



ZEN 39		YAMAHA 300hp		PROPELLER	
Hull Type	Deep-VStepped	Engine	4 Stroke – V6	S. SeriesII	15" x 20"
Deadrise at transom	25.5	HP	300	Blades	3
Dry Weight	2500 Kg	Displacement	4.2L	Material	
Length	12.03 m	Weight	272 kg		
Beam	3.22m	Operating Range	5000 - 6000 rpm	MOUNTING HEIGHT	
Tubes Material	H/N 1670 dtex	Gear Ratio	1.75:1	Hole Position	2nd
Tubes diam.	65/35 cm			Jack Plate	No
Fuel Capacity	800lts			A/V plate-keel	-- cm

www.zenmarine.gr

www.yamahaoutboards.com

TEST CONDITIONS					
Sea State	5-6bf			Fuel	500ltrs
Wind speed	18-25kn			Crew Weight	300 Kgr
Waves height	2-3m			Equipment Weight	250 Kgr

PERFORMANCE DATA						USEFUL REMARKS	
RPM	KNOTS	LPH	LPM	SLIP	RANGE	On Plane	-- Knots@ --00rpm
3000	19	52	2.7	30%	185nm	W.O.T.	5900rpm
3500	26	70	2.7	10.9%	185nm	Top Speed	51 Knots
4000	32	90	2.8	4.9%	176nm	Acceleration	0-30 Knots in -sec
4500	36	114	3.2	2.6%	156nm	Time to plane	-sec
5000	41	154	3.7	0.02%	135nm	Best Fuel Efficiency	2.7lpm @ 3500rpm
5500	45	178	3.9	-0.02%	128nm	Optimum Range	185nm @ 26Knots
5900	51	200	3.9	0%	128nm		

ZEN 39/40

Technical Report

...at the speed range from 19 to 32 knots, the fuel consumption is almost constant, which I really consider a great achievement for this hull and is probably due to the Twin Delta Keel implemented by the ZEN marine Shipyard...

Read more: <https://www.e-ribbing.com/zen-39-twin-4-2l-v6-300hp-yamahas/>



...The hull with steps has many advantages such as increased economy and speed due to the reduction of drag and the ventilation of the rear part of the boat.

ZEN 39 follows the American School of Single Step in its hull, as it has been observed to be extremely efficient and effective in a **precisely** weighed boat, **offering advantages over multiple steps such as steering, grip and economy...**

At low speeds, however, according to the Naval Hull Step Design Literature, it shows intense drag and the boat loses the point of support, where the phenomenon of vacuum occurs. The purpose of the Twin Delta Keel applied in ZEN 39 serves to reduce this phenomenon, so that the boat has higher buoyancy and a larger support surface when riding at low speeds. As the speed increases the intervention is getting less and less as the ventilation of the rear part reduces any friction, balancing the countervailing forces exerted at low speeds. **This technology has been patented by ZEN MARINE.**

The rails behind the step have been designed to guide the air bubbles between them, in order to achieve greater buoyancy in the specific area.

At tight maneuvers, the boat finds more support and grip on the centrifugal forces as they serve as "tracks" of grip, reducing slippage...

(By [e-ribbing.com](https://www.e-ribbing.com))