

# 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