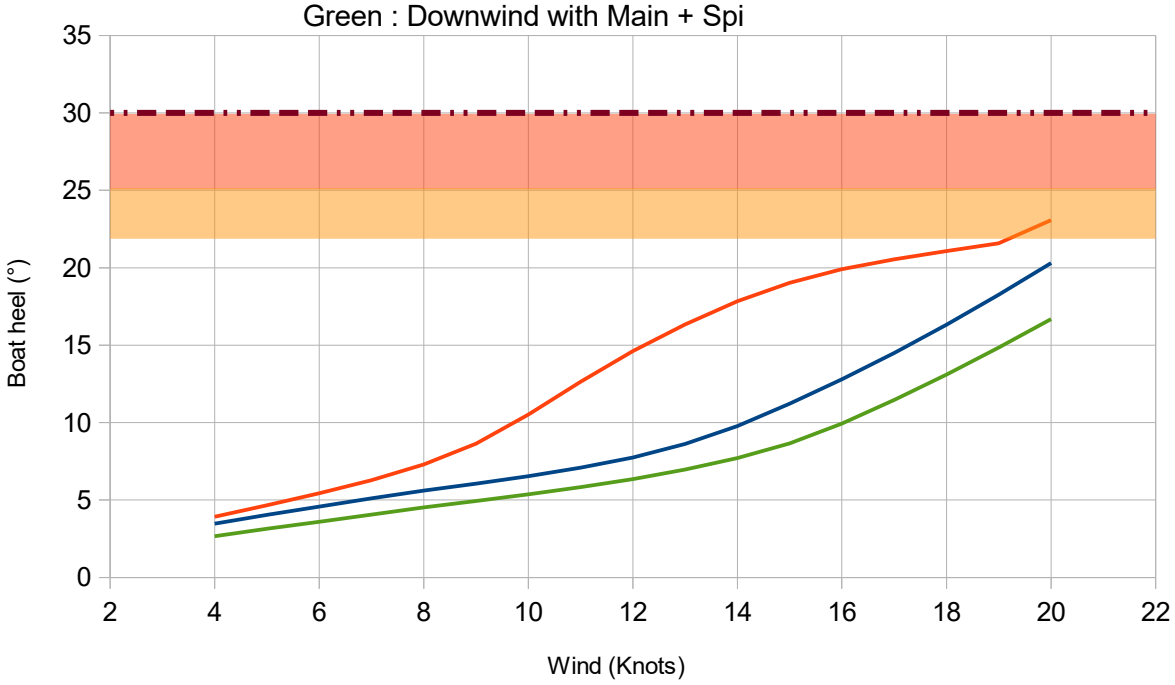
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
9,36	2,73	0,27	3,47	0,57	46,08	18,51	30,27	28,35	5,97	1,09	14,48	90,00	7,16	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,6
0,06449	2,17	0,70	0,06849	1,13	1,80	0,30	0,03226	2,43	0,40	3177	2,21			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
1,962	25,032	30,188		24,84	21,39	19,33								

>>> Output :

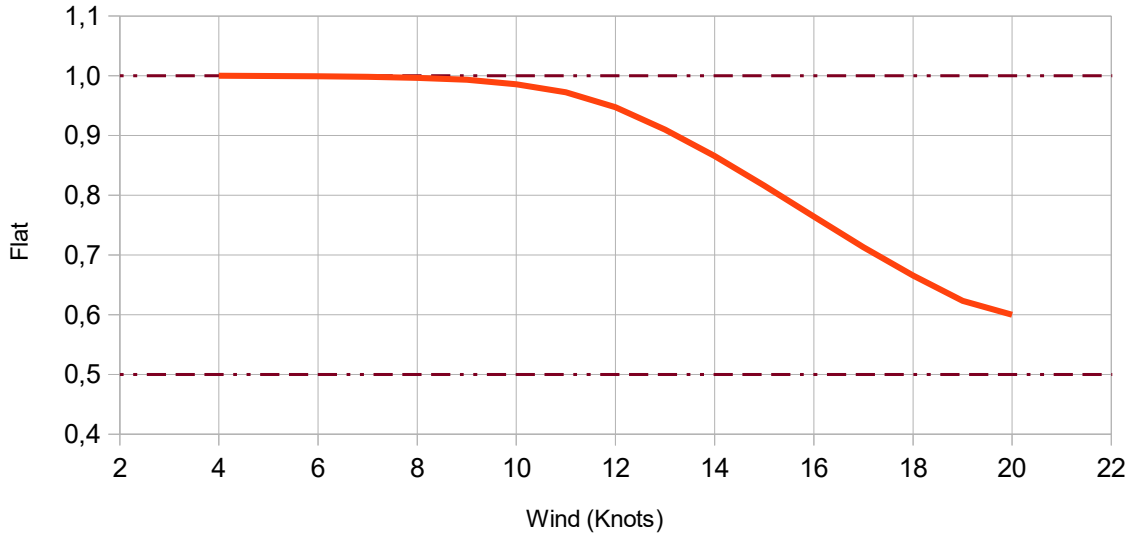


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

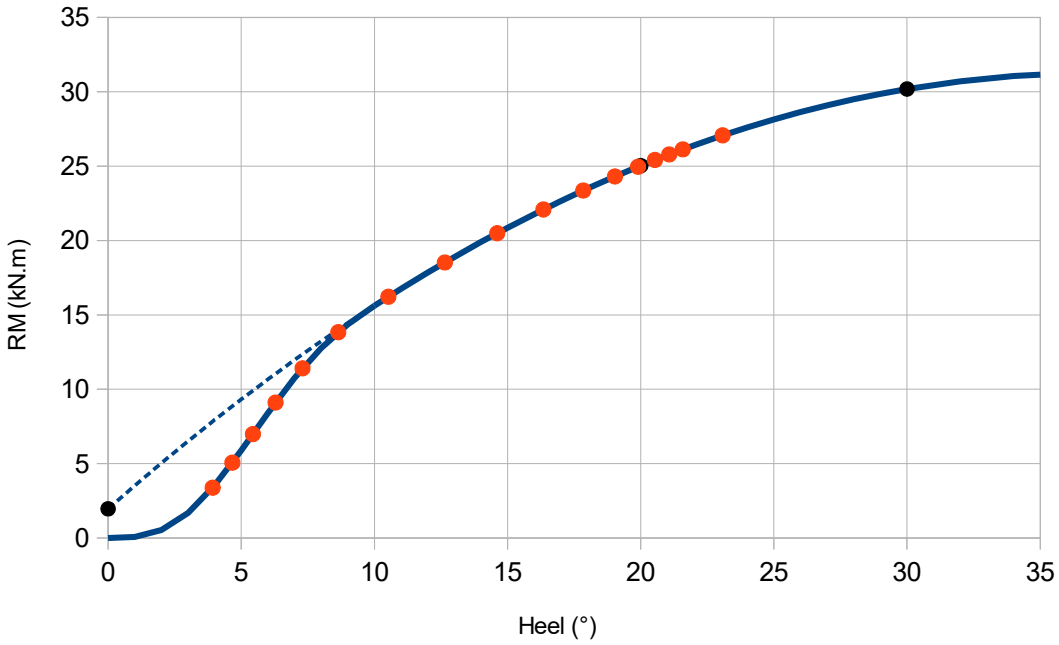


Gene-VPP : Flat optimum when upwind



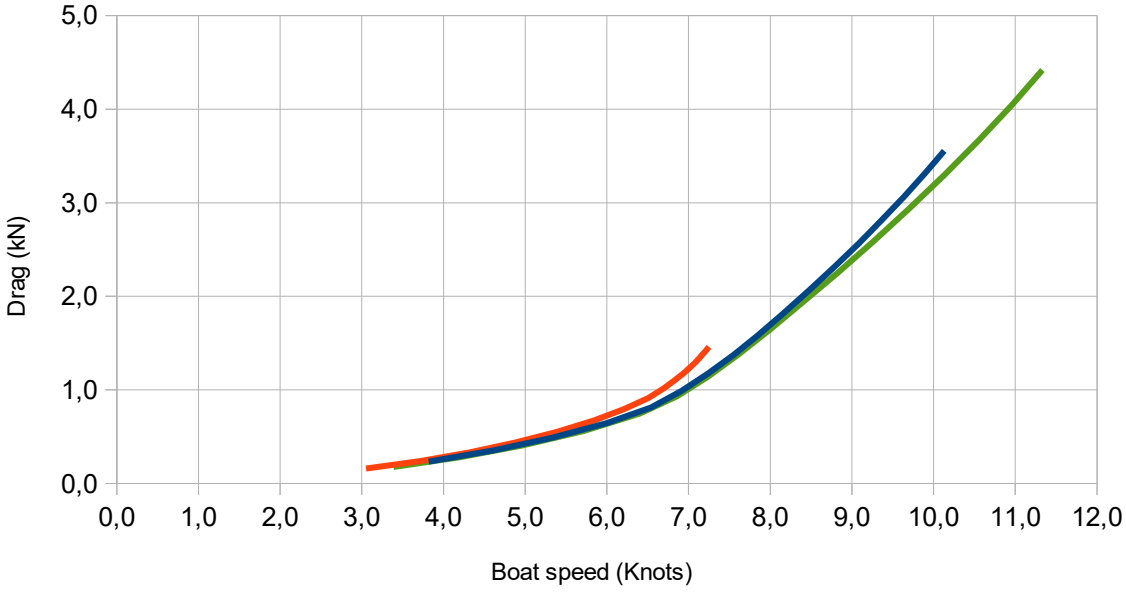
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

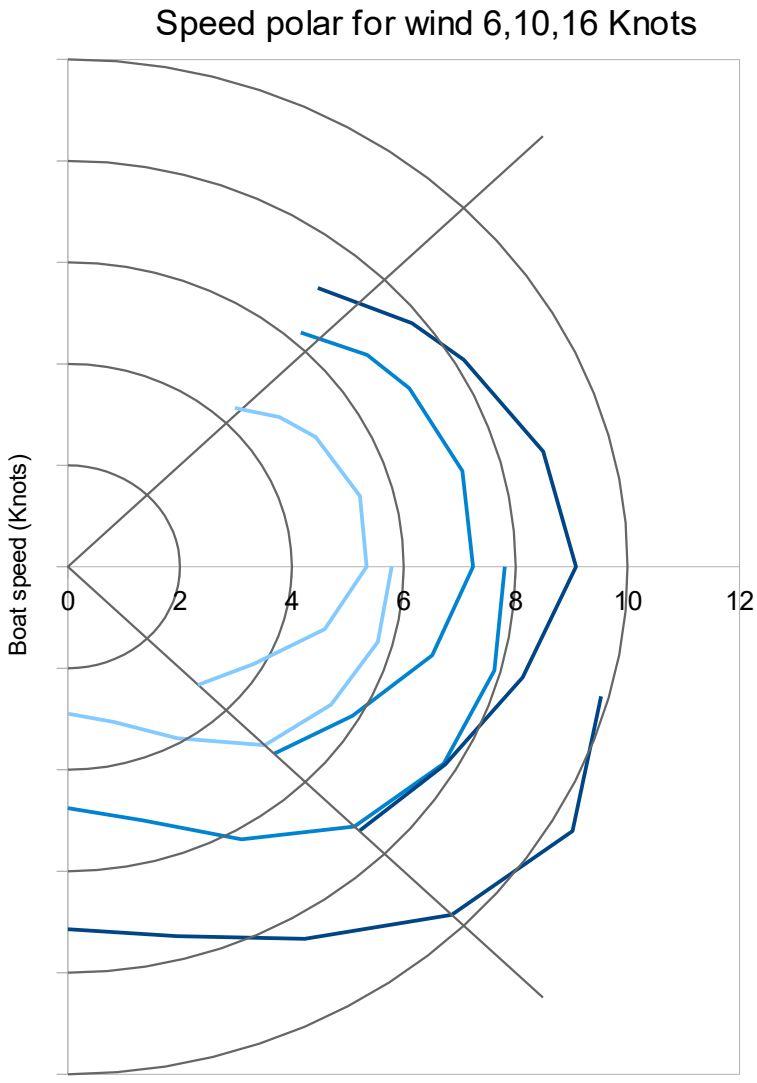


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

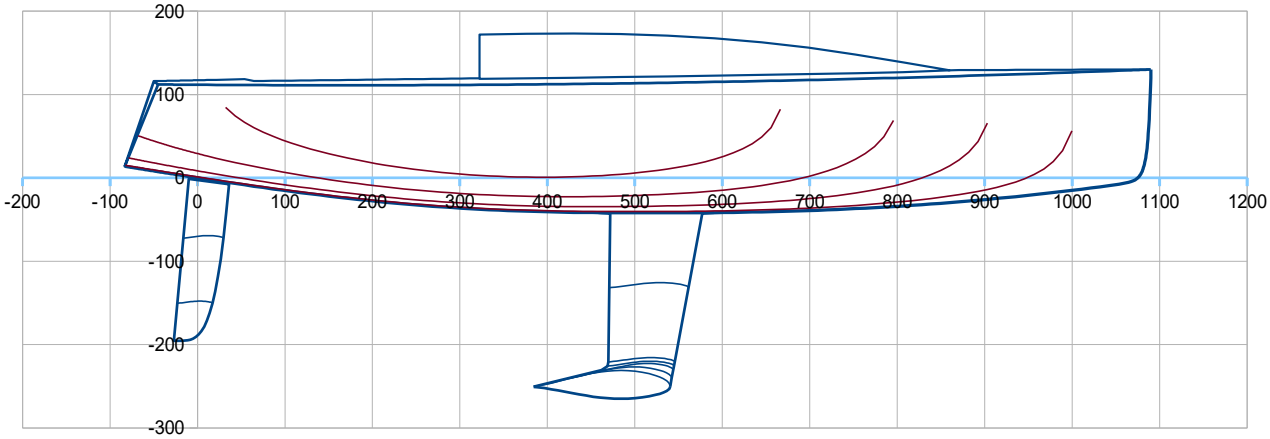


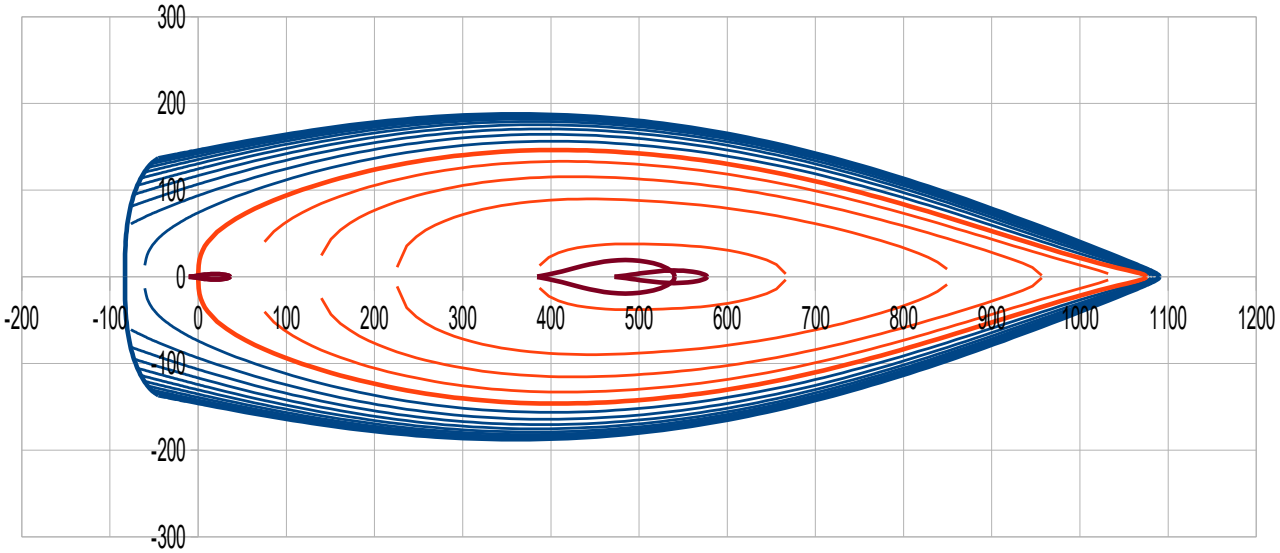
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,33	5,39	6,21	6,70	6,95	7,08	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,80	5,99	6,78	7,25	7,58	7,80	8,11
60	5,11	6,31	7,04	7,53	7,90	8,16	8,56
75	5,40	6,60	7,30	7,87	8,36	8,79	9,48
90	5,34	6,54	7,24	7,85	8,47	9,08	10,13
105	4,75	5,91	6,74	7,30	7,85	8,41	9,52
120	3,83	4,89	5,87	6,67	7,24	7,78	8,90
135	3,29	4,28	5,21	6,09	6,81	7,36	8,45
With Mainsail + Spi (sym or asym)							
90	5,79	7,01	7,80	8,46	8,93		
105	5,73	7,00	7,89	8,69	9,38	9,86	
120	5,43	6,80	7,76	8,69	9,60	10,41	
135	4,97	6,40	7,24	8,00	8,83	9,70	11,33
150	3,90	5,10	6,20	7,04	7,74	8,46	10,15
165	3,17	4,19	5,17	6,11	6,89	7,54	8,88
180	2,89	3,84	4,76	5,65	6,48	7,14	8,37

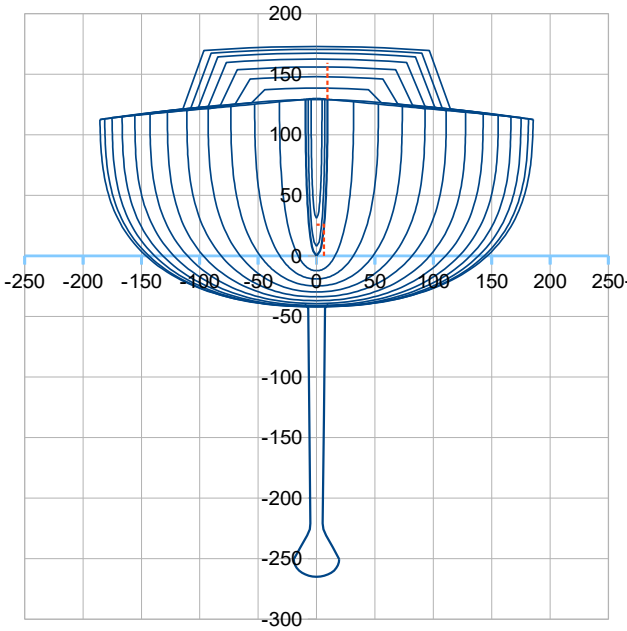


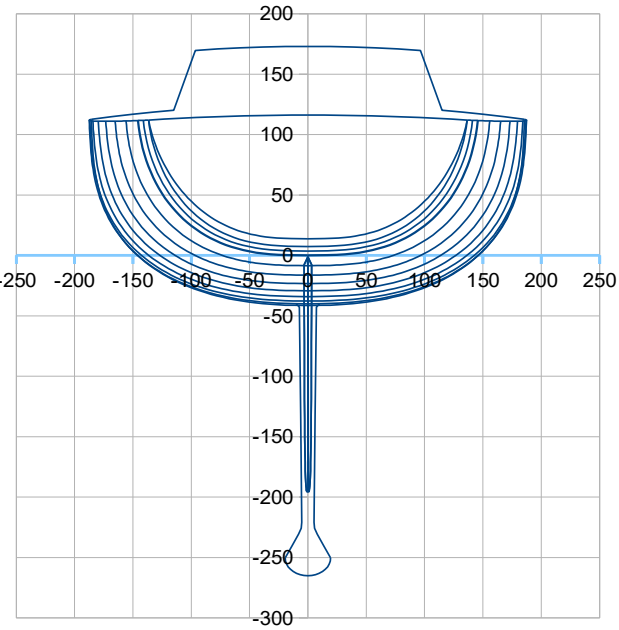
Syd 38, inspired by the Sydney 38 / Murray Burns Dovell

Loa 11,73 m ; Lwl 10,75 m ; B 3,75 m ; Draft 2,65 m ; Light weight : 5640 kg ; Ballast : 1930 kg



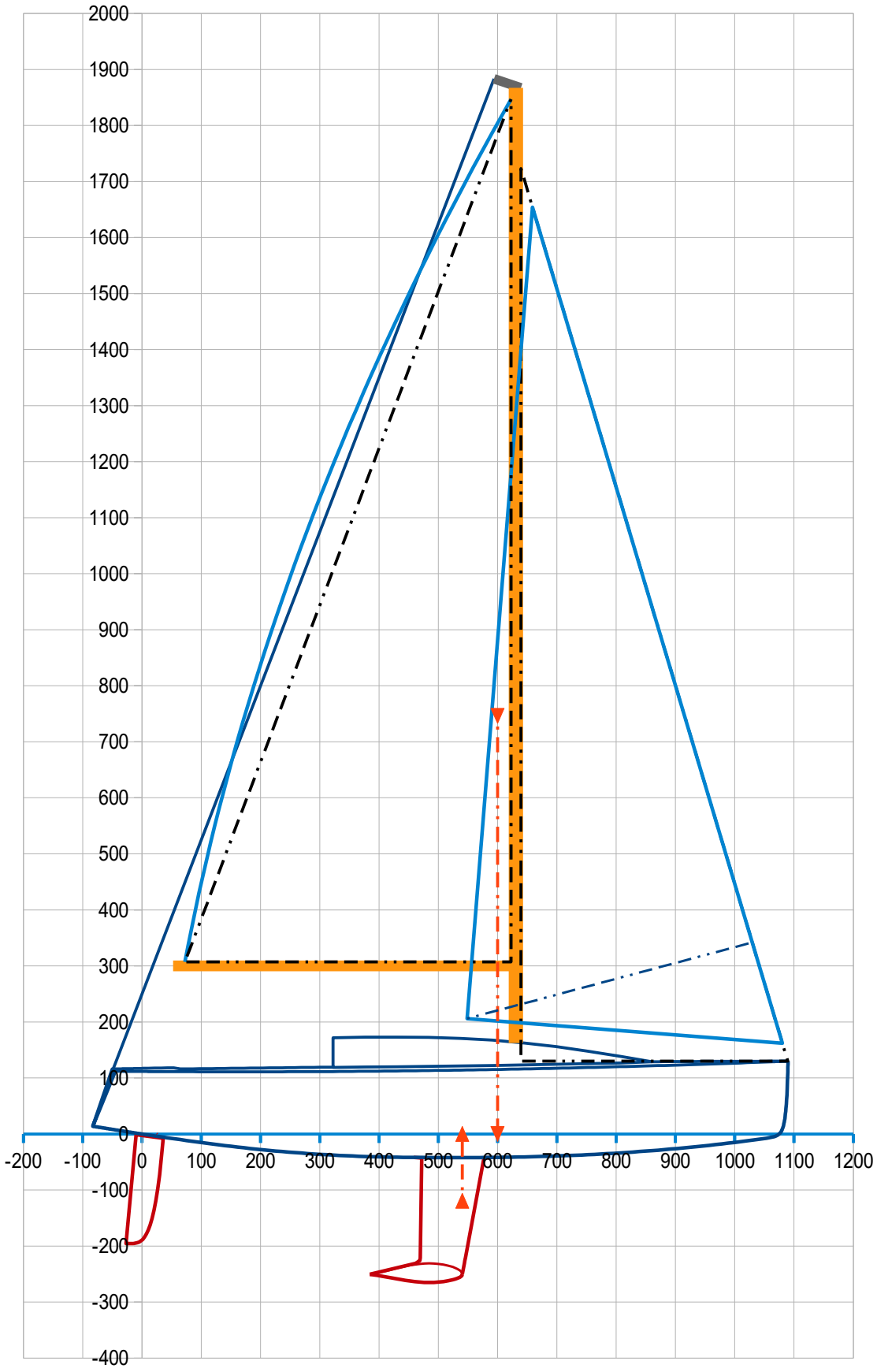






Sailplan :

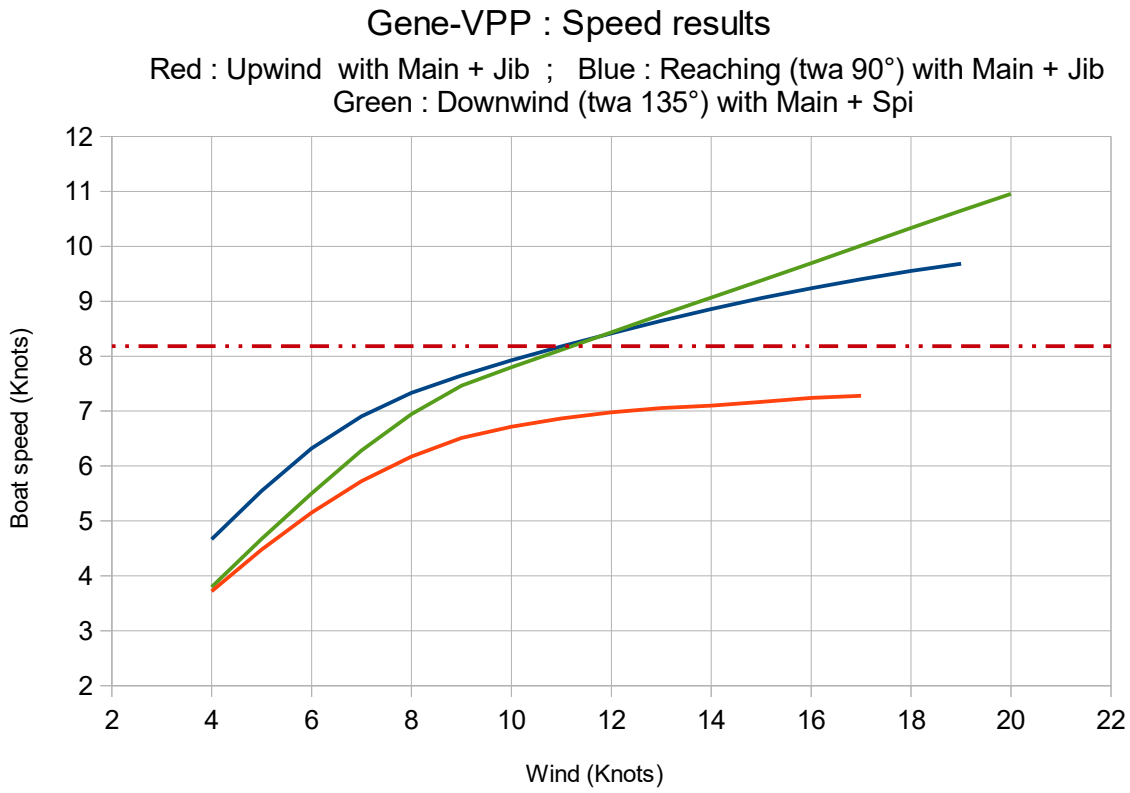
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	50,85	39,54	7,77	1,30	18,47	125,00	9,32



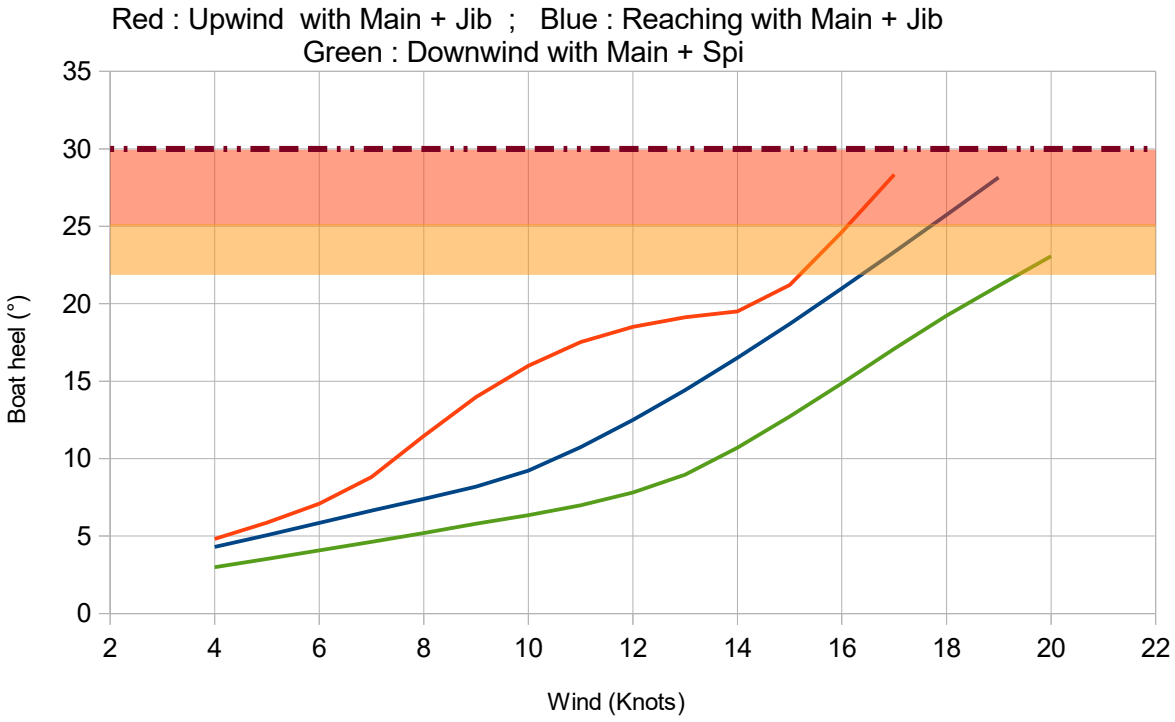
Gene-VPP input data for Syd 38 with a loading of 450 kg (crew sit windward) :

For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
10,96	2,98	0,44	3,75	0,55	45,86	22,23	50,85	39,54	7,77	1,30	18,47	125,00	9,32	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,6
0,13171	3,46	1,05	0,08537	1,73	1,60	0,39	0,02892	1,68	0,46	6090	2,67			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
6,622	35,718	44,559		30,68	29,17	28,05								

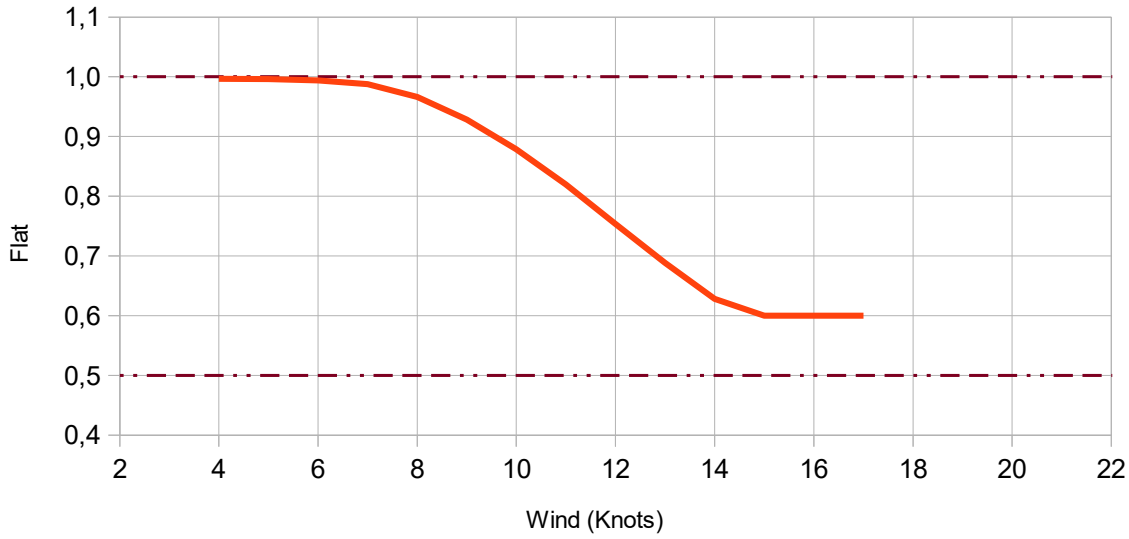
>>> Output :



Gene-VPP : Heel results

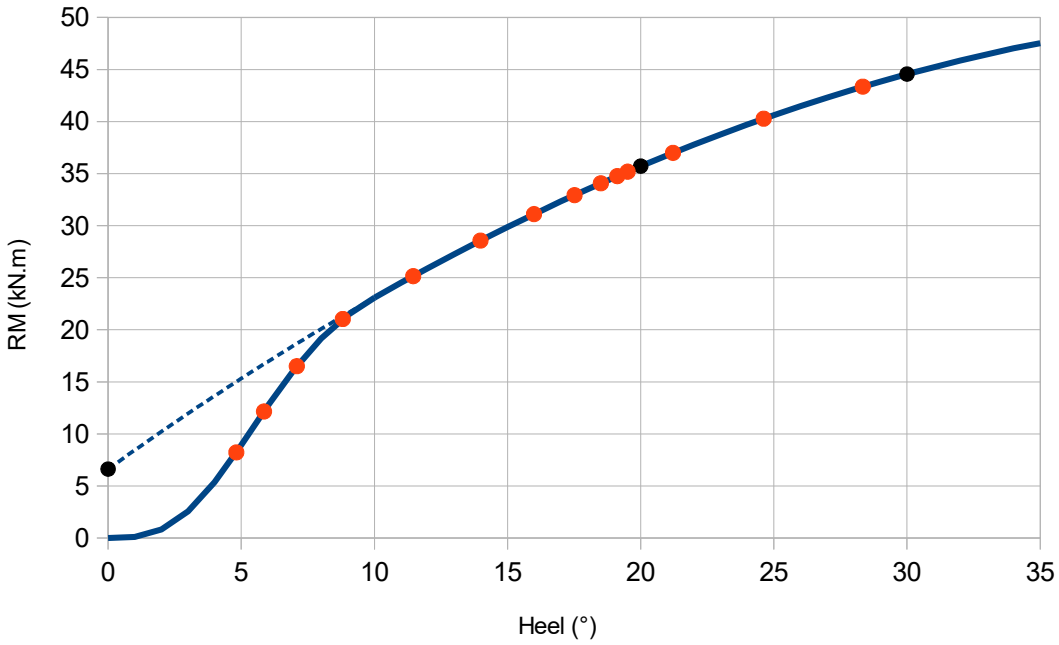


Gene-VPP : Flat optimum when upwind



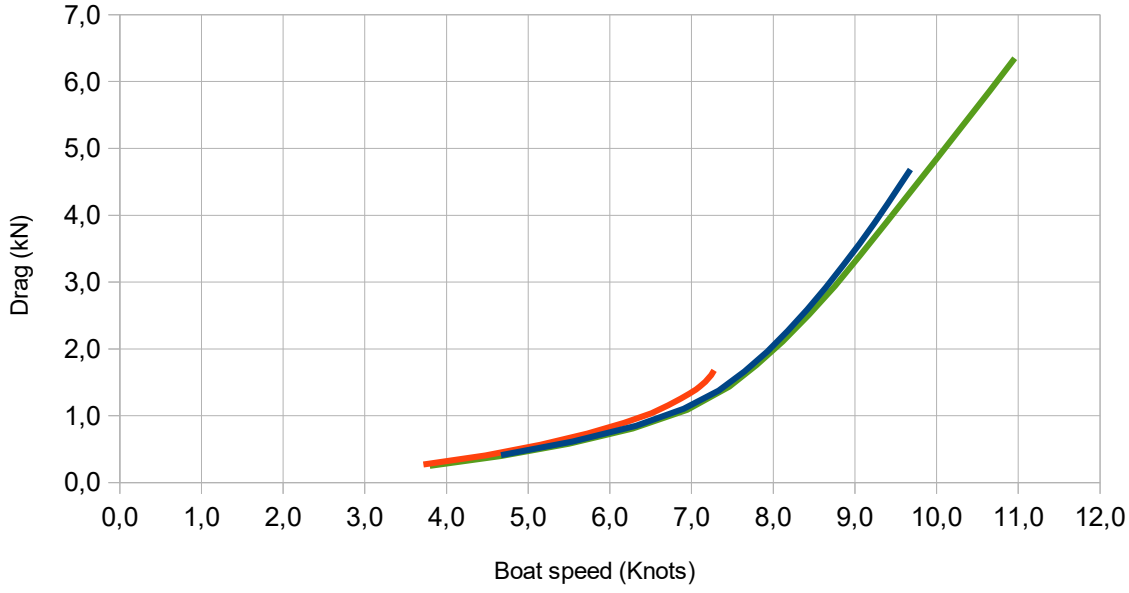
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

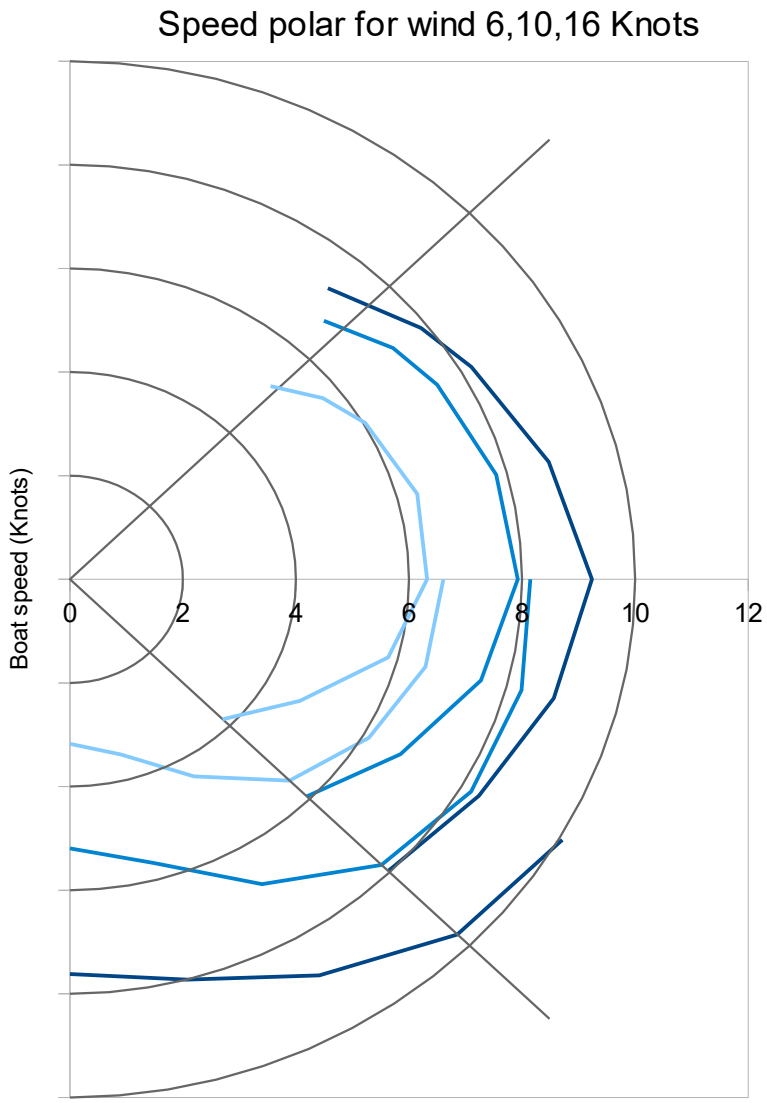


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

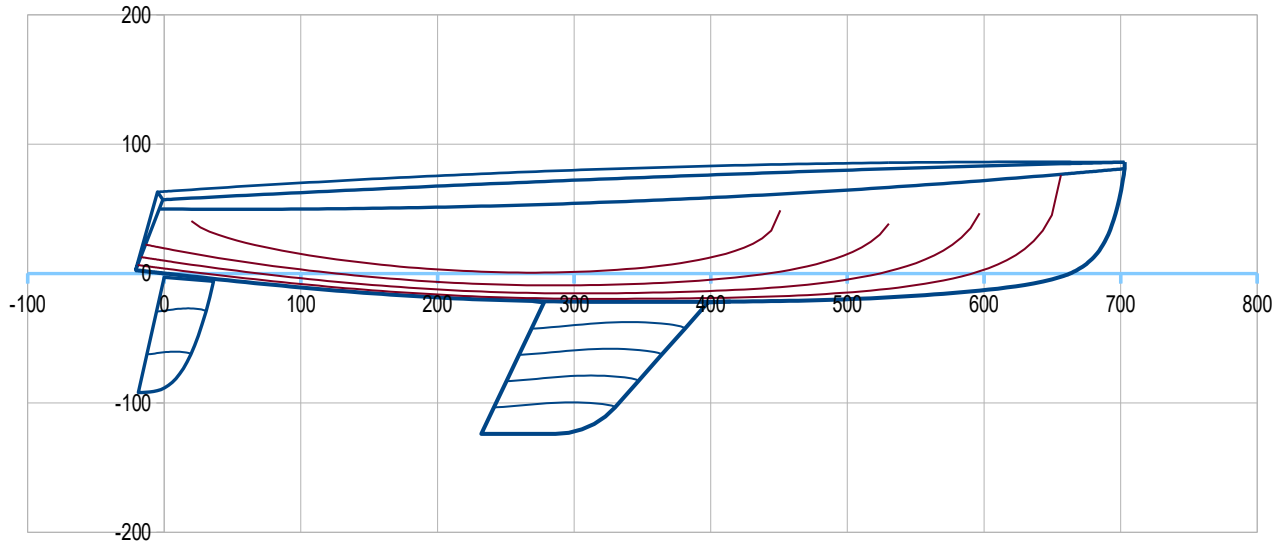


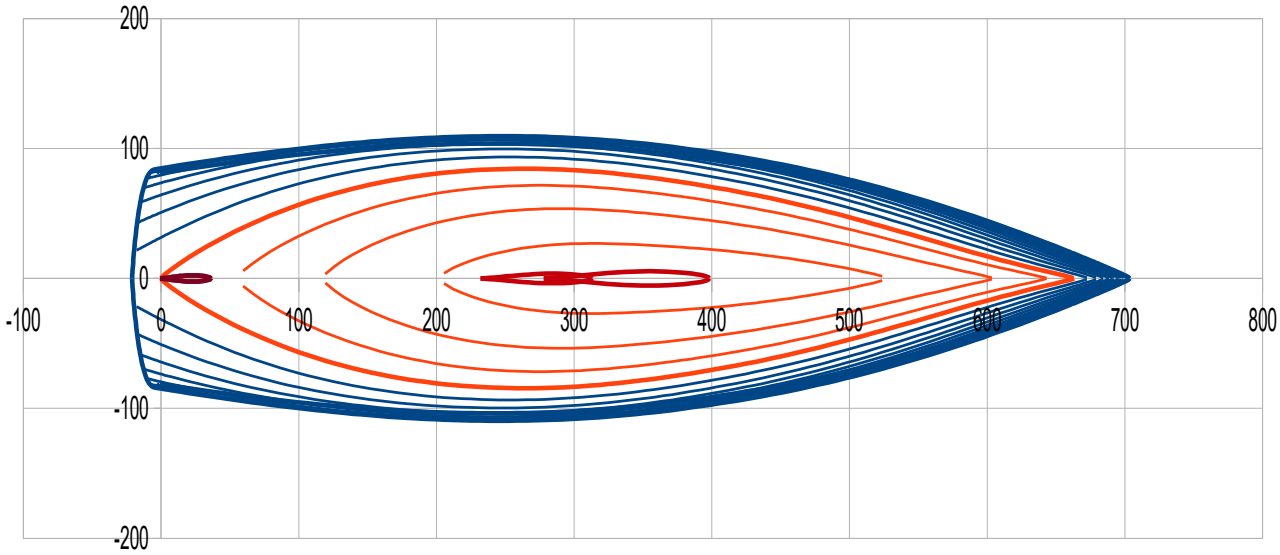
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	5,15	6,17	6,72	6,98	7,10	7,24	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	5,68	6,74	7,26	7,52	7,68	7,88	
60	6,03	7,05	7,51	7,78	7,98	8,20	
75	6,36	7,32	7,81	8,18	8,48	8,77	
90	6,32	7,33	7,92	8,42	8,86	9,24	
105	5,83	6,91	7,53	8,01	8,46	8,86	9,55
120	4,70	5,82	6,75	7,40	7,89	8,35	9,16
135	3,82	4,92	5,93	6,81	7,46	7,96	8,92
With Mainsail + Spi (sym or asym)							
90	6,61	7,58	8,15	8,52			
105	6,51	7,59	8,27	8,80			
120	6,11	7,38	8,20	8,89	9,51	10,06	
135	5,50	6,95	7,80	8,43	9,07	9,69	10,96
150	4,39	5,68	6,80	7,57	8,20	8,83	10,25
165	3,50	4,61	5,66	6,64	7,40	8,00	9,17
180	3,18	4,20	5,19	6,14	6,98	7,62	8,73

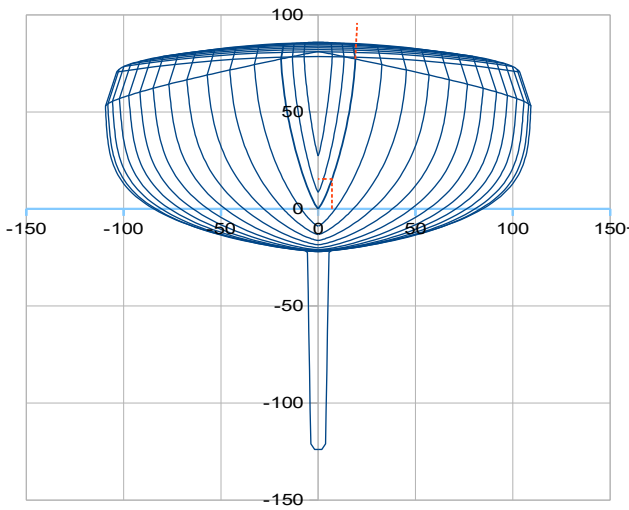


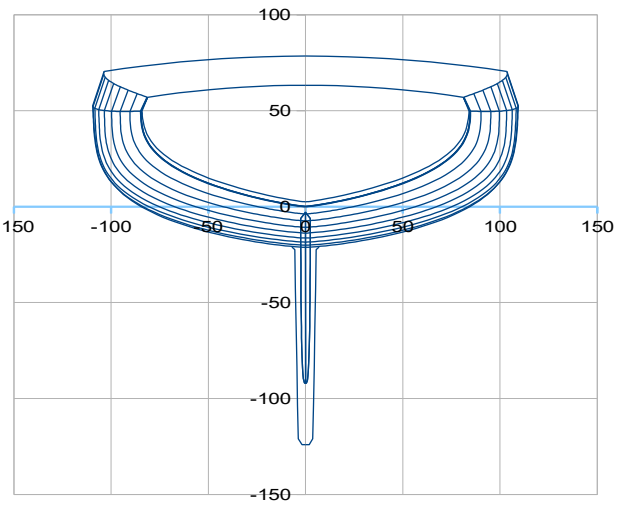
MO24, inspired by the Moore 24

Loa 7,24 m ; Lwl 6,63 m ; B 2,19 m ; Draft 1,24 m ; Light weight : 931 kg ; Ballast : 454 kg



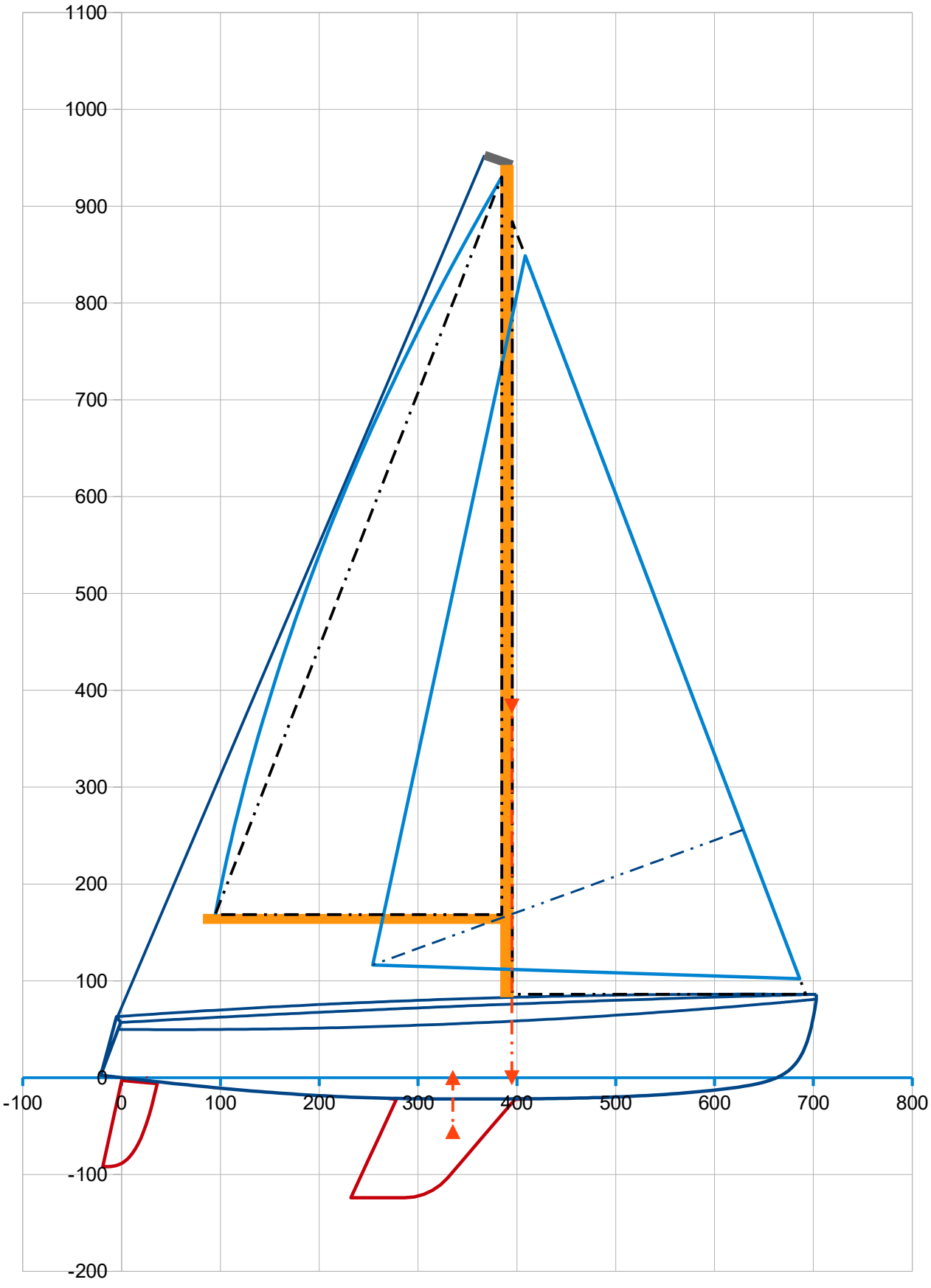






Sailplan :

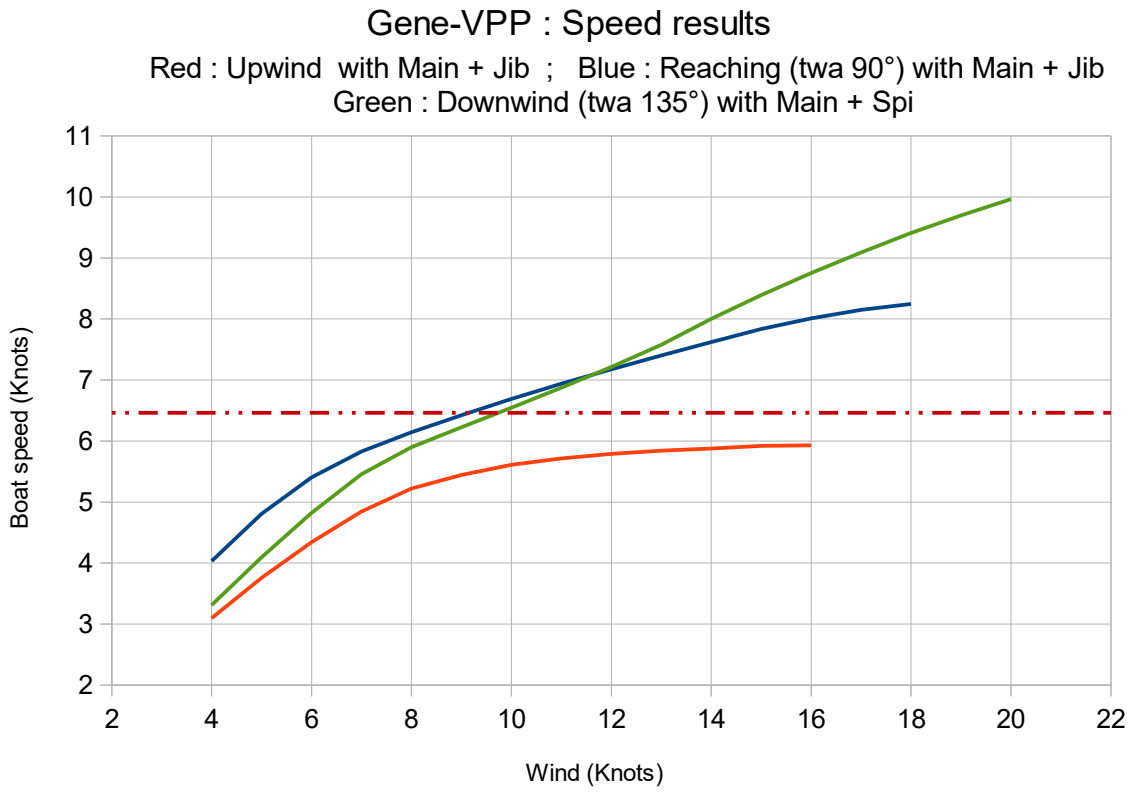
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
0 by default	**13,27**	**16,40**	**3,94**	**0,86**	**9,30**	**40,00**	**4,72**



Gene-VPP input data for MO24 with a loading of 140 kg (crew sit windward) :

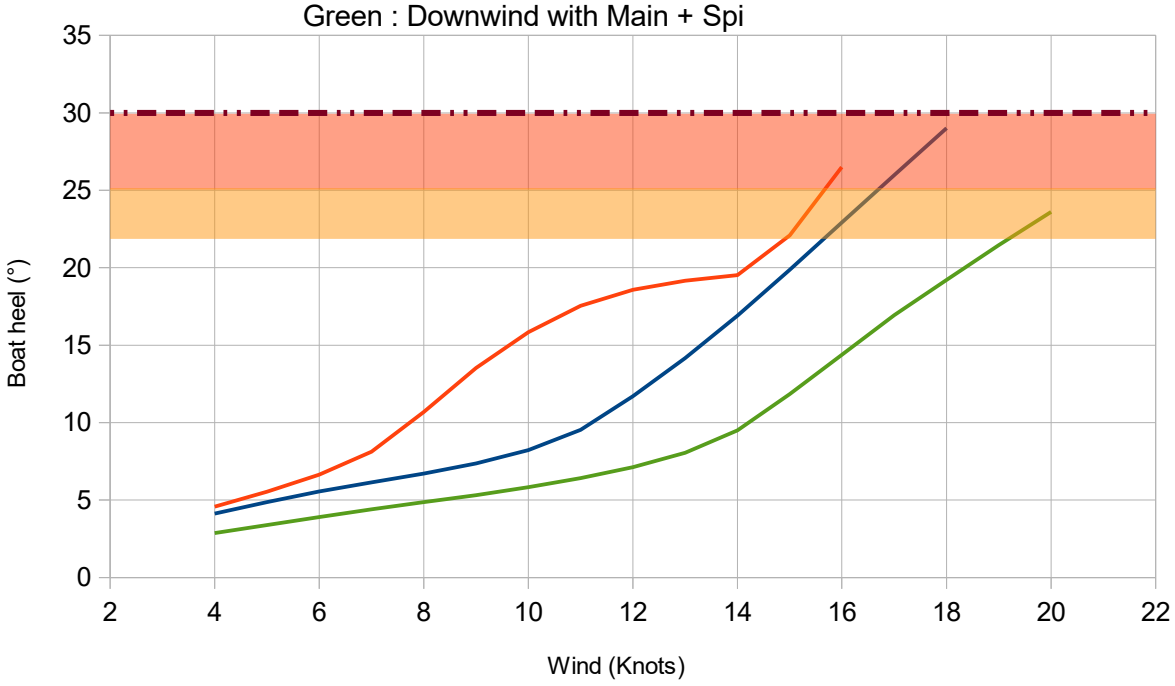
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
6,84	1,75	0,24	2,08	0,53	48,06	7,73	13,27	16,40	3,94	0,86	9,30	40,00	4,72	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,6
0,06224	2,10	1,20	0,00000	0,00	0,00	0,00	0,00766	0,58	0,36	1071	1,26			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
1,373	4,646	5,492		10,86	10,14	9,74								

>>> Output :

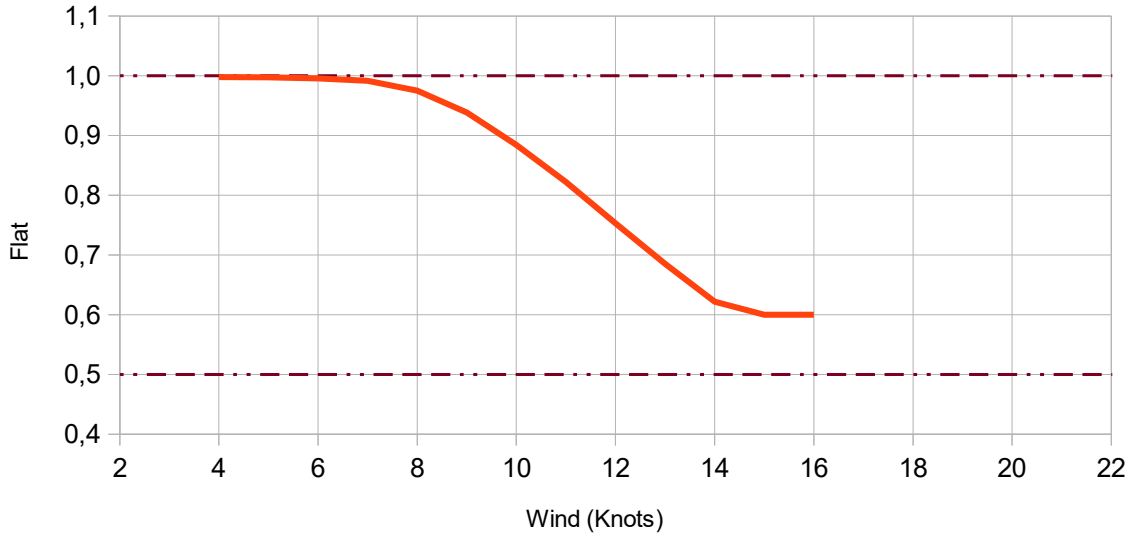


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

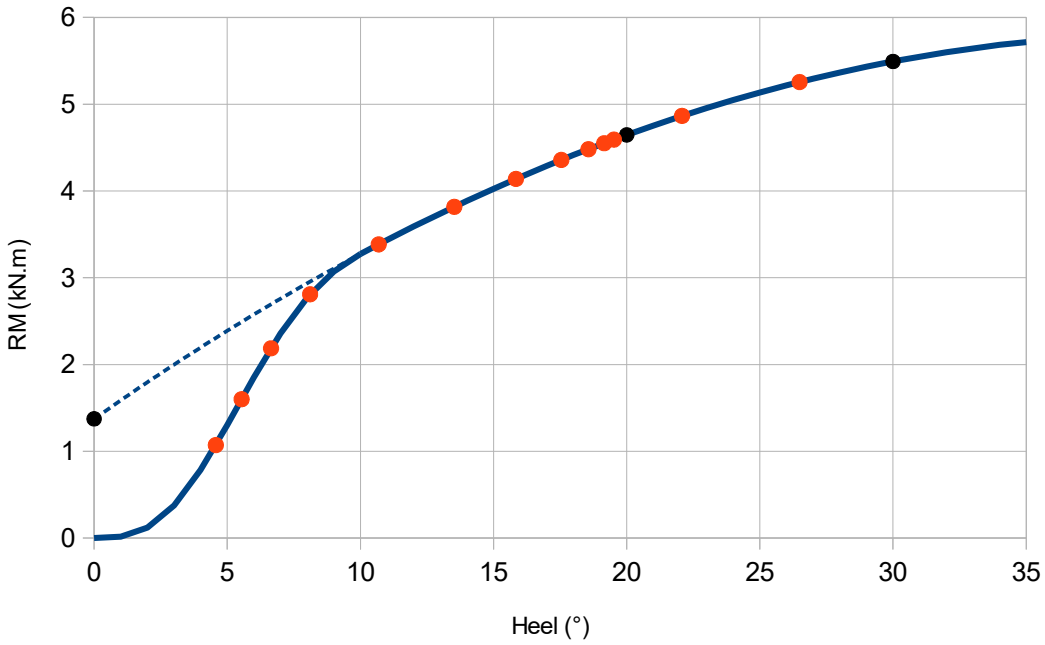


Gene-VPP : Flat optimum when upwind



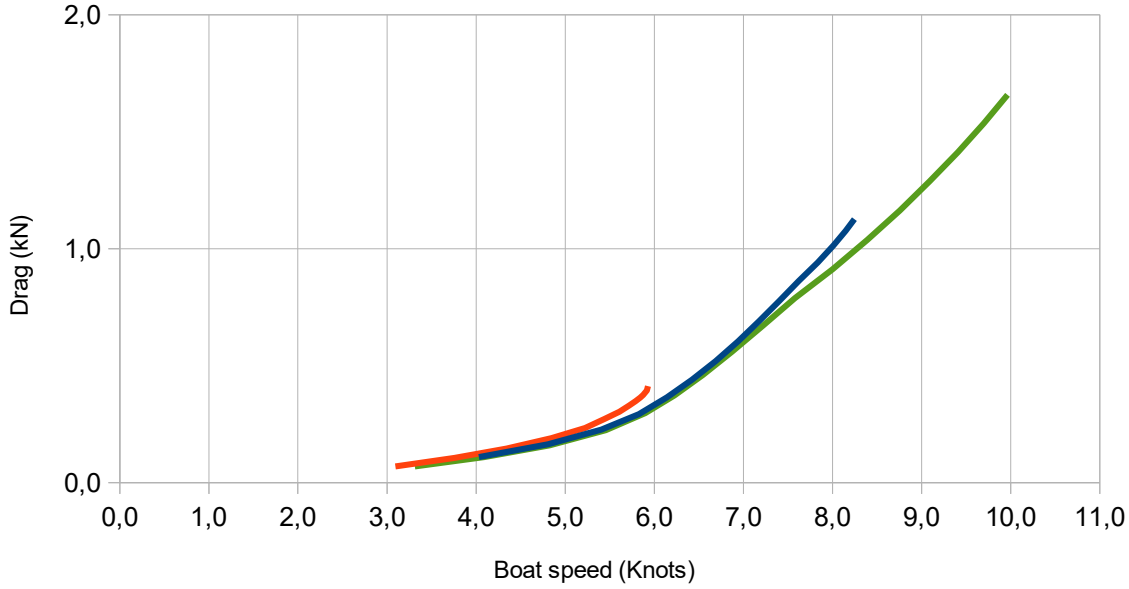
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

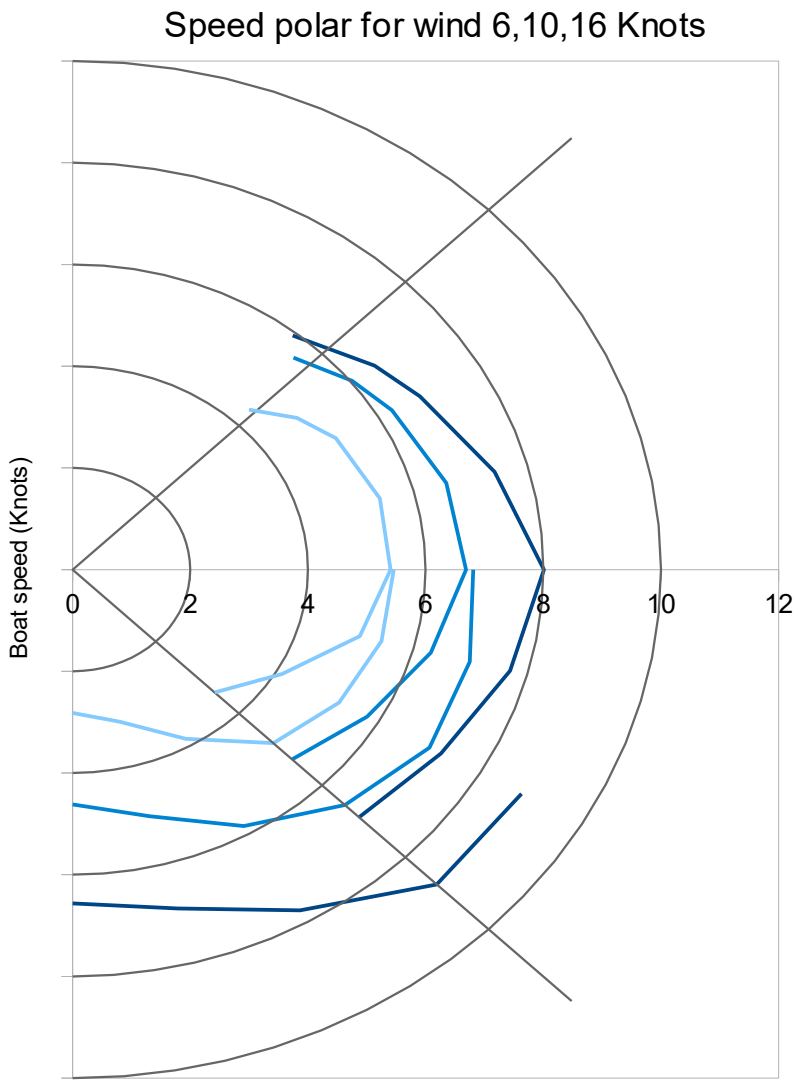


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

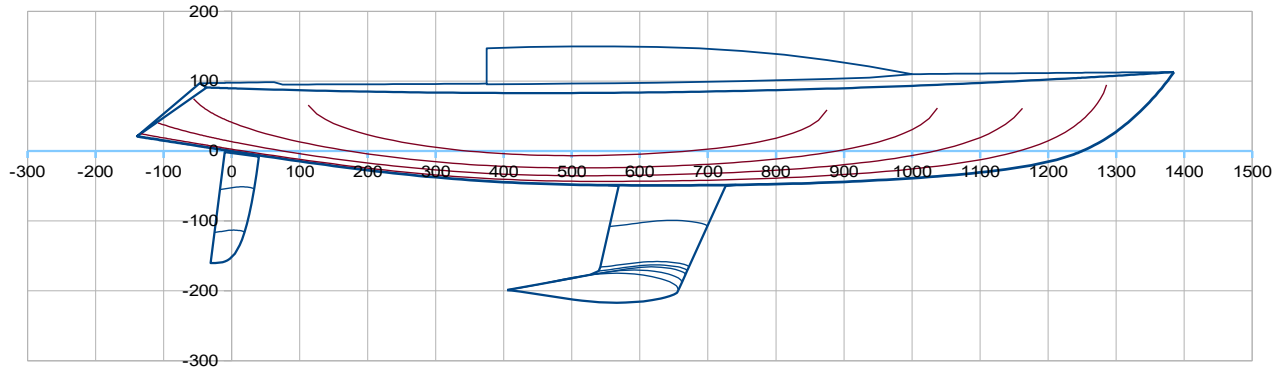


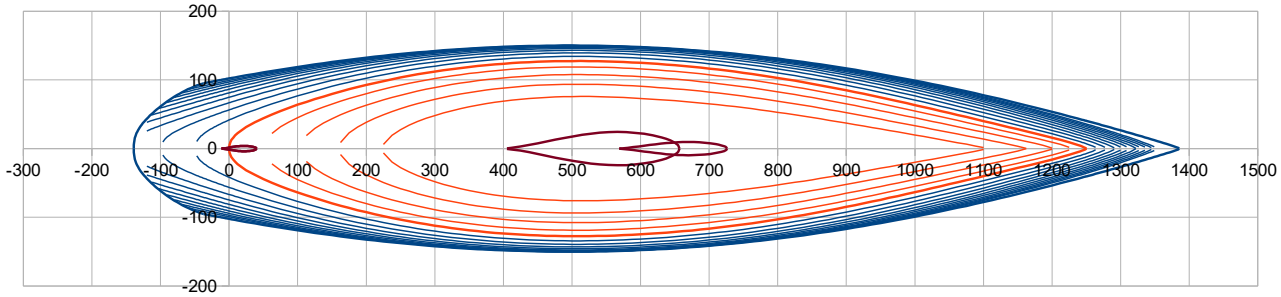
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,34	5,22	5,61	5,79	5,88	5,93	
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,84	5,67	6,03	6,25	6,39	6,52	
60	5,17	5,90	6,27	6,50	6,67	6,82	
75	5,41	6,13	6,58	6,92	7,20	7,42	
90	5,40	6,14	6,69	7,18	7,62	8,01	
105	5,05	5,81	6,31	6,77	7,25	7,70	8,39
120	4,11	5,12	5,78	6,27	6,75	7,23	8,14
135	3,42	4,41	5,28	5,90	6,40	6,89	7,99
With Mainsail + Spi (sym or asym)							
90	5,46	6,29	6,81	7,10			
105	5,43	6,33	6,99	7,48			
120	5,23	6,21	7,01	7,75	8,41	8,81	
135	4,82	5,90	6,55	7,21	8,00	8,75	9,97
150	3,84	4,98	5,82	6,44	7,05	7,74	9,51
165	3,10	4,09	5,02	5,77	6,35	6,90	8,21
180	2,82	3,74	4,62	5,42	6,04	6,57	7,69

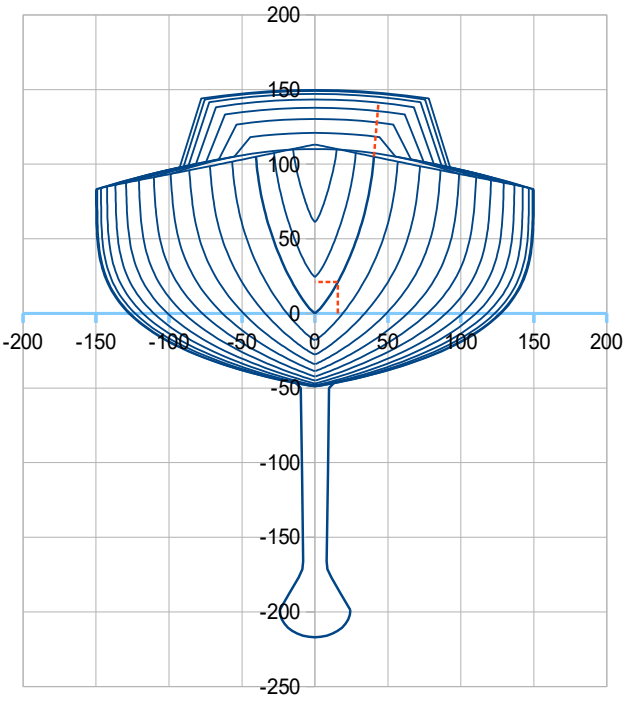


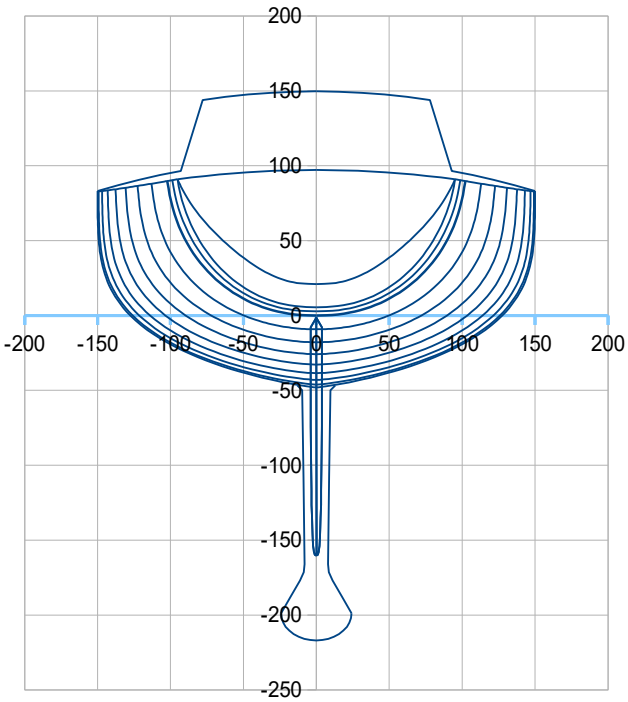
ULDB 50, inspired by the Swede 55 / Knud Reimers

Loa 15,24 m ; Lwl 12,50 m ; B 3,00 m ; Draft 2,17 m ; Light weight : 6057 kg ; Ballast : 2908 kg



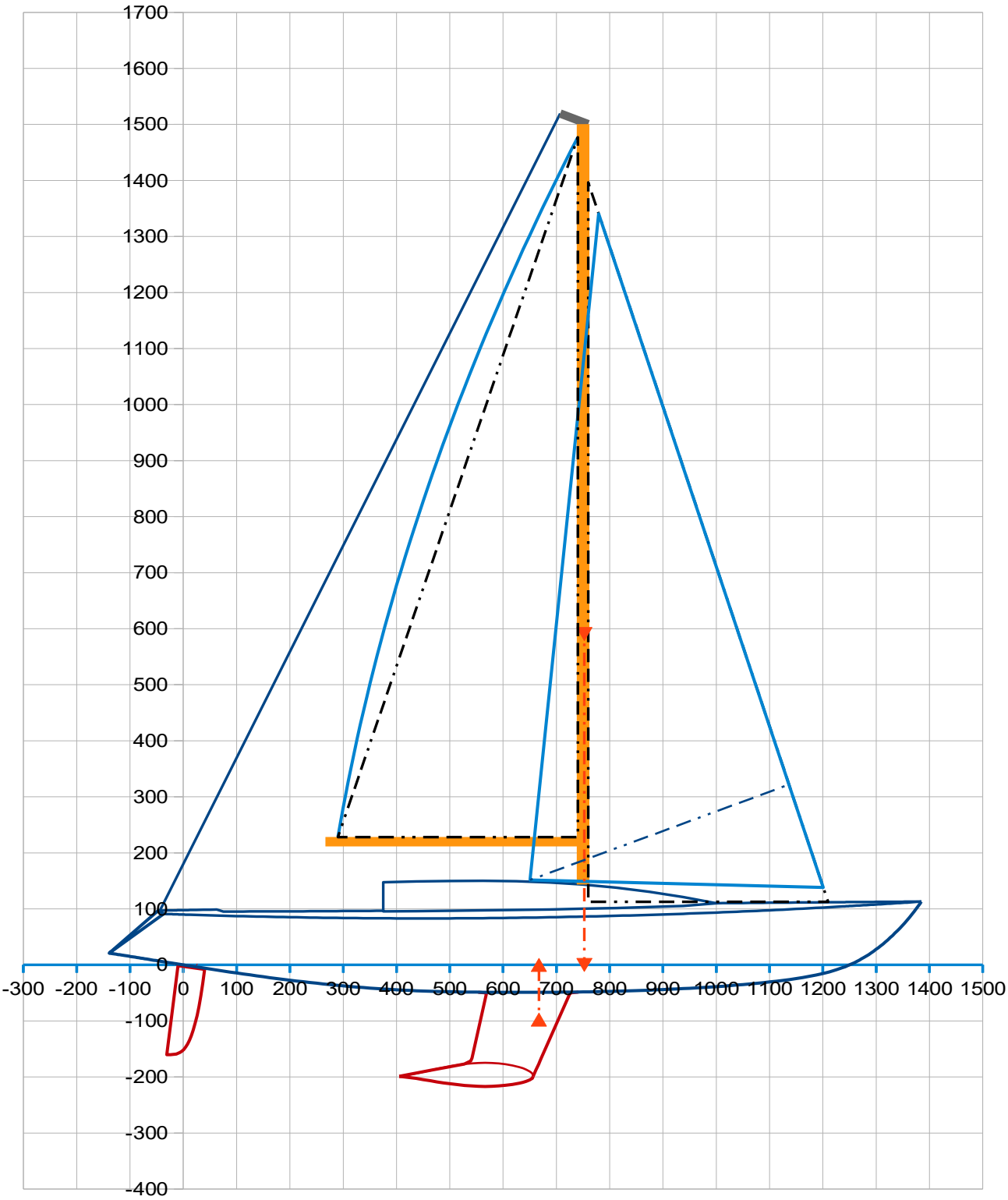






Sailplan :

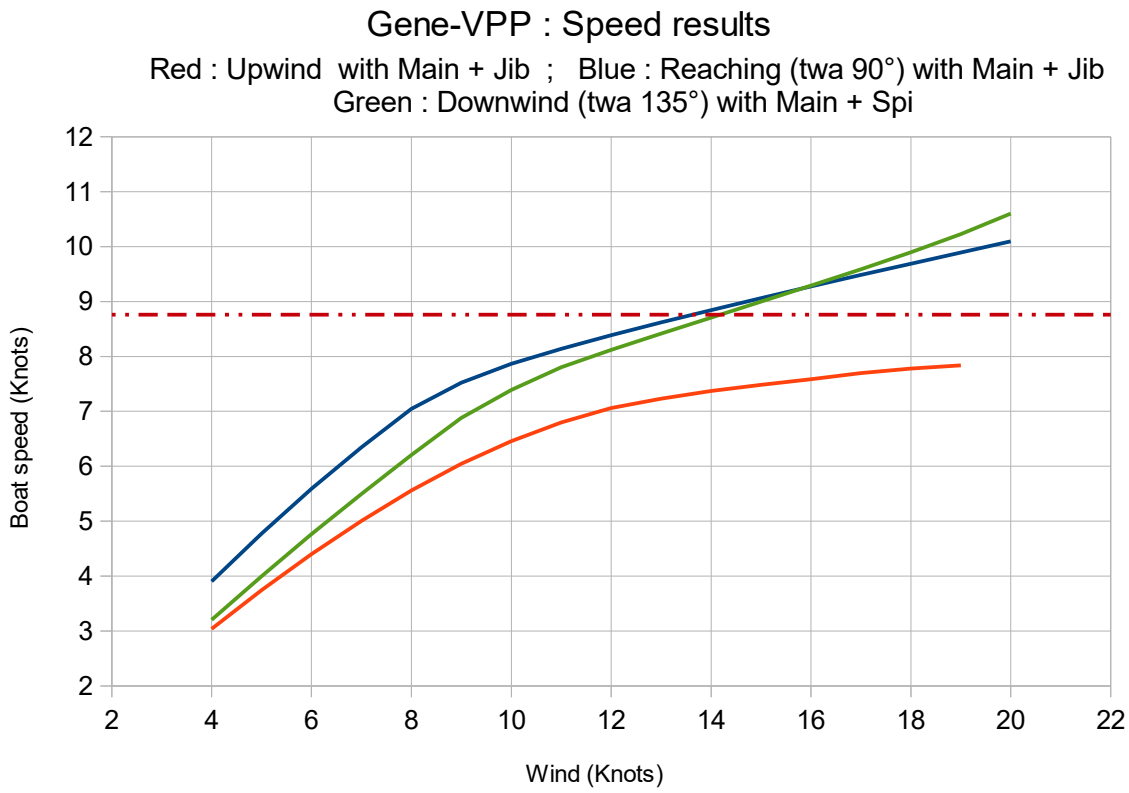
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	33,74	33,47	6,09	1,12	14,77	80,00	7,31



Gene-VPP input data for ULDB 50 with a loading of 140 kg (crew sit windward) :

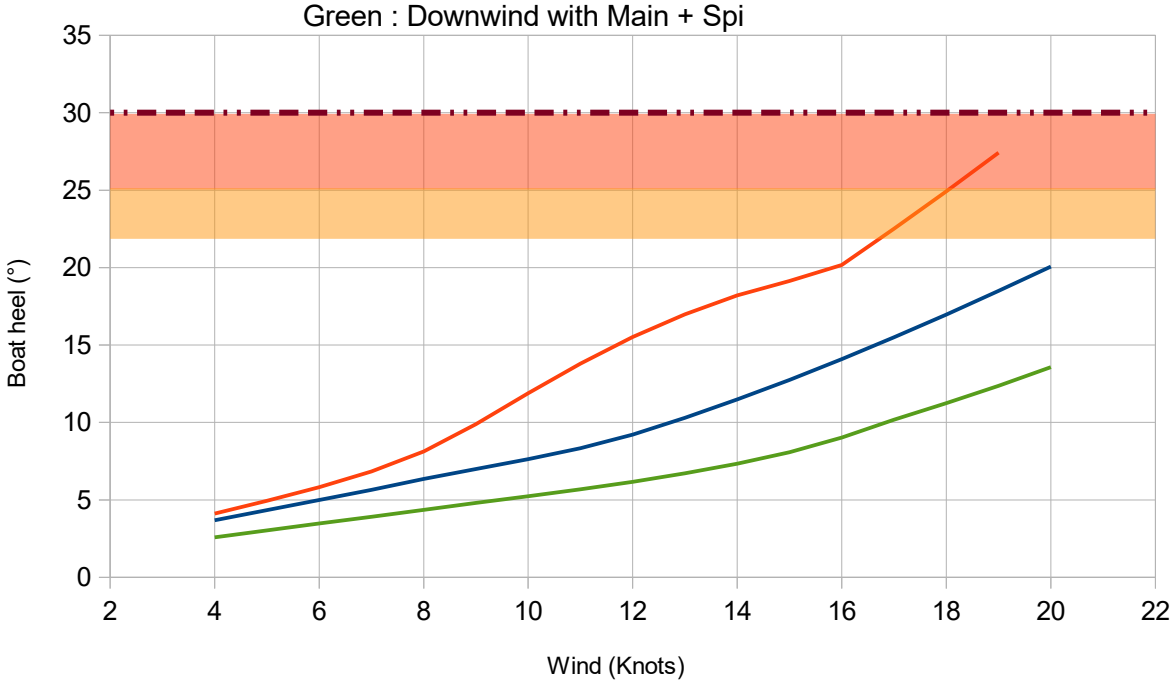
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
12,57	2,56	0,50	3,00	0,55	46,93	21,75	33,74	33,47	6,09	1,12	14,77	80,00	7,31	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,19097	3,74	1,57	0,20737	3,34	2,58	0,48	0,03102	1,46	0,50	6197	2,18			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
1,373	29,733	40,380		32,28	31,27	30,76								

>>> Output :

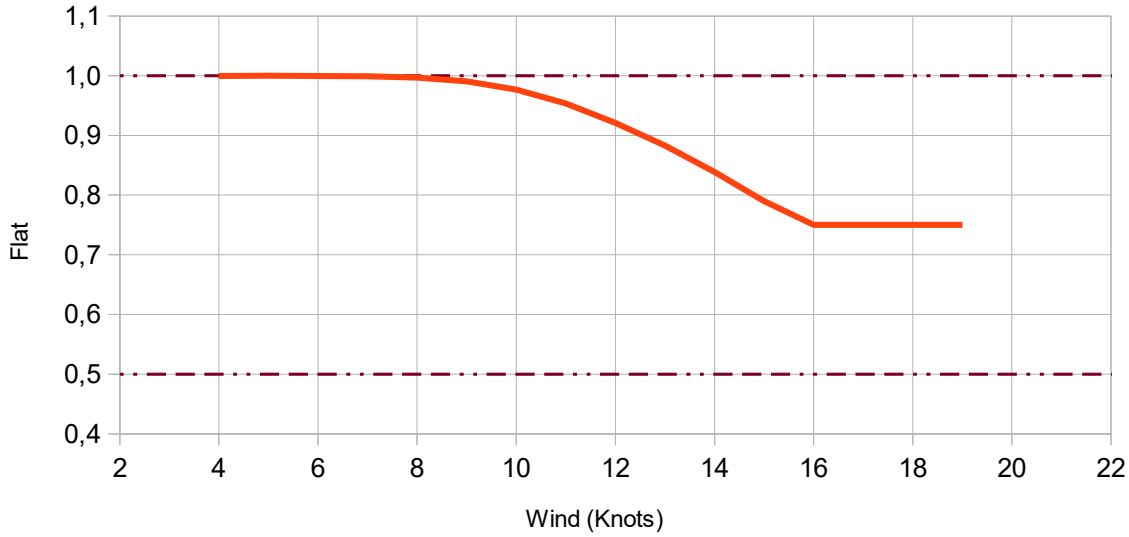


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

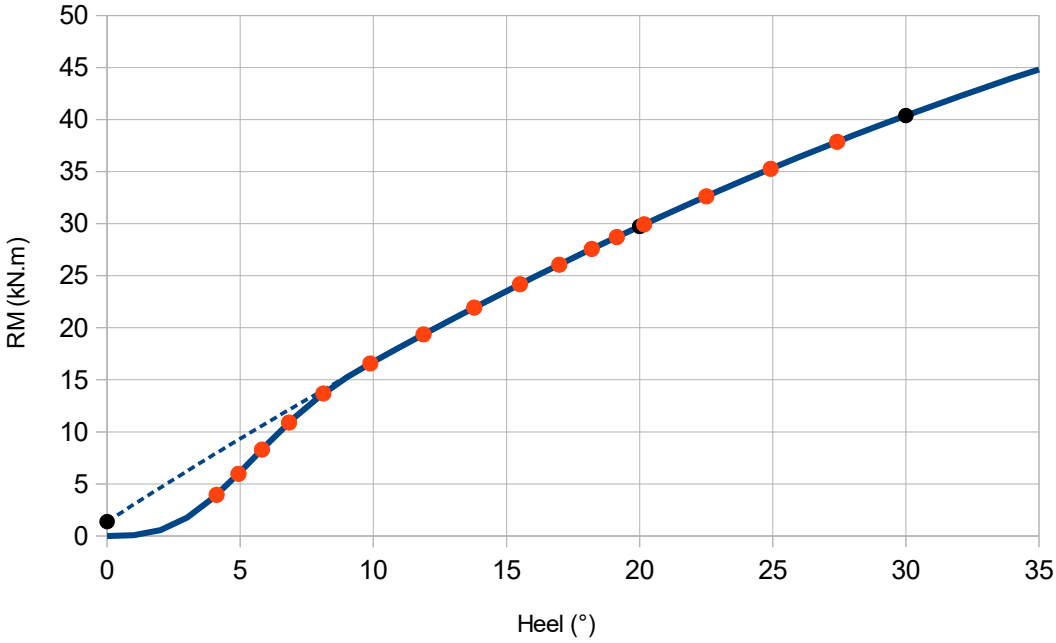


Gene-VPP : Flat optimum when upwind



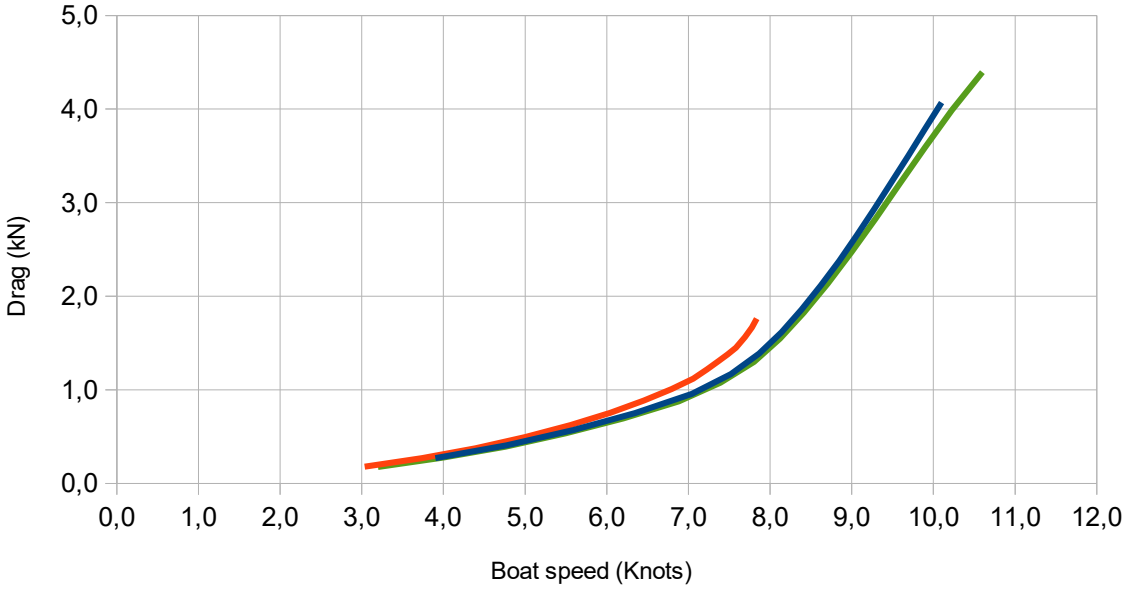
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

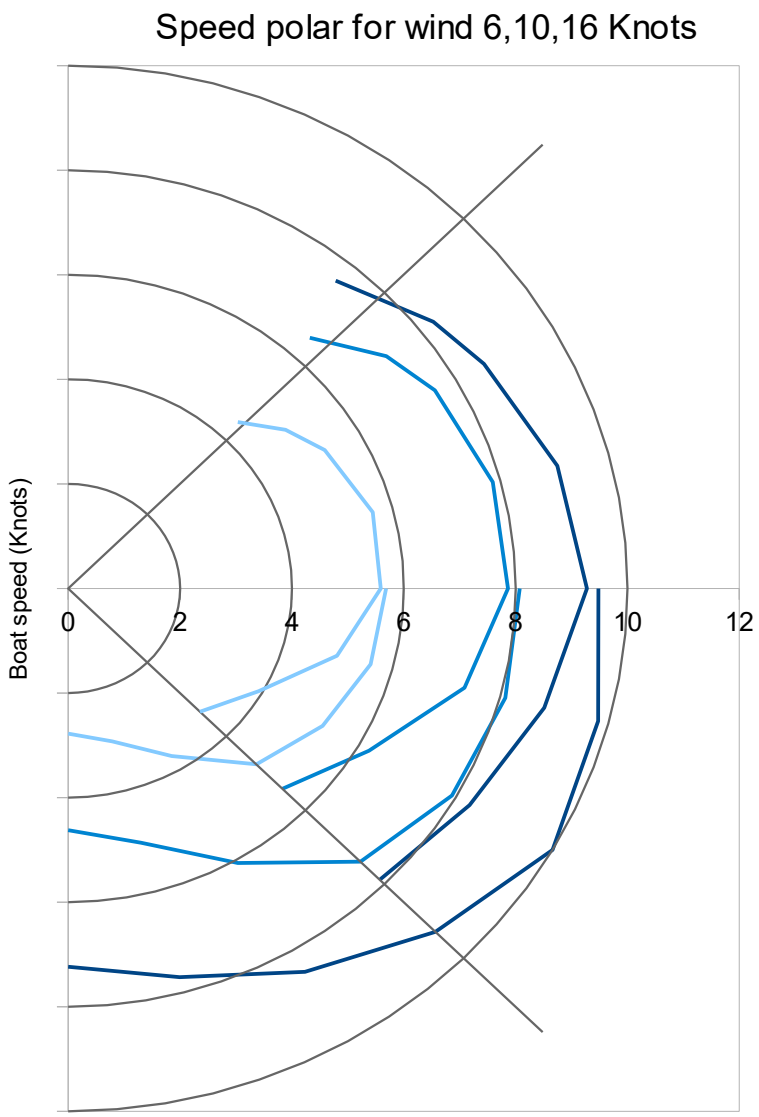


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

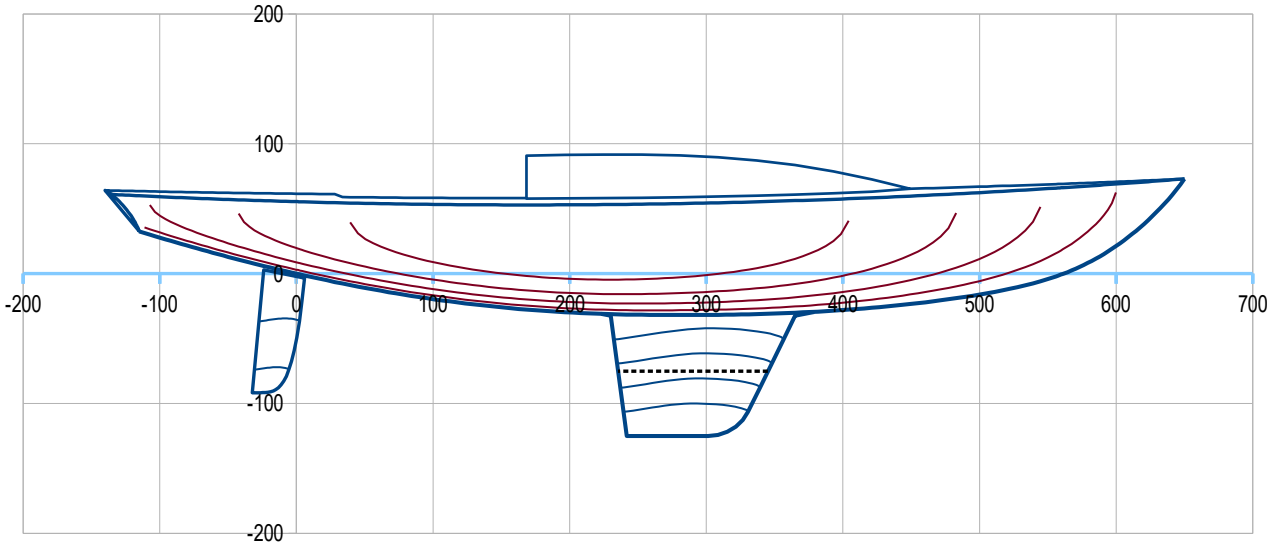


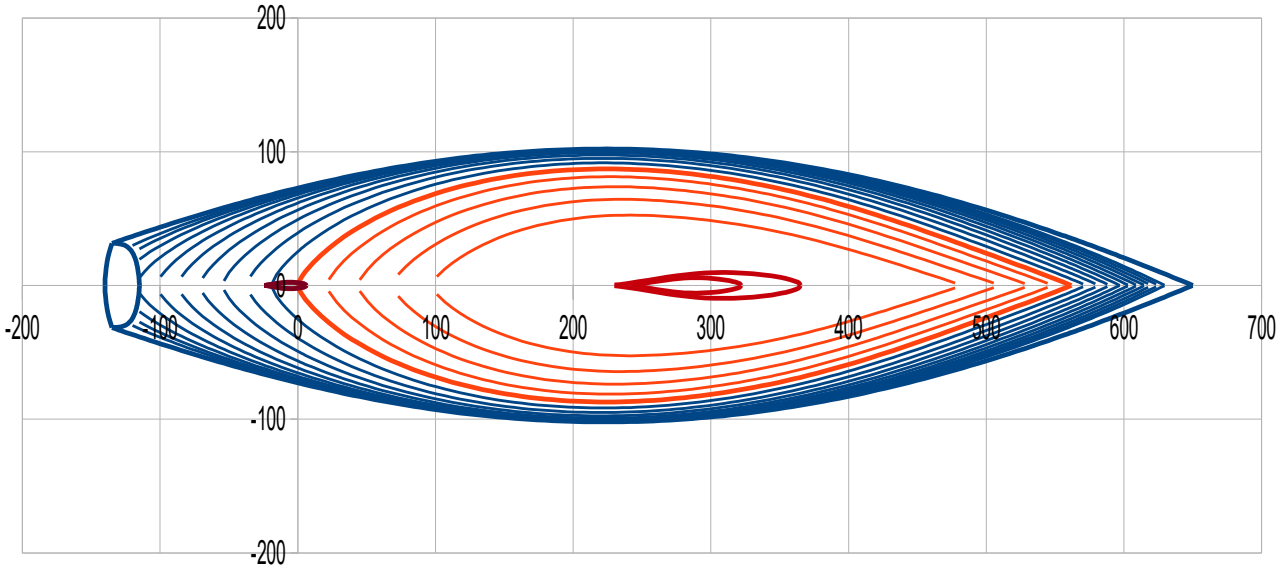
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,40	5,56	6,45	7,06	7,37	7,58	#DIV/0 !
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,93	6,25	7,22	7,76	8,06	8,28	
60	5,29	6,68	7,57	8,03	8,34	8,58	
75	5,64	7,07	7,86	8,33	8,72	9,06	9,75
90	5,59	7,04	7,87	8,39	8,84	9,27	10,10
105	4,97	6,30	7,34	7,95	8,40	8,81	9,59
120	3,93	5,10	6,21	7,16	7,82	8,29	9,12
135	3,33	4,39	5,42	6,37	7,24	7,88	8,79
With Mainsail + Spi (sym or asym)							
90	5,68	7,22	8,07	8,63	9,10	9,48	
105	5,60	7,17	8,09	8,73	9,29	9,81	
120	5,25	6,84	7,93	8,65	9,32	10,00	11,20
135	4,76	6,20	7,39	8,12	8,71	9,29	10,60
150	3,70	4,91	6,07	7,14	7,90	8,47	9,58
165	3,03	4,04	5,03	6,00	6,95	7,70	8,76
180	2,77	3,71	4,62	5,53	6,41	7,23	8,39

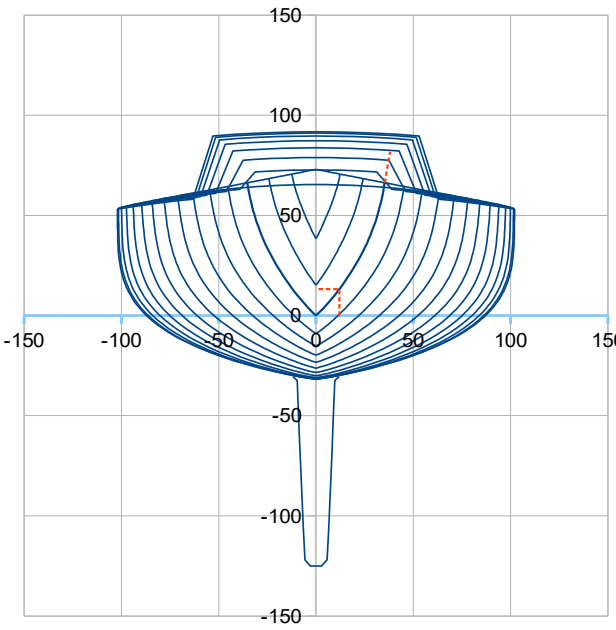


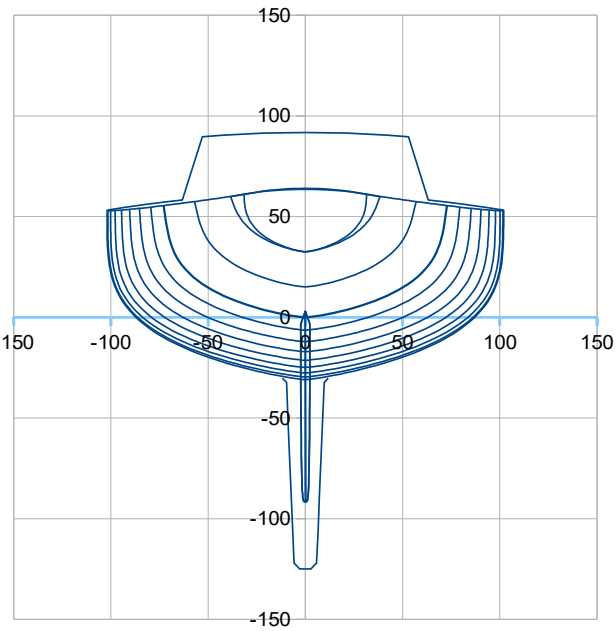
DH17, inspired by the Drak Harbour 17,5 / B.B. Crowninshield

Loa 7,90 m ; Lwl 5,62 m ; B 2,04 m ; Draft 1,25 m ; Light weight : 1214 kg ; Ballast : 500 kg



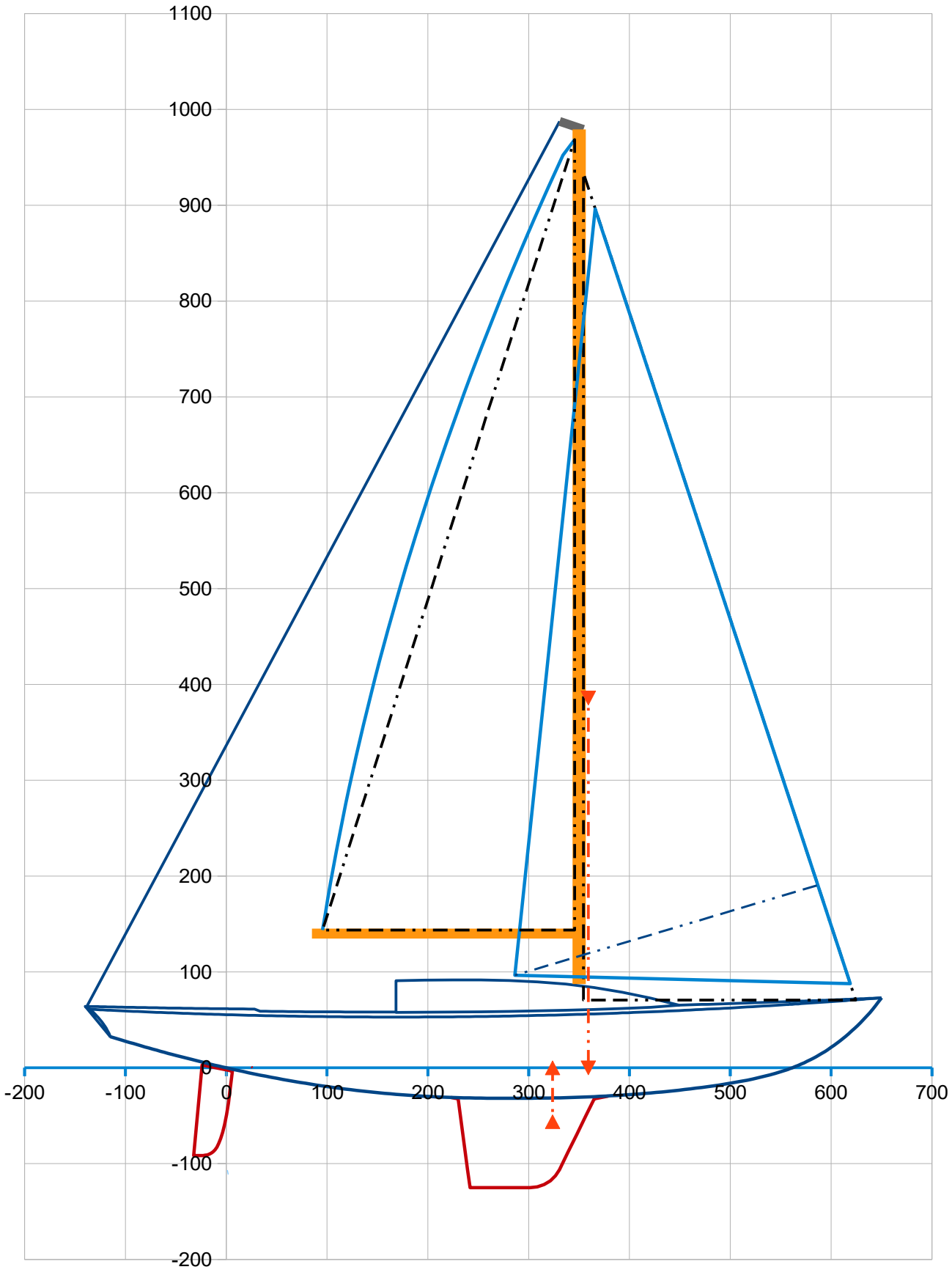






Sailplan :

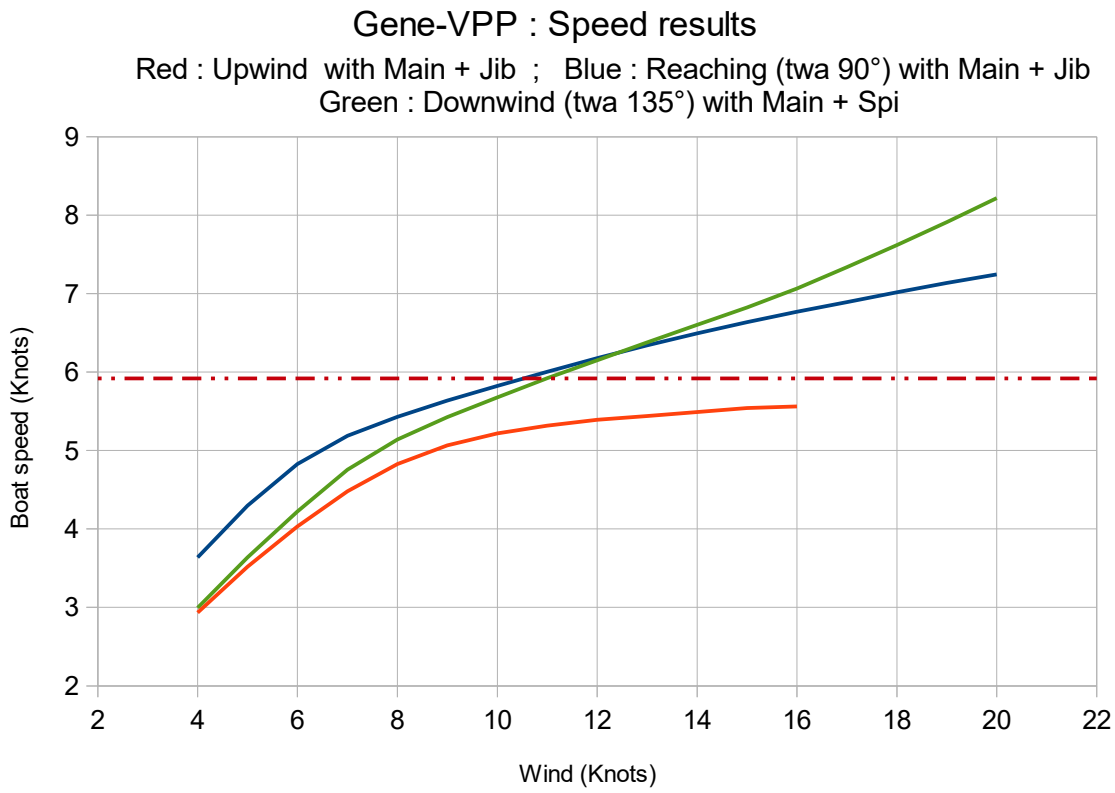
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
0 by default	**12,50**	**13,61**	**3,99**	**0,71**	**9,69**	**30,00**	**4,79**



Gene-VPP input data for DH17 with a loading of 150 kg (crew sit windward) :

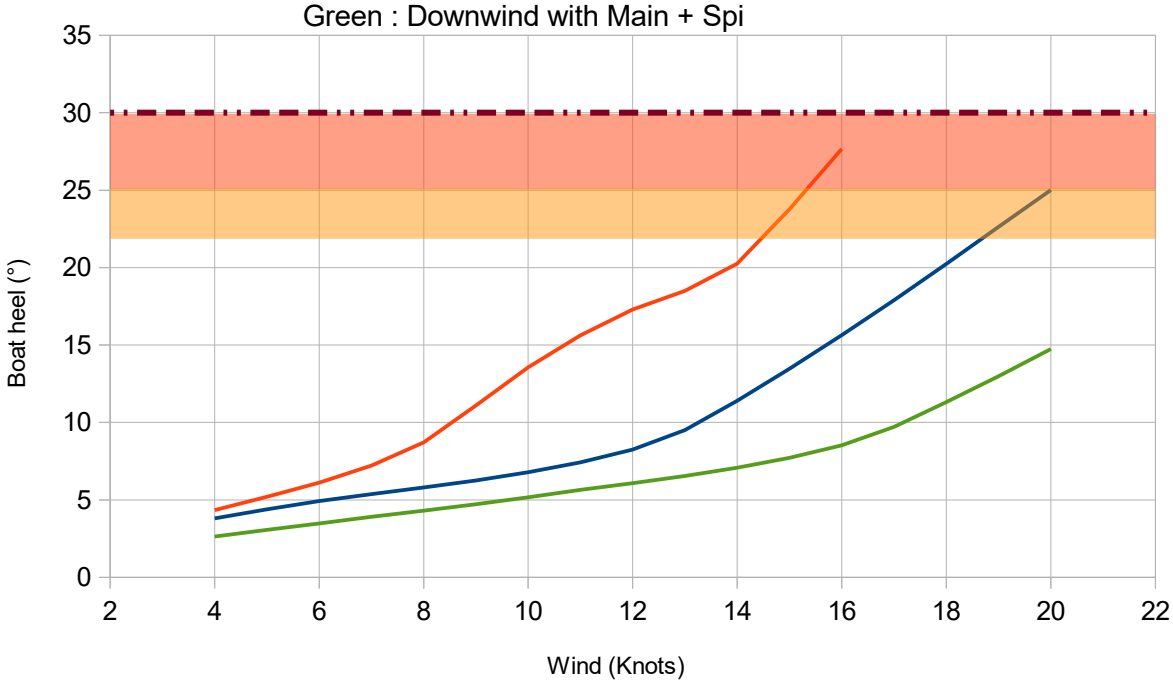
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
5,74	1,79	0,34	2,04	0,54	46,37	7,09	12,50	13,61	3,99	0,71	9,69	30,00	4,79	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,10580	2,09	1,35	0,00000	0,00	0,00	0,00	0,00665	0,52	0,30	1364	1,27			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
1,177	4,711	5,842		10,30	9,95	9,69								

>>> Output :

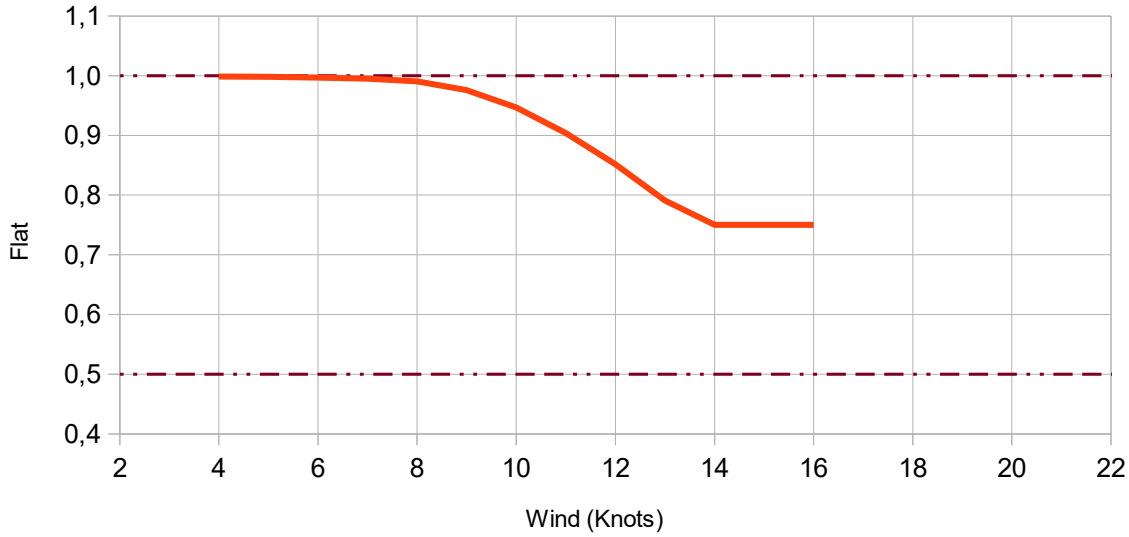


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

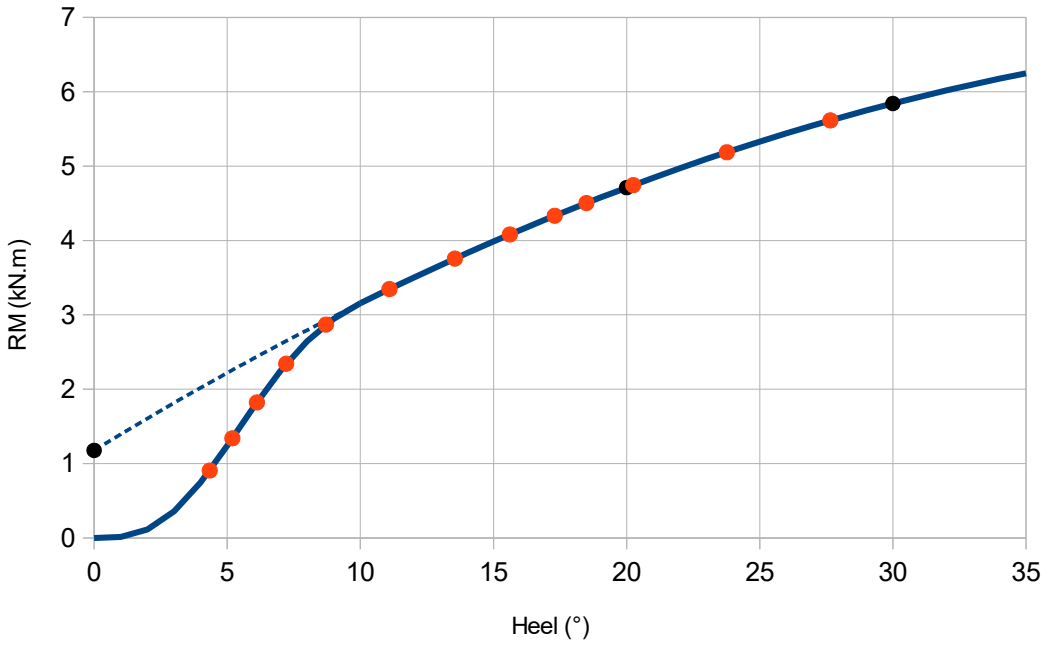


Gene-VPP : Flat optimum when upwind



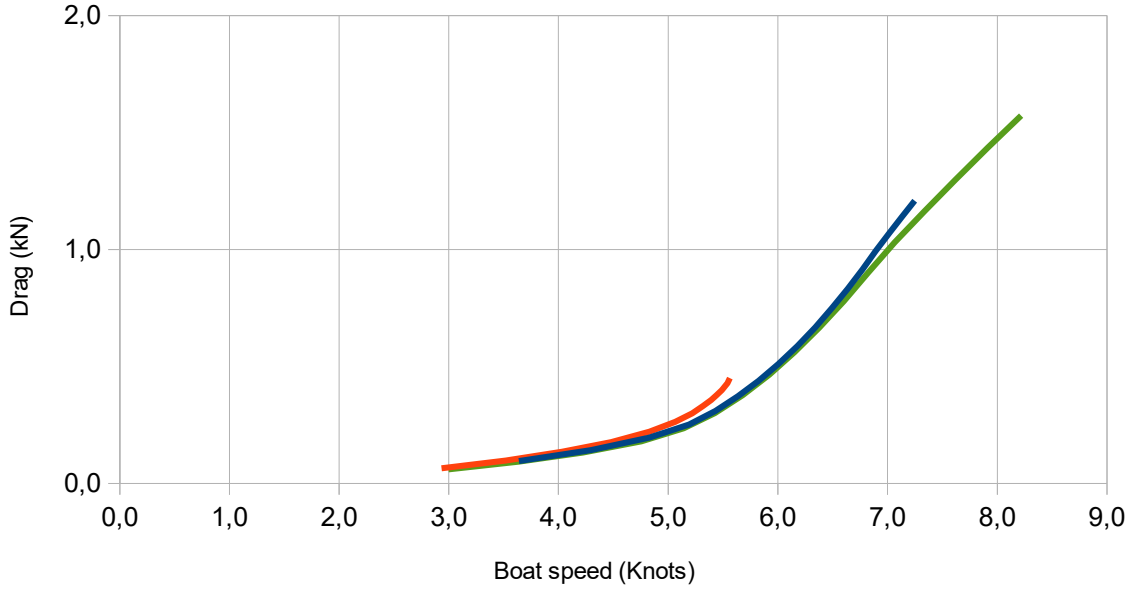
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind

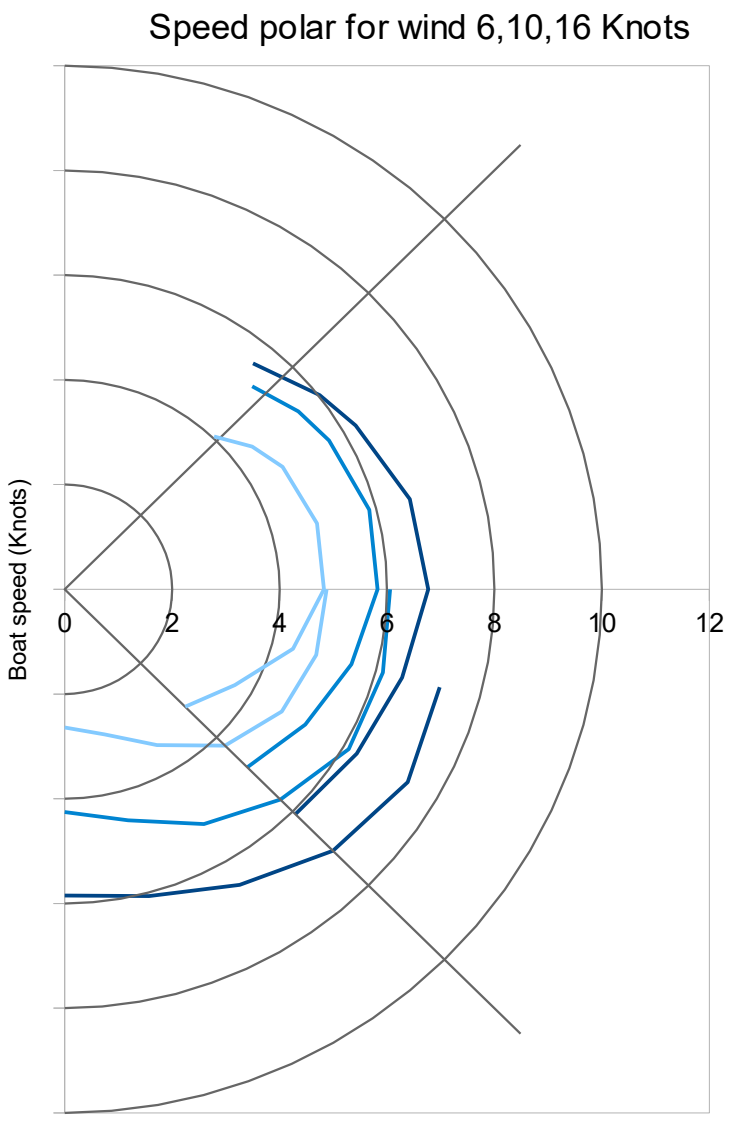


Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi

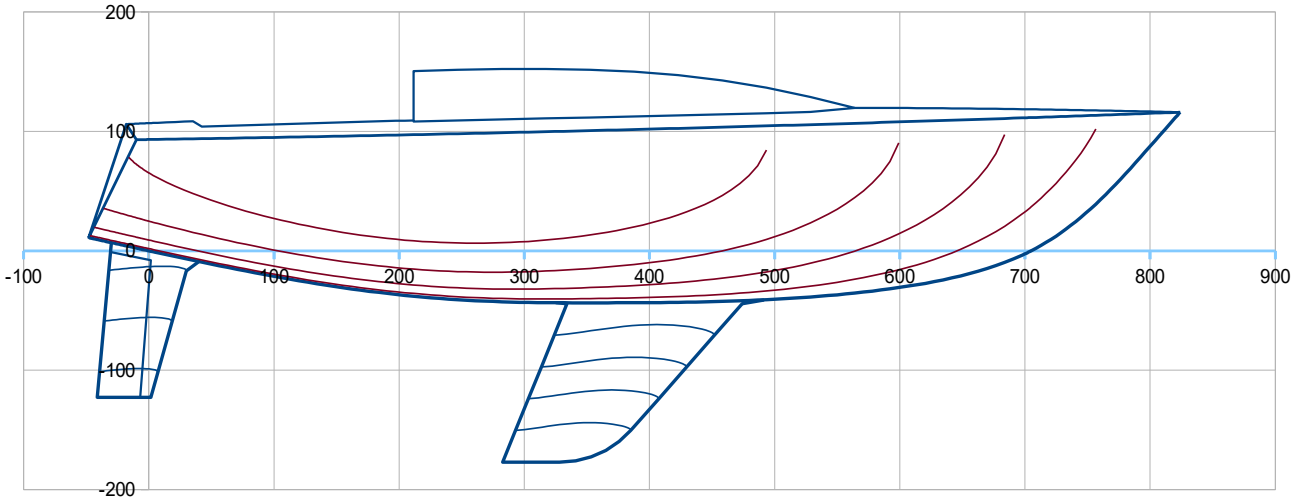


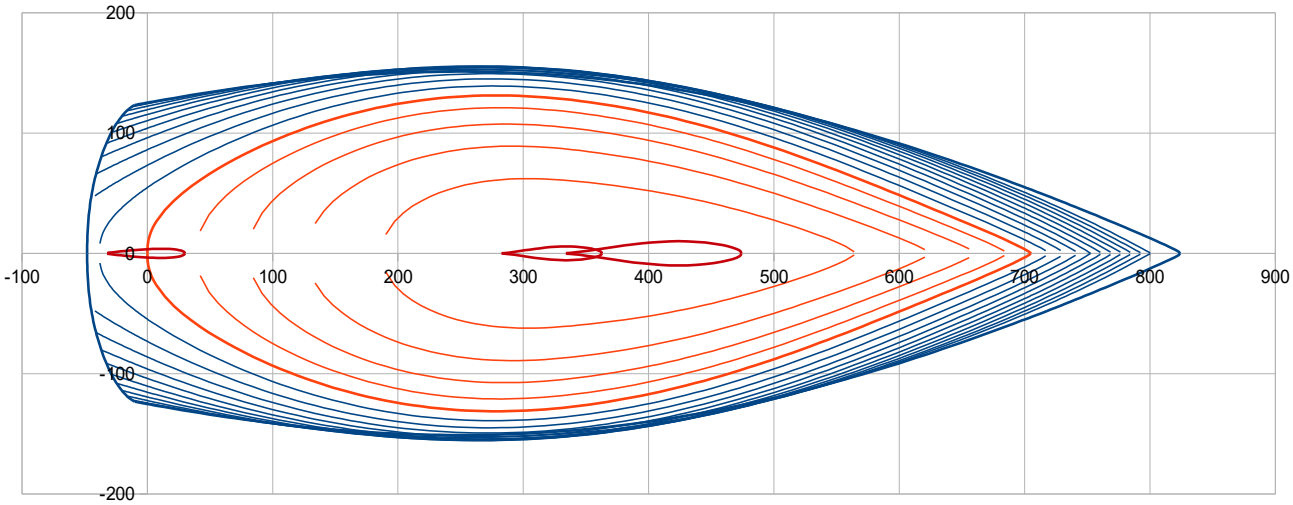
Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	4,03	4,83	5,22	5,39	5,49	5,56	#DIV/0 !
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,43	5,18	5,52	5,73	5,88	6,02	
60	4,68	5,34	5,68	5,91	6,08	6,26	
75	4,86	5,48	5,87	6,16	6,41	6,65	
90	4,83	5,43	5,82	6,18	6,49	6,77	7,25
105	4,40	5,13	5,53	5,87	6,20	6,51	6,99
120	3,66	4,54	5,17	5,57	5,93	6,28	6,87
135	3,17	4,04	4,81	5,33	5,72	6,07	6,75
With Mainsail + Spi (sym or asym)							
90	4,88	5,59	6,06	6,41	6,65		
105	4,85	5,59	6,14	6,57	6,92	7,23	
120	4,67	5,50	6,10	6,57	6,95	7,37	
135	4,22	5,14	5,68	6,15	6,60	7,07	8,22
150	3,44	4,42	5,18	5,67	6,10	6,52	7,47
165	2,87	3,75	4,57	5,21	5,66	6,07	6,84
180	2,64	3,47	4,25	4,94	5,45	5,85	6,60

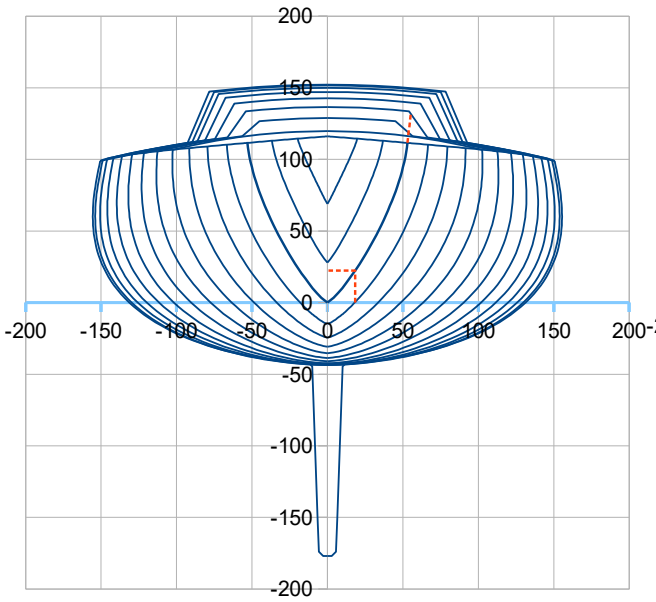


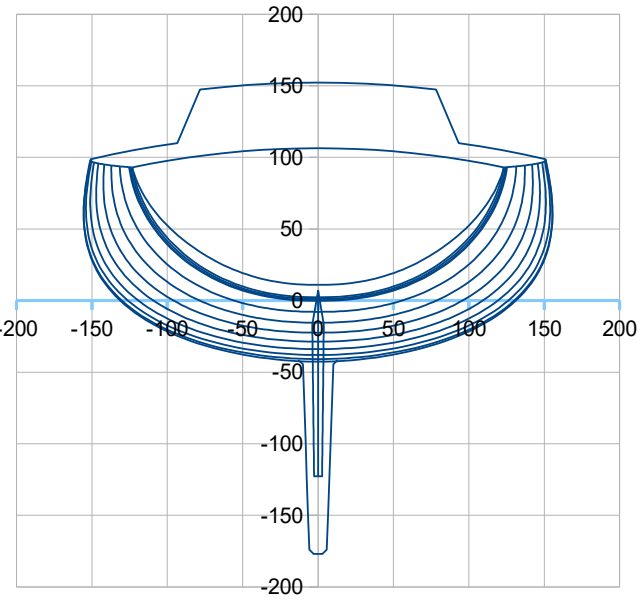
AL29, inspired by Aloa 29 / J.M. Finot

Loa 8,72 m ; Lwl 7,05 m ; B 3,11 m ; Draft 1,77 m ; Displacement : 3341kg ; Ballast : 1127 kg



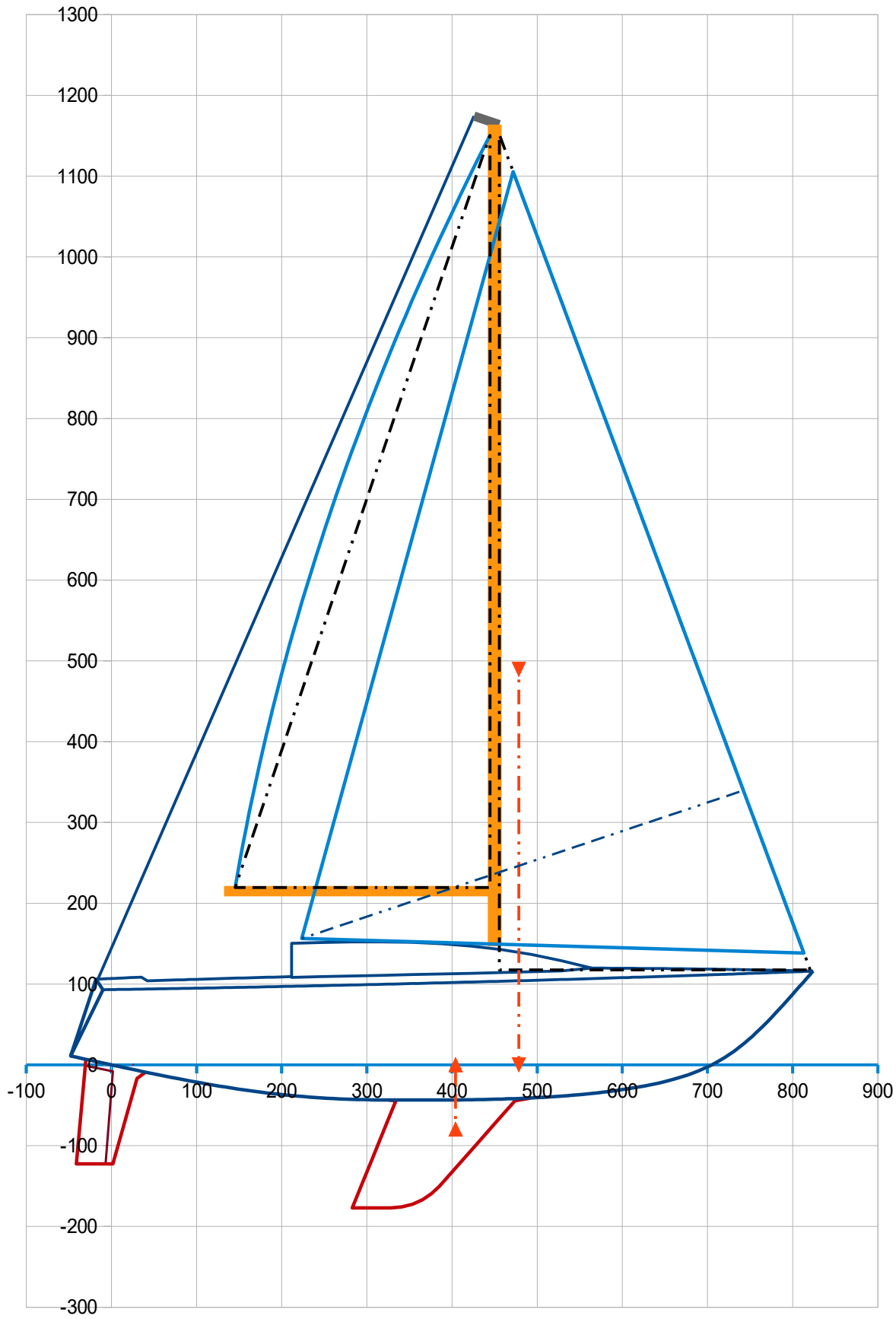






Sailplan :

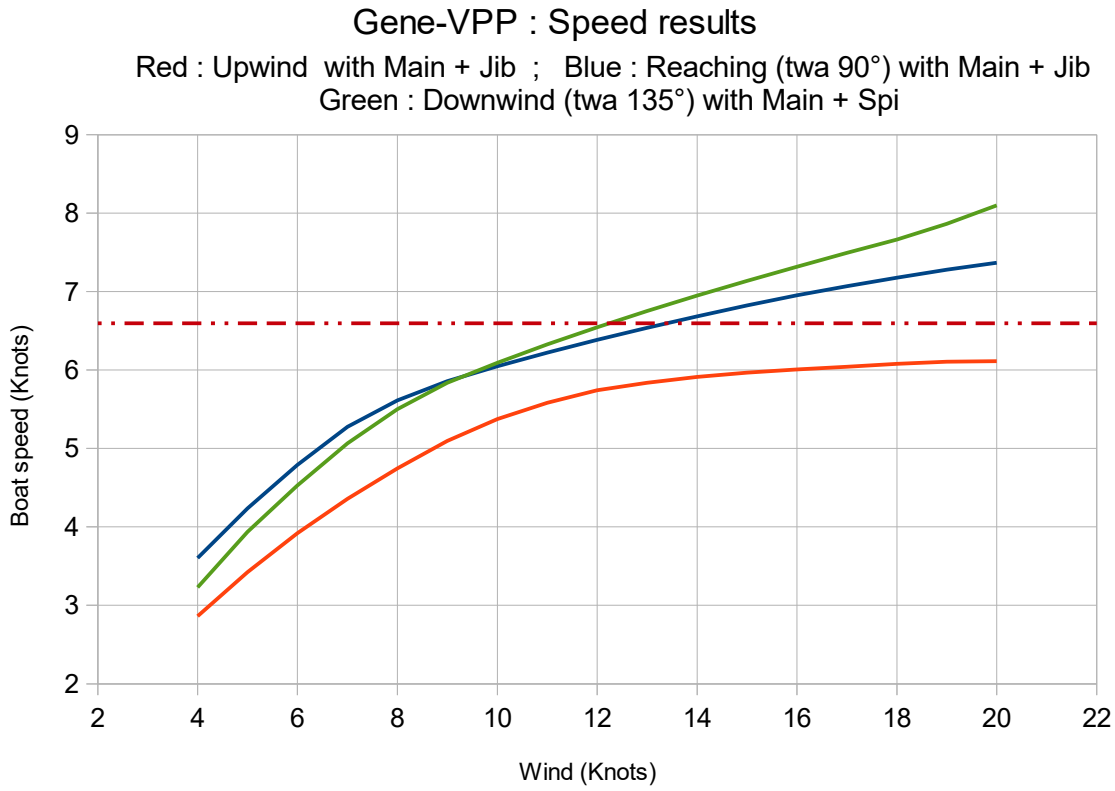
For Gene-VPP :	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)
	16,71	29,33	4,98	1,18	11,51	70,00	5,97



Gene-VPP input data for AL29 with a loading of 300 kg (crew sit windward) :

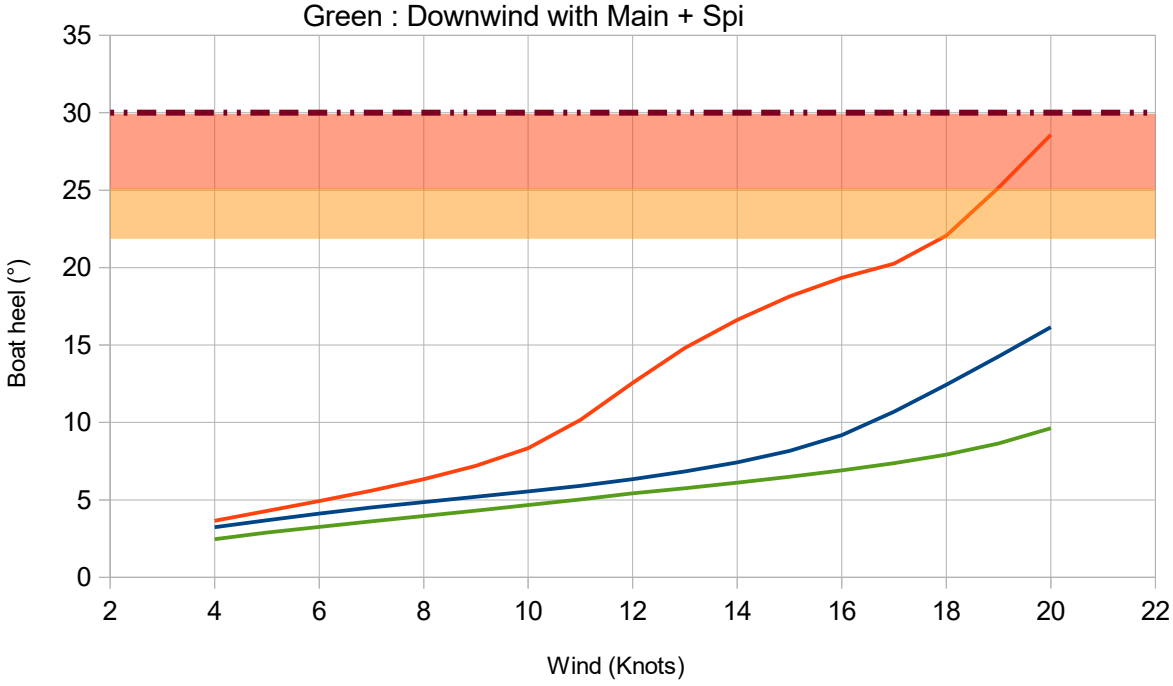
For Gene-VPP, hull body data with loading and at equilibrium upright (put Heel = 0°)							From the Sailplan sheet :							
Lwl (m)	Bwl (m)	Tc (m)	Bmax (m)	Cp hull	LCB hull(%)	Sf (m2)	Main (m2)	Jib (m2)	ZCE (m)	Zdeck (m)	Zmast (m)	Spi (m2)	ZCE spi (m)	Reefing
7,12	2,66	0,46	3,02	0,56	47,34	12,87	16,71	29,33	4,98	1,18	11,51	70,00	5,97	1,00
Keel wing			Keel bulb (if no bulb, put Vol. = 0 and Sw = 0)				Rudder			Displacement and draft at design load			sym0 asym1	Flat mini
Vol. (m3)	Sw (m2)	Chord (m)	Vol. (m3)	Sw (m2)	L (m)	D (m)	Vol. (m3)	Sw (m2)	Chord (m)	Disp. (kg)	Draft (m)		0	0,75
0,15445	3,04	1,40	0,00000	0,00	0,00	0,00	0,02822	1,31	0,60	3641	1,79			
Righting Moment RM (kN.m)				Wetted surface Sw (m2)										
RM0°	RM20°	RM30°		Sw0°	Sw20°	Sw30°								
4,120	16,101	19,735		18,39	17,79	17,33								

>>> Output :

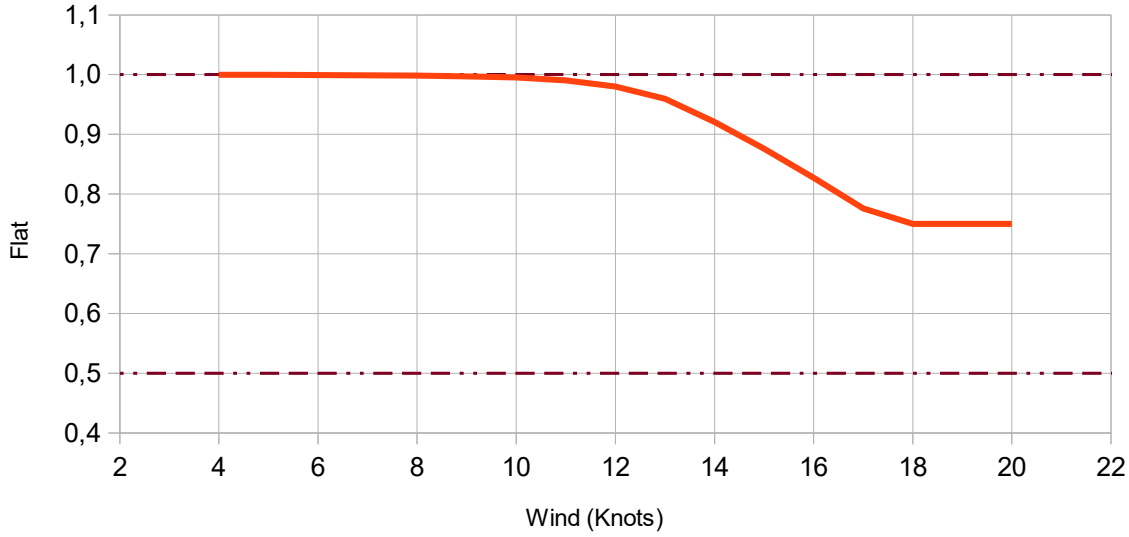


Gene-VPP : Heel results

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib
Green : Downwind with Main + Spi

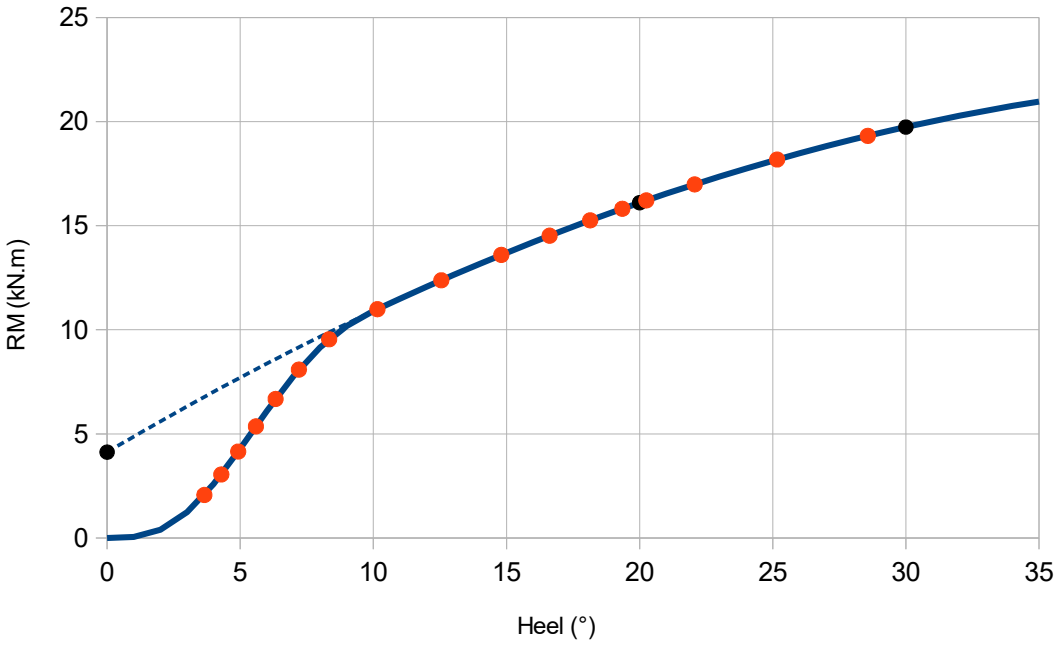


Gene-VPP : Flat optimum when upwind



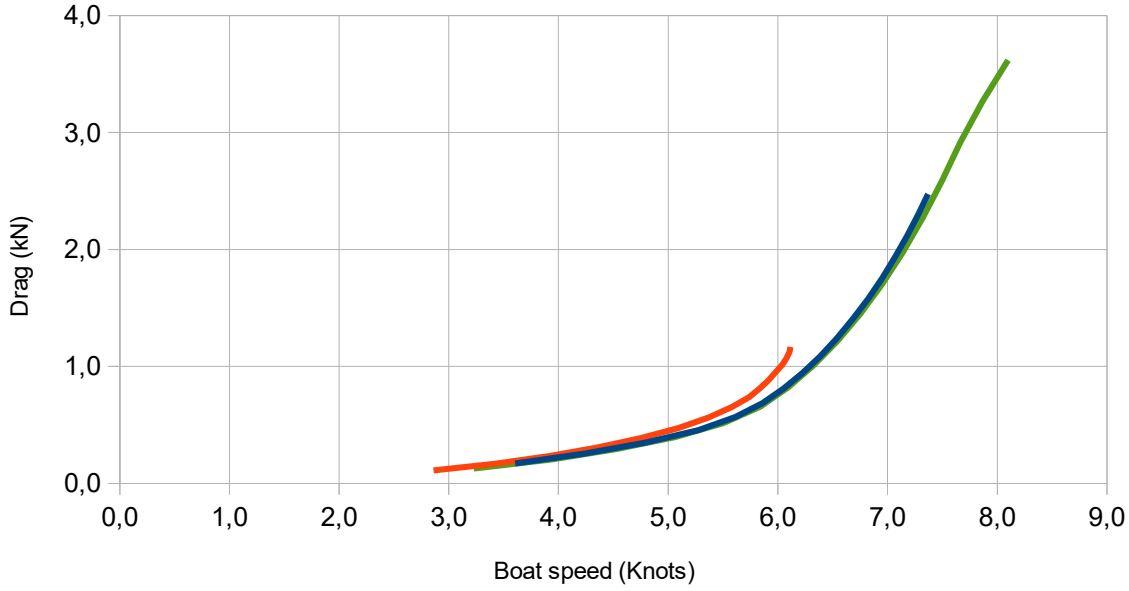
Gene-VPP : Righting Moment RM versus heel angle

Black points : RM input values ; Blue : RM programmed function
Red points : Gene-VPP output when upwind



Gene-VPP : Drag versus boat speed

Red : Upwind with Main + Jib ; Blue : Reaching with Main + Jib or Code 0
Green : Downwind with Main + Spi



Upwind on calm water							
Wind (Knts)	**6**	**8**	**10**	**12**	**14**	**16**	**20**
Twa (°)	43,6	42,9	42,0	41,0	40,0	39,1	38,0
Vboat (Knts)	3,92	4,75	5,37	5,74	5,91	6,01	6,11
With Mainsail + Jib (or Genoa)							
Twa (°)							
52	4,32	5,23	5,80	6,11	6,32	6,46	6,67
60	4,58	5,45	5,97	6,29	6,51	6,67	6,91
75	4,83	5,68	6,12	6,47	6,74	6,94	7,29
90	4,79	5,61	6,05	6,38	6,68	6,95	7,37
105	4,34	5,19	5,76	6,11	6,42	6,70	7,18
120	3,67	4,53	5,29	5,81	6,17	6,49	7,05
135	3,22	4,08	4,85	5,50	5,96	6,30	6,89
With Mainsail + Spi (sym or asym)							
90	4,96	5,87	6,39	6,78	7,05	7,23	
105	5,00	5,93	6,49	6,94	7,29	7,56	
120	4,87	5,87	6,48	6,95	7,30	7,60	8,22
135	4,53	5,50	6,09	6,55	6,95	7,32	8,10
150	3,67	4,66	5,50	6,05	6,47	6,85	7,53
165	3,04	3,94	4,78	5,50	6,01	6,41	7,10
180	2,79	3,65	4,45	5,19	5,78	6,19	6,89