

# Practical Sailor Magazine J/80 Review

Looking for a fast sprit boat? The J/80 can't keep up with a Melges 24, but we think for racing and family fun, it's a more well rounded boat. And it's less expensive. We imagine that Rod and Bob Johnstone of J/Boats faced a dilemma back in 1991 when they prepared to introduce a new line of boats. Among the several boats they were building at that time was the J/35, one of the most popular and successful boats on the racing scene.

The J/105 would be the first production keel boat rigged with a retractable bowsprit, conceived to increase performance by offering cruisers a user-friendly method of flying asymmetrical spinnakers. It, too, would measure almost 35 feet. So to give it a separate identity, they chose a metric name, vogue in the 1990s (10.5 meters equals 34.49').

Five years after introduction of the J/105, the company has sold more than 400 sprit boats in sizes ranging from 26-50 feet, and several look-a-likes have been introduced by competitors. New cruising boats are being offered with optional bowsprit arrangements; one line even has an articulating bowsprit. There's no doubt: The concept has spawned a generation of so-called sport boats like the Ultimate 20 (October 15, 1995) and the Melges 24 (May 1, 1995), both sprightly, trailerable pocket rockets.

## Background

The history of J/Boats dates to 1976, when Rod Johnstone designed the ground breaking J/24, a fast, easy-to-sail racer that attracted sailors frustrated with the vagaries of MORC and PHRF handicapping systems. Rod formed the company with brother Bob, who came aboard to handle marketing. They hired Everett Pearson of Tillotson-Pearson, now TPI Composites, to construct the boats. In the ensuing 20 years, more than 5,200 J/24 's were produced, and the fleet became the second largest one-design keel boat class in the world, behind the Starclass. By the early 1990's, the company was a fixture in the boatbuilding business.

Following the successful launch of the J/105, the company unveiled the J/80, which is carving a niche in the marketplace with a broad customer base. Measuring 26' 3", it is a versatile performer designed to have market appeal among those entering the performance arena for the first time, dinghy sailors stepping up to a keel boat, big boat racers seeking a simpler method of going around the buoys, and daysailors.

At a glance, the boat's low profile and soft chine are aesthetically appealing. A spacious 12' cockpit offers plenty of room for a four-person race crew, and its decks are uncluttered by ankle-knocking hardware. More than 170 boats have been built since hull #1 was launched in April, 1993.

## Construction

During his four decades of boatbuilding, Everett Pearson has constructed more than 16,000 fiberglass hulls. The J/Boats are constructed at TPI's plant using the Seeman Composites

Resin Infusion Molding Process (SCRIMP®), a vacuum-assisted closed system designed to increase the integrity of hulls while reducing the amount of volatile organic compounds that enter the environment and workplace. The system has also been employed in the construction of 65' blades for wind machines, and in fabricating therapy pools (SwimEx) used by professional football teams.

The SCRIMP® method was developed by Bill Seeman, a Gulf Coast fiberglass expert, who worked with Baltek, a manufacturer of end-grain balsa used as core material in hulls and decks. During the 1980s, at the same time Seeman was exploring new methods of laminating composite panels, Baltek was experimenting with various methods of developing a core product engineered for vacuum bagging.

When Seeman was commissioned by the U.S. Navy in 1990 to fabricate balsa-cored panels for a special project, he selected Baltek's AL-600 as the core because it contained a newly developed precoated copolymer that acted as a "tie coat," strengthening the inter laminary bonds while reducing the amount of resin required. Baltek engineers continued to tinker with chemical formulations, eventually introducing the current generation of precoated balsa, AL-600/10, which reduced cost of the balsa by a third. It is a key component in the SCRIMP process.

Coincidentally, Pearson was on a parallel track, pursuing attempts to develop a similar system when he discovered Seeman's. During a visit to Seeman's plant in Mississippi he was so taken with the process that he immediately purchased manufacturing rights and began building "SCRIMPed" boats, including the line of J/Boats. That was 1993.

Alan Johnstone of J/Boats sees several additional advantages to the new system. "It produces laminates with glass/resin ratios that are within one percent of specifications," he says. "It also reduces labor cost because of increased efficiency in the lay-up process, and we think it produces a better product because molding workers are not working in as hazardous of an environment."

The J/80 hulls are cored with 3/8" AL-600 over which are laid layers of fiberglass chop and bi-directional and unidirectional mat. Three-ounce mat is used to reinforce the keel sump, and 6" wide strips of 3/4-ounce mat are used to reinforce deck flanges.

The use of vinylester resin has inspired the company to offer a 10-year blister warranty. Bulkheads are located amidships, and in the bow and stern. Like deck flanges, they are tabbed to the hull with additional 6"-wide overlays of cloth.

The hull-deck joint is bonded with Plexus, a high strength adhesive Johnstone says is stronger than the laminate itself. The company says it has no reported hull-deck leaks since it began using Plexus. (We do know of one Lagoon catamaran that sprung a hull-deck leak, not because the adhesive failed, but because a worker had failed to fill the entire seam.)

The keel, which is cast from ceramic molds, is attached to a 12"-deep stub using seven, 3/4" J-shaped stainless steel bolts. The 1,400-pound lead keel is coated with four coats of epoxy primer.

As on most J/Boats, the mast step is an aluminum "I" beam tabbed to the hull on both sides of its base. Transverse aluminum webs welded to each end are through-bolted at the aft end into the main bulkhead and forward to another bulkhead. The mast is attached with four bolts attached to a plate that allows fore and aft adjustment at the base.

The retractable bowsprit is located to starboard. When owners of early models experienced leaks into the forepeak, a rubber seal gasket was mounted on the front of the housing.

The fiberglass rudder is molded in two halves that are cored with balsa before being married and wrapped with fiberglass at leading and trailing edges.

The company delivered 49 boats within months of its introduction and, like newborns, experienced teething problems: Some of the original stanchion bases failed where spinnaker blocks were attached, so the factory welding method was improved. Some mast cranes with lightening holes failed. Stainless steel gudgeons on the rudder were initially under-engineered so have been increased in size from 1/8" to 3/16" material, as has the stainless tiller strap. Owners of early models were provided with retrofits.

We inspected hull #42, which has been raced extensively for two seasons but still appears factory fresh. Gelcoat surfaces are unblemished. There were no signs of crazing or stress cracks, and areas where the crew operates were clean. Though the owner has raced in 25- to 35-knot winds in San Francisco and Seattle, his only failure was at a stanchion base.

We have always thought that TPI does as good a job as anyone building with balsa. At the same time, it should be remembered that the current generation of lightweight performance boats, despite their stiffness, tend to be more fragile than older, more heavily laid-up cruisers.

#### Deck Layout

Because sprit boats fly asymmetrical spinnakers and are equipped with roller-furling headsails, the amount of clutter on deck and in the cockpit is greatly reduced. Replacing the spinnaker pole eliminates a need for deck chocks, foreguy and topping lift, afterguy, sheet stoppers and, perhaps, one winch.

Generally, four lines are led aft on the J/80: jib sheets and spinnaker sheets, which are led to Harken 32-2A winches in the cockpit. Two identical winches located on the coachroof are factory options, but may be redundant. One owner told us he uses them only when setting the spinnaker or doing a jibe set, and is considering removing them.

Main and jib halyards are cleated at the mast. The spinnaker halyard is led to a cam cleat on the coachroof, the spinnaker tack line to a cam cleat on the side of the cabin, as is the roller-furler line, and the pole launch line is inside the bulkhead with only the tail exposed.

An outhaul and reef line located in the boom exit near a clam cleat on the underside of the boom, within reach of a crewperson. Cunningham and vang controls are also at the base of the mast, within reach of the cockpit or rail. Mainsheet trim and backstay adjustment is easily accomplished by the helmsman from a position aft of the traveler. The mainsheet system includes a 2:1 Harken traveler system led to cam cleats in the coaming, and five-part Harken mainsheet system led to a swivel base cleat. The 4:1 split backstay tackle is led forward to a position at the helmsman's fingertips.

When sailing downwind in moderate breezes, trimmers are typically located opposite the primary winches, two body widths forward of the helmsman. To keep the boat level when going to weather in more than 15 knots of wind, the jib sheet is led to the weather winch.

As one experienced crew person told us, "This boat is so easy to sail that if you have an experienced helmsman, you can pick up three novices and go racing."

Hall Spars supplies the fractionally rigged, double spreader rig, which measures 31' above the deck. The mast is supported by a rod headstay and stainless steel 1×19 shrouds and backstay.

#### Interior

Space belowdecks is well organized and nicely finished, but there isn't much of it. This is because of the boat's narrow, 8' 3" beam and long cockpit. Daylight enters the area through two Lexan ports, but the space will be dark at night unless one purchases the optional Halogen reading lights.

The main cabin has 4' of headroom, and is accented by a teak and holly sole. Single berths located amidships are more than 6' long, but only 19" wide. Big persons won't find them very comfortable. Tiny storage compartments are located beneath each settee.

The forepeak is more spacious, 5' 6" wide at the main bulkhead, and almost 7' long. There's storage in the forepeak for little more than the battery and some small items, because the hollow area below the berth is enclosed to provide flotation. A small anchor locker is located in the bow.

Space aft of the companionway below the cockpit is open for storage, and is accessible by removing the companionway steps, which are mounted on a stainless steel frame attached to the hull with quick release pins. The space is adequate for storage of a cooler, portable toilet, outboard, and fuel tank. We'd recommend installation of a sliding tray or bracket to simplify the process and make access easier.

A bulkhead 6' from the stern encloses the aft section of the boat, adding additional flotation. Though the area can be inspected through removable plastic plates located below decks and in the cockpit, repairs to the area will present a challenge.

Exposed wiring from running lights is secured by cable ties screwed to tabbing in the hull. They detract from the boat's appearance and could pose a hazard if pulled loose.

Though there is room for storage of equipment necessary for weekending, the challenge will be in the organization of gear and supplies.

Auxiliary power is furnished most often by a 3-hp. outboard motor on a transom bracket. There is no special locker for the portable fuel tank, so it sits in the cockpit. To minimize weight, capacity usually is limited to about 2 gallons.

#### Performance

We sailed Steve Painter's Climax in moderate winds and flat water on Puget Sound and found her to be responsive from the moment we left the dock. In close quarters amidst a fleet of returning boats, we unfurled the jib and, once clear of traffic, the main was hoisted. The boat's response was to lower its right shoulder and shoot forward into the wind. We estimated wind speed at 10-12 knots (the design class does not allow wind instruments), a range Painter said is trickiest when sailing in competitive situations.

#### At A Glance

##### Strengths:

Excellent construction methods

Excellent factory support

Easy and fun to sail

##### Weaknesses:

Trailerable, but...

Storage methods could be improved

No access to stern compartment

#### Conclusion

The second in J/Boats line of sprit boats, the J/80 is a good, all around fun boat to sail. Built by TPI using infused resin molding, it's strong, yet lightweight. Still, keep in mind that such boats won't take as much abuse as more heavily built cruisers. As an example, fiberglass skins are thin and can abrade through the core in no time. A new boat will cost you about \$40,000.

"She likes it when the wind is under ten, because she performs well in light air, and when it's over fifteen, because then she will plane when sailing downwind. In ten to fifteen knots we find it difficult to sail to her handicap," he told us.

A veteran sailor who has owned and campaigned a Star boat, Catalina 30, and most recently a C & C 44, Painter says he's having more fun with the J/80 than with any of the others.

When equipped with a non-overlapping jib, the boat rates 127 PHRF on the Sound, but regional handicaps differ by as much as 12-15 seconds. More than 170 boats have been produced and one-design fleets are organizing across the country, though most quickly on the East Coast.

When we took the helm we found that the designer's claims of a neutral helm and positive tracking were not exaggerations. A Forespar tiller extension allows the helmsman to position himself comfortably with a single lifeline for back support and a 3" footrest built into the sole for lateral support. Tacking is as simple as stepping across the boat, because the mainsheet is well forward of the tiller.

Crew movement is rather straightforward as well. The boom is high enough that the risk of head-knocking has been reduced, and the coachroof far enough forward that it's not necessary to crawl across it on a tack.

Having tested other sprit boats, we've become accustomed to launching the asymmetrical spinnaker, and have an increased appreciation for them as they allow cruisers and racers to sail fast without dealing with the potential for disaster that always exists with a conventional spinnaker setup.

The spinnaker, which is always tacked to the bowsprit, is launched by pulling the pole forward and hoisting it from a J/24-style canvas basket in the companionway. With one person sweating the halyard and a second taking the sheet, it is aloft and pulling within 30 seconds.

Like any boat with an asymmetrical spinnaker, the J/80's best point of sail downwind is broad reaching. When the wind pipes up, the crew moves aft, the bow comes out of the water and she's planing. Compared to conventionally rigged-boats, which sail fast with the pole on the headstay, sailing high jibe angles downwind is inefficient.

Because there's no spinnaker pole, there's no need for a foredecker. Jibing is simply a matter of pulling the clew across the boat in front of the headstay and trimming to the new course.

Spinnaker takedowns are simpler as well, especially when the sail is doused to weather. We unfurled the jib, jibed and eased the spinnaker halyard as the sail fell to the deck with assistance from one crewman controlling the clew.

#### J/80 vs. Melges 24

Initial reaction to the introduction of sprit boats was a combination of skepticism and curiosity. Judging from the success of J/Boats as well as new boats introduced by competitors, market acceptance is now a given in both racing and cruising fleets.

However, there are clear distinctions among boats on the market, which requires that a buyer clarify his needs before writing a check.

Comparing the J/80 with the Melges 24 may provide a frame of reference because of their similarities and differences. The Melges is clearly a faster boat, rating in the 90s, despite being nearly 2' shorter. Both have cavernous cockpits designed and rigged to maximize performance. Though waterline length, draft, and beam measurements are close, there are major differences. The Melges has a retractable keel and performs like an overgrown

dinghy; the J/80 has a fixed keel. It is less buoyant and more comfortable going to weather in a chop. The Melges is a lightweight at just 1,700 lbs\* compared to the J/80's 2,900 lbs. The Melges' carbon fiber rig and spreaders, which weigh only 62 lbs., plus the difference in overall displacement, translates into speed, especially downwind, when it breaks free of the surface and begins planing in 10 knots of wind. The J/80 simply needs more wind to overcome its displacement and the 185-pound rig. However, in 15 knots of wind, J/80 speeds into the teens, and we've seen them crack the 20-knot barrier on gusty San Francisco days. At those speeds, sailing is thrilling and challenging, regardless of the boat. An equally important consideration is the proficiency of the crew. We agree with those who contend that the Melges requires a talented crew to be sailed to the victory circle. The 40- to 50-boat fleets that successfully contend at Key West Race Week are littered with professional sailors. By comparison, the J/80 provides veteran sailors, like Painter, an opportunity to compete at a high level without recruiting so-called rock stars.

Both boats are trailerable, though we would not want to set up the J/80 every weekend. Stepping the mast requires a gin pole, at the least, and hands and muscles, or, preferably, a hoist. By comparison, the Melges can be launched from a trailer and easily rigged in 30 minutes. The fixed keel on the J/80 also means a higher profile when traveling, though Johnstone told us that J/80 sailors trailer their boats from coast to coast to attend regattas. The Melges is faster and may have more sex appeal. But, when measuring overall utility-including family sailing-the J/80 gets the nod. We wouldn't be afraid to take the boat into the ocean, but we'd think twice about a coastal passage in the Melges.