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**THE VIKING 65'
MOTOR YACHT**



FOREIGN EXCHANGE

Viking 65 Motor Yacht: The new international business machine.

BY PETER FREDERIKSEN

I'M AT THE helm of a Viking 65 Motor Yacht, sliding over the dark-blue water of the Mediterranean off the French Riviera. We're approaching the breakwater for Nice at 25 knots.

As a Jersey-bred boatman with hundreds of hours behind the wheel of Jersey-built Vikings, I should feel almost at home. But I don't. Things are very different here.

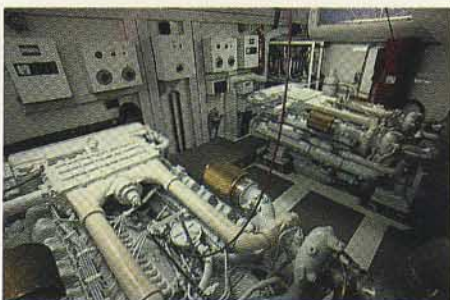
It's not just that there are no buoys ahead in the harbor. Or that the cruising guide is written in a language I don't understand. It's that the boats and the boatmen are different, too.

For instance, many here see the boating season as just two months—July and August—and during this time they rarely put on more than 40 hours. But they typically make the most of it, swimming, sunning and entertaining aboard. That's why boats here have sunpads on the bow and swim platforms on the stern. Ice-makers are in, though wet

bars are out. Cool, breezy days don't keep these boatmen chained to the dock—they just move the party inside. That's why lower stations and lots of windows are so popular.

The docking arrangements are different, too. Marinas are few, and generally so crowded that fortunes are made in the inflatable-fender business. At the Saint-Laurent-du-Var facility near Nice where we tested this Viking, there are no pilings. Boats literally raft up alongside each other's fenders, often at least six or eight per side, with the vinyl groaning as the boats surge on the Med's flow.

Since there are no pilings, many marinas place a chain along the bottom of the basin. Bow lines and spring lines are moored here and are drawn through the bow cleats as tight as guitar strings, often using a windlass. Stern lines are secured to concrete bollards with more chain used to prevent



THE LOVELY AMERICAN—(clockwise from top) Single-level living design includes a day head and sprawling salon with a spiral teak stairway to the flying bridge and below. Top speed with twin 959-hp D2842 LY V-12 MANs was 28.5 mph. That's entertainment. Flying bridge offers acres of relaxing open space and ample room for a dinghy.





QUIET ON THE MED—At 1800 rpm, the dB-A level in the master stateroom was a modest 82. Afterdeck takes advantage of the wide beam. Sliding port and starboard doors provide full walkaround access.

chafing. Most boats also have a windlass (sometimes a pair) at the stern to snug the boat in. Even heavy lines are broken because there's no room for elasticity or stretch. With all the boats tied tight to the bulkhead, long boarding ladders are the norm. Pier 66 was never like this.

SHHHHHHHHHH!

And as I run this boat into Nice, I find something else very foreign—the quiet. At 25 knots, this 65-footer isn't roaring, but almost seems to be whispering.

The reason is another Euro difference—many potential European buyers told Viking that American boats like the 65 were too noisy, especially for guests on the afterdeck and those in the master stateroom. But they liked the boat's joinerwork throughout the salons and staterooms, and the crisp white entertaining spaces topsides. They heard the message across the Atlantic loud and clear in New Gretna, New Jersey.

Long an engineering powerhouse, Viking didn't want to go for just a quick fix, such as larger mufflers or more sound-deadening foam. They had to get to the root of the noise, and that meant re-examining the whole propulsion package.

The result was tuning, tinkering and even some wholesale changes in the powertrain. It led to what Viking calls its "World-Class Propulsion Package." It's a system employing some of this planet's most sophisticated equipment—MAN diesels and ZF transmissions from Germany, along with propellers from France Helices. Not only do demanding Europeans benefit, but so will Viking buyers everywhere, as similar machinery makes its way to all Viking motor yachts and convertibles from 50' on

PROPULSION AND PERFORMANCE Viking 65 Motor Yacht

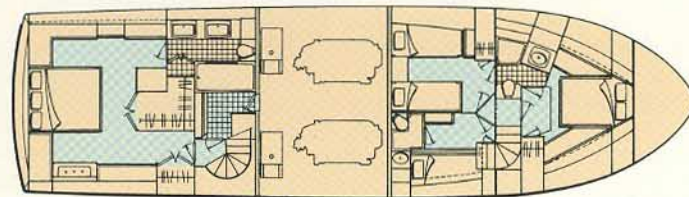
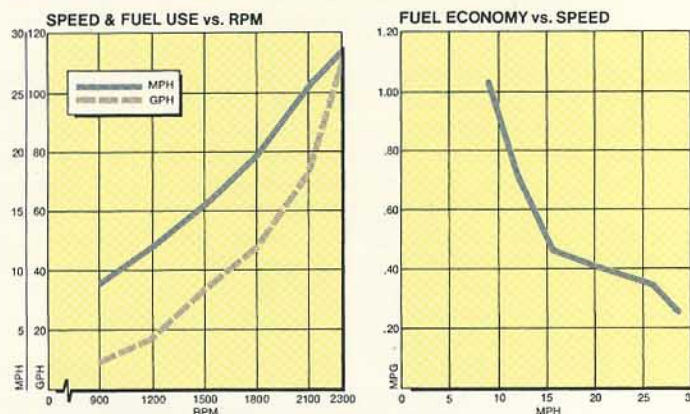
Standard power: twin 959-hp MAN D2842 LY diesel inboards

Optional power: none

Test boat power: twin 959-hp MAN D2842 LY V-12 diesel inboards with 1,338 cid, 5.04" bore x 5.59" stroke, swinging 34" x 33" five-bladed "S" class propellers through 2:1 reduction

rpm	speed		fuel use		efficiency			operation		
	knots	mph	% of max.	gph	% of max.	naut. mpg	stat. mpg	n. mi. range	angle	sound level
900	7.7	8.9	31	8.6	8	0.90	1.03	1118	0.5	60
1200	10.4	12.0	42	16.8	15	0.62	0.71	771	1.0	62
1500	13.5	15.5	54	33.0	30	0.41	0.47	507	2.5	67
1800	17.2	19.8	69	47.4	43	0.36	0.42	451	4.5	71
2100	22.3	25.7	80	72.2	65	0.31	0.36	384	5.0	78
2300	24.8	28.5	100	110.4	100	0.22	0.26	279	5.0	79

Advertised fuel capacity 1,380 gal. Range based on 90 percent of that figure. Performance measured with six persons aboard, full fuel, full water. Sound levels taken at bridge, in dB-A.



LOA	65'7"	Max cabin headroom	6'4"
Beam	17'4"	Bridge clearance (to top of radar arch)	20'8"
Draft	4'9"	Fuel capacity (gal.)	1,380
Displacement	94,000	Water capacity (gal.)	300
(lbs., approx., wet)		Designer	Viking Yachts
Freeboard forward	8'8"		
Freeboard aft	6'7"		

Standard equipment (major items): Hydraulic steering and controls at upper and lower stations; full instrumentation; alarm and monitor systems; ss hardware; S-class propellers; Glendinning engine synchronizer; underwater exhaust system; 20kw Onan genset; isolation transformers; battery converter; 4 Vacu Flush MSDs; 3 auto.

bilge pumps; Halon system; Bennett trim tabs; entertainment center; wet bar; microwave oven; refrigerator/freezer; dishwasher; trash compactor; electric cooktop; washer and dryer; reverse cycle a/c; central vacuum system; swim platform w/ ss ladder; VHF radio; knot-meter; depthsounder.

up to the 72' CMY.

THE MAN EVENT

For some time, Viking has been a stalwart user of the German diesels. Their strong suits are obvious aboard the 65. Virtually every piece of machinery is painted white in the Viking's surgically clean engine room. This makes the area look larger. At the same time, the whiteness makes the V-12 959-shp MANs seem small.

Which, in fact, they are.

Weighing about 4,400 pounds each with the ZF BW 165P gearbox, the low-profile MANs save nearly one and a half tons compared with DDC 12V-92TAs, which weigh about 5,800 pounds apiece with 1,040-shp.

These MANs trace their roots back to Rudolf Diesel, who built his first working engine in the company's Augsburg factory around 1893. Today's engines are modularly built four-strokes with direct fuel injection, twin turbochargers and raw-water intercoolers. Contributing to their compact size and quietness are coolant and lube-oil circuits integrated into the crankcase, while individual cylinder heads, remote filters and serviceable components such as the gear-driven raw-water pump are within easy reach.

But perhaps their most unusual feature is the cylinder cut-out circuit. In simple terms, this means when the engine starts up it only fires on one bank of cylinders. This reduces exhaust smoke dramatically. After all, high-horsepower engines smoke at start-up and at low speeds because the engine is cold and not all the fuel is burned. With the cut-out circuit feeding fuel to only six cylinders, a lot less unburned fuel goes into the air.

The cut-out circuit also means that the boat idles very quietly. Aboard our test boat, start-up was almost eerily silent. I couldn't feel or hear the engines running, and the only sound that made it up to the bridge was the cackling of the 20kw Onan genset. And when engaging the transmissions, the ZF gearboxes were as smooth as a marble tabletop in a French cafe.

The engines continue to fire on the single bank until you put on a load,

say about 1200 rpm, when the second bank of cylinders kicks in automatically. The transition is so smooth, you have to convince yourself you can actually hear or feel the slightest rumble aboard this boat. Your guests won't suspect a thing. Peg the throttles, and the Bosch fuel-injection pump delivers smooth power from a gentle throb to WOT.

In our tests off the French coast, this 47-ton Viking hit a top speed of 28.5 mph. Throttled back to 1800 rpm, the boat cruised at 19.8 mph with a range of 451 nautical miles from its 1,380-gallon fuel supply.

TAMING OF THE SCREW

Looking at the Propulsion and Performance chart, you can see the low dB-A readings. But these figures don't tell the whole story. The remaining elements of this propulsion package are the propellers.

On many boats, propeller selection is an engineering crap shoot. Calculate the load and power and figure out the prop size as part of the equation. If the engine doesn't turn up to full rpm, drop the pitch an inch or two. Too much rpm, add some pitch.

Meanwhile, prop wash is a source of noise and vibration. The faster and more powerful the boat and engine, the more obvious the limitations of this seat-of-the-pants approach to prop selection.

But the whole answer isn't in choosing the prop. Much of it is in building it. In conventional propeller manufacturing, one form is used like a cookie-cutter to turn out props. Nonetheless, two seemingly identi-

cal props can vary by inches in pitch and diameter. Add in right and left-hand props and any particular boat has a margin of error that you can drive a motoryacht through. This inaccuracy will cost a seemingly perfectly running engine top speed and create vibrations and noises that defy isolation.

To avoid this, Viking has used a blade shaper for years to test and measure all props before installing them. Frequently, new props had to be reconditioned before they could be used. But that still wasn't good enough for the performance and quietness that Viking was seeking.

That's when the New Jersey engineers turned to France Helices, a propeller manufacturer located near Paris which is noted for its computer-designed and milled running gear. France Helices manufactures propellers for ships, submarines, super-yachts and go-fast boats where price is no object. It's not uncommon for them to build a set of props that cost well over \$100,000. Indeed, the props on our Viking were reported to be worth \$26,000.

These props are called the "S Class," and are specifically designed and built to match this hull, engine and transmission. There's no guesswork involved anywhere in the process. The casting starts out seven times thicker than a standard prop. The computer-guided milling is so extensive that it needs that much metal to work with. And the precision is mind-boggling, with a tolerance threshold that's reported to be less than $\frac{1}{1000}$ mm.

The propellers are tested in a cavitation tunnel where they are inspected and photographed to ensure peak efficiency. They also are statically and dynamically balanced at the shaft speeds typically produced by the yacht. Needless to say, these five-bladed props fit this Viking like foie gras and *pâte*.

Viking conducted their own tests and found a marked reduction in the sound levels throughout the boat, particularly in the aft master stateroom. Our boat test produced similar results, and I was impressed by the quietness and lack of vibration at all speeds. Fuel efficiency is another benefit and not to be taken lightly when diesel sells for \$2.27 a gallon.

In all, this Viking offers not only the all-American comforts and engineering that have made this builder famous, but now, some of the best of European technology and lifestyle as well. And I have to admit the quietness of this package makes me feel right at home. ↓

For more information, contact:



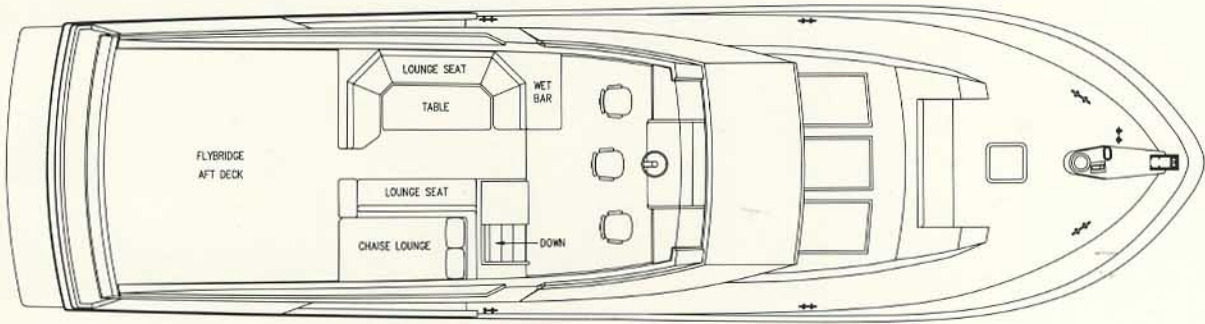
Route 9 and the Garden State Parkway
New Gretna, NJ 08224

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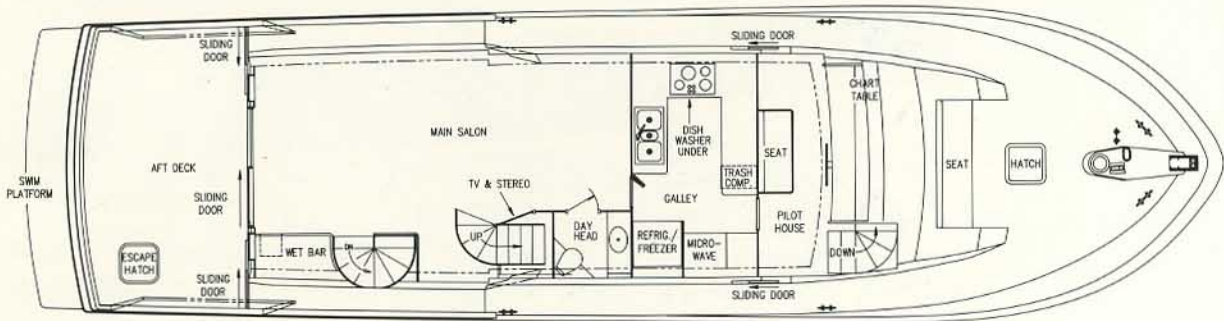


The full-sized gourmet galley features a pass-through to both the dining area and the wheelhouse.

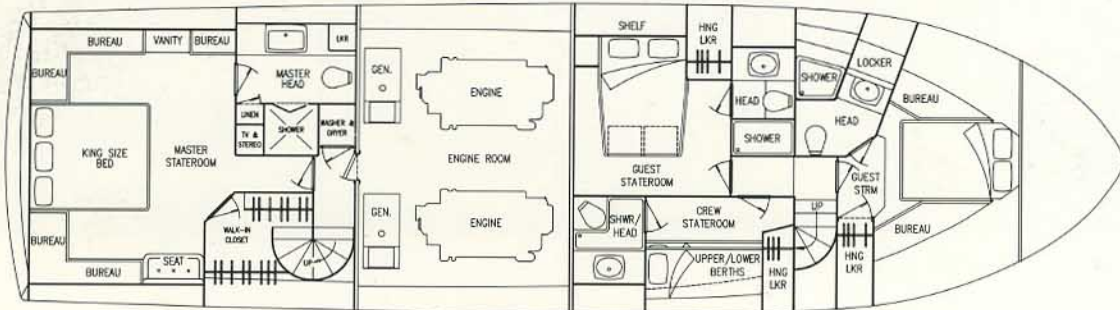
VIKING 65' MOTOR YACHT



FLYBRIDGE DECK



MAIN DECK



LOWER DECK

