

J24 VMG Chart

Optimum VMG for J24 from IMS certificate (converted to apparent wind)

Downwind

Apparent Wind		Boat		True Wind		Gybing
Speed	Angle	Speed	VMG	Speed	Angle	Angle
3.8	99	4.07	3.15	6	141	78
4.8	111	4.87	4.02	8	146	68
5.5	142	5.1	4.8	10	161	38
6.6	157	5.6	5.5	12	168	24
8	168	6	6	14	173	14
9.6	170	6.4	6.37	16	174	12
13	170	7.19	7.14	20	173	14

Note: Downwind cliff between VTWs

8 <142-111 = 31 degrees BAW> 10

10 <157-142 = 15 degrees BAW> 12

VTWs 14-20 essentially same BAW~170

Apparent wind angle + gybing angle = 177-184, gybe when wind fly points at mark.

Upwind

Apparent Wind		Boat		True Wind		Tacking	Heel
Speed	Angle	Speed	VMG	Speed	Angle	Angle	Angle
9.3	29	4.2	2.8	6	49	98	3
11.9	29.3	5	3.4	8	47.2	94.4	6
14.3	30.2	5.3	3.7	10	45.8	91.6	12
16.4	31	5.5	3.9	12	44.7	89.4	15
18.4	32	5.57	4	14	44.2	88.4	17
20.4	33.2	5.6	4.02	16	44.2	88.4	18
24.3	35.9	5.66	3.98	20	45.4	90.8	19

Note: Heel based on crew weight of 765 lbs

Terms:

VTW = Velocity True Wind

BTW = Bow angle to True Wind

VAW = Velocity of Apparent Wind

BAW = Bow angle to Apparent Wind

V = Boat speed kts

VMG = Velocity made good to True Wind