F27

A Revolutionary New Trimaran

Introduction

The F27 is a high performance production trimaran, with a unique folding system that allows easy trailering or marina docking in just 2 or 3 minutes. Performance is outstanding, with a top speed potential of over 20 knots, while effortless 10 knot plus averages are easily achieved in complete safety.

Other features such as comfortable cruising style accommodation, wide spacious decks, near level sailing, and easy fingertip control make the F27 a unique combination of an exciting racer for the sailing enthusiast, and a perfect easily handled fun cruiser for the family.

History

The F27's development began in 1975 when the original Trailertri 18 was launched in Australia. This was the first trimaran to use the unique Trailertri folding system, developed and patented by designer Ian Farrier. This prototype Trailertri was very successful and was soon followed by hundreds more, world wide, all built from plans developed for home builders. Over the last ten years these home built Trailertris have proven to be exceptional performers, with many race victories, and an excellent safety record. Trailerability has proved to be easy and practical, while their roomy interiors have shown it is possible to have a high performance multihull with cruising style accommodations.

On the basis of this experience, the next stage was production fiberglass versions, and the first of which, a 19' day sailer—The TRAMP—was developed in Austrailia and launched in 1980. It was an instant success being named Australian Boat of the Year in 1981. It is now available in the U.S. as The EAGLE.

The new step was a larger version with full cruising accommodations, and thus the new F27 was designed.

General

The design object was to provide a roomy, comfortable cruising boat, easily trailerable, with offshore capability, and exceptional high performance. A strict requirement was that performance was to be achieved only by design efficiency, and not at the expense of safety or good accommodation.

The center hull shape is considerably different from that commonly used in multihulls, it being broader and flatter with little rocker and a maximized waterline. This encourages early planing and high reserve buoyancy in the ends discourage any pitching. A major benefit of this shape is a tendency to send any spray horizontally outwards, and this combined with molded-in spray deflectors gives a very dry ride.

Lateral resistance is provided by a retractable daggerboard, for maximum performance, and simplicity in construction. Stability is given by form design, so there is no need for a heavy ballasted keel with its performance limitations. The kick-up rudder is transom mounted with a deep blade, set well foward, for maximum control while running in steep waves. The retractable daggerboard and rudder mean the F27 can be easily beached, or can explore numerous backwaters, floating in only 14" of water. Fold her up and you can float in just 12"

Construction

This is a balance between High-Tech composites and advanced construction techniques to give a light, extremely strong boat, but without an excessively high price tag. Foam sandwich construction is used throughout, with hand laid double bias glass fabrics, and selective use of Kevlar, S glass, and carbon fiber in all high stress areas. Advanced vacuum bagging techniques are used extensively, giving aerospace standard fiber/resin ratios, while ensuring a top quality, void free laminate.

Strengthwise, the F27 has been engineered without compromise in any respect. In all critical areas where structural integrity is vital, large safety factors are employed, in conjunction with the best available materials and techniques.

The connecting float beams are of composite construction using both Kevlar and carbon fiber. The most

important feature of the Farrier folding system is the complete absence of hinges of any kind in the beams. Simply by utilizing good engineering the folding system actually strengthens the boat.

The beams are bolted down into molded recesses with two bolts each, the bolts being anchored into specially reinforced internal bulkheads. Once bolted the beams are strong enough on their own for all loadings. However, add the lower struts (part of the folding mechanism) and these become the primary structural members, actually relieving all bending stresses from the inner ends of the beams. Sailing is then quite possible without any bolts in beams at all!

The beam bolts thus act as a backup system in the unlikely event of a folding strut failure. But should this occur the beams simply take over all loadings making the inboard structure completely safe.

The actual folding struts are precision engineered from solid high strength aluminum, with nylon bush inserts being used at the pivot points with stainless steel pivot bolts.

Folding

The unique patented folding system (U.S. Patent No. 3937166 and others) has been thoroughly tested over the past ten years, with hundreds of boats now using it. Over this period of time the folding system has proved to be completely reliable and easy to operate.

The complete folding operation takes only two or three minutes, single-handed. To extend the floats, a beam end is pulled inwards and down and the beam bolts tightened. To fold, the beam bolts are released and the floats are retracted by lifting an inner beam end. With the float's motion controlled at all times by the folding struts, and all movement being mostly horizontal, very little force is required. The wingnets fold or tension themselves automatically, so there is no need to undo or relace these.

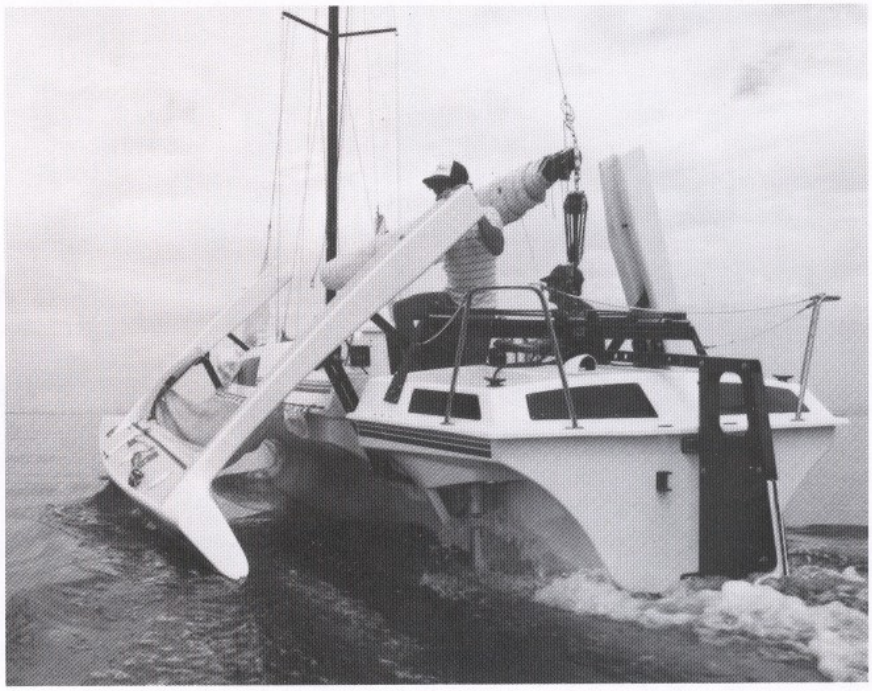
Folding can be done in smooth water, rough water, or even while motoring. There are absolutely no restrictions of any kind. The carefully engineered folding struts have absolute control over the movement and allow no flexing. Folded beam is 8'5", being within the new legal maximum of 8'6".

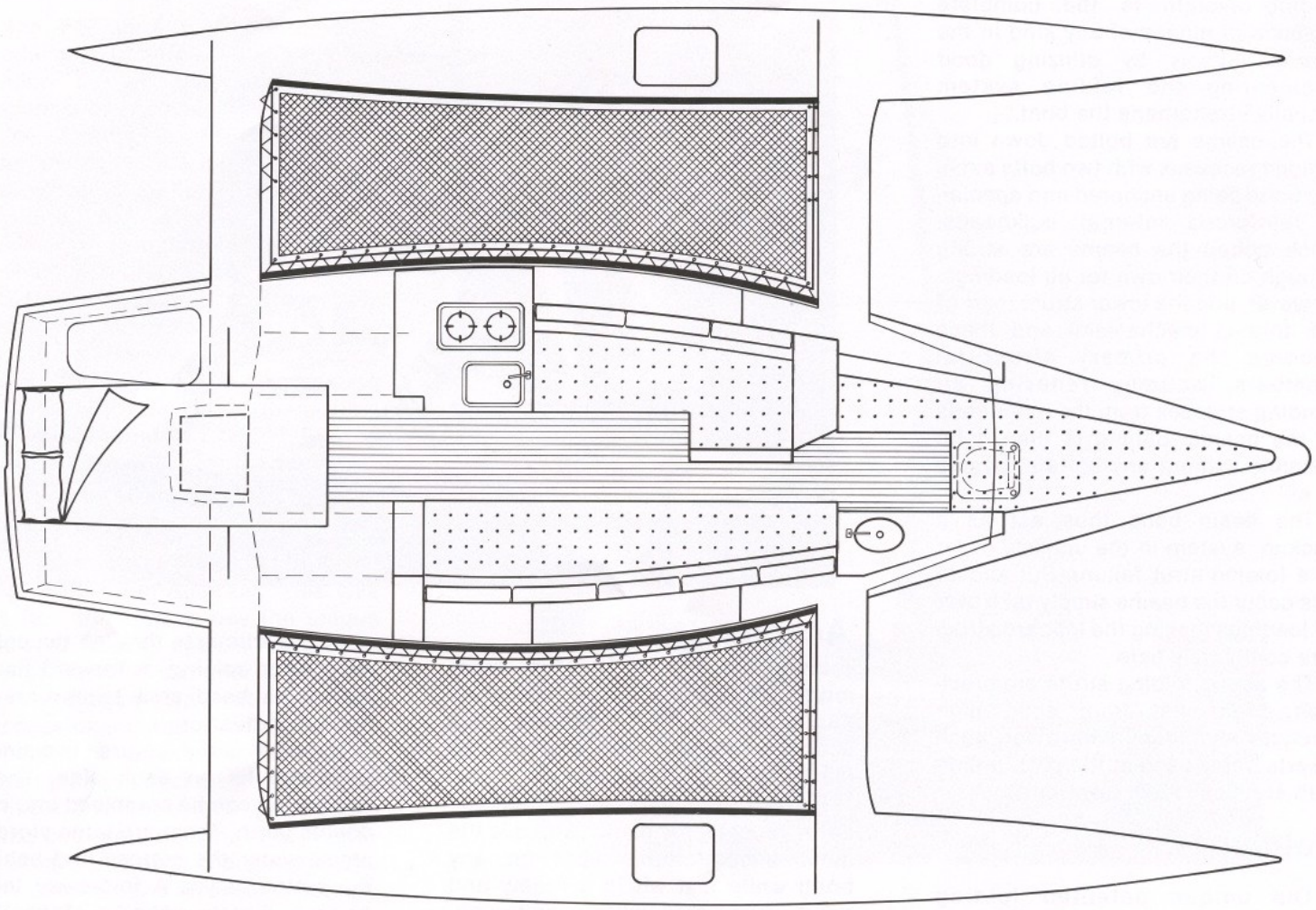
Accomodation

Long the Achilles heel of most multihulls, careful space utilisation has given the F27 monohull style accommodation, even superior to many.

Forward, there is an occasional berth, (occasional because this is the most uncomfortable spot on any boat) while just aft is a roomy and private head area, with a vanity unit. Just above the forward berth is the self-draining anchor locker. Small interior hatches into this locker allow dry air to circulate through the cabin even when raining. A forward hatch above the head area takes care of normal ventilation.

The main cabin features two single settee/berths on each side. These two berths can be combined into one double berth. There are large storage areas under the settees and behind the settee backs. A fold-away table gives a dinette capable of seating four. The galley area features plenty of countertop area, a large stainless steel sink, and a flush mounted stove





(stoves do not need gimbals on a trimaran). A pop-top gives a full 6'3" standing headroom in this area, as well as exceptional ventilation. While pop-tops have questionable safety aspects for monohulls , on the low heeling multihull, these aspects do not apply and the pop-top is an excellent solution for interior standing headroom.

An option for the pop-top is a 'vinyl cabin' which encloses and weather-proofs both the pop-top (while up) and the cockpit area. So even in the worst weather, the cockpit can become part of the cabin, with full sitting headroom, considerably increasing the amount of usable room. This is another advantage of the trimaran. There is no need of a long cockpit capable of sitting all the crew on one side, to reduce heeling. With this need eliminated, you can then have a very safe, centrally located cockpit, surrounded by a safe coaming, and ideal for fitting such a 'vinyl cabin.'

Another benefit of the central cockpit is the roomy aft cabin, with a double berth. It also makes a great kids' cabin with plenty of room for toys and things. This cabin is in the most comfortable area of the boat (motion wise) and has proven to be the most popular berth on all earlier designs. Access is either through under the cockpit floor (a bit squeezy) or through a hatch between the aft beams (an easy step down). With the vinyl cabin up, passage from the main cabin to the aft cabin is easy and completely weatherproof.

A major aspect of the F27's cabin is its complete usability. Cabin use is not limited to time spent at anchor or in dock. As you see it on the showroom floor is essentially how it is while sailing—the maximum heel angle is usually around 5 to 10 degrees and seldom exceeds 12 degrees. The cabin is not rendered useless by excessive heeling, the floor remains the floor, both settees can be sat on, and you can lie on any berth without fear of being thrown off. Meals can be cooked, items stay where they are put, kids can play with their toys, and in general the complete below decks area is a pleasant place to be at all times.

On deck, the F27 offers features totally unobtainable in similar size yachts, with an unbeatable combination of wide decks and near level sailing. The wingnets are ideal for sunbathing, just lounging around, or sleeping on under the stars on warm summer nights. There's even enough room to carry a full size dinghy while cruising.

Rig

The rig is a problem free, well proven, and highly efficient fractional rig, with all control lines led aft for operation from the cockpit. Rig and all deck hardware are very robust, being based on boisterous Australian conditions. Examine the rig and deck fittings closely. Compare them to similar boats. Note the ¼" rigging wires, the Harken 'Big Boat' traveller big enough for 43' monohulls, the 8:1 Harken mainsheet system, the Harken Cam-Matic cleats, all essential for reliable high performance. This emphasis on strength and quality is used throughout and as a result the F27 can be relied on to withstand virtually any conditions.

This was proven in her first official race in the U.S.—the 2 man round Catalina race starting from Newport. In rough 15-25 knot conditions the prototype F27 took line honors by four hours, won on handicap, and set a new record. Her superiority over the 28 boat fleet (including a 65 foot monohull and several bigger racing multihulls) was shown on the initial 30 mile windward leg. The F27 was easily first to Catalina in conditions that forced many in the fleet to reef and some to retire. On this leg, at times, the F27 was doing an awe-inspiring 10 to 11 knots hard on the wind.

Easy to Trailer, Rig and Launch

Special care has been taken in designing the trailer, rig and folding system so that everything can be done single-handed. This ensures a quick and easy set up—a very important aspect of trailer yachting.

The trailer is an inexpensive, trouble free, standard marine type, and with no need for a heavy keel, the F27 is light and easily trailered. Sitting low on the trailer it has a safe, low center of gravity, with excellent

trailering characteristics. Being trailerable, the F27 opens up many distant cruising grounds previously out of reach. And best of all, with a 55 mph capability, dead to windward, you don't have to spend most of your vacation just getting there.

Raising or lowering the mast is so simple even an 11 year old can do it alone. On average it takes about 20 minutes to rig the F27 ready for launching and then just a few minutes to ramp launch from the trailer, without crane assistance. The shallow draft avoids having to completely sink the trailer several feet and even better, you don't have to wade chest deep into the water. Thus virtually any ramp will do—you are not restricted to only the best facilities. Launching is always done folded so no more space is taken at the ramp than with a conventional boat. There's none of the obvious problems in trying to launch a 19' wide craft at a crowded ramp.

Once afloat, stability while folded is excellent, and the F27 can be quite safely motored, even sailed, in a folded condition. If you do not wish to trailer the F27 then marina docking is as easy as any other type of craft.

Performance

Light weight, immense stability, super efficient wide beam sheeting and slender hulls give the F27 dynamic performance in all conditions. From impressive light air drifting, where the modern trimaran is superior to any other type of craft, to exciting bursts of acceleration and sheer speed in the windiest conditions.

When just taking it easy, speeds of 7 to 8 knots to windward, and 10 to 12 knots on a reach are comfortably achieved, greatly increasing cruising range. You will be amazed at how safe and secure the F27 feels while effortlessly maintaining such high averages.

A spinnaker is optional, and this colorful sail is a dream to handle. Setting or retrieving is done with incredible ease from the wingnets, while the low heel and the wide sheeting base, all combine to make the spinnaker a truly safe and enjoyable sail for family cruising.

When all out racing with spinnaker in a blow, exhilarating reaches in excess of 20 knots are possible with consistent speeds of 15 to 20 knots being easily maintained, all with fingertip control.

Maneuverable

Superb handling is probably one of the least well known advantages of the modern trimaran. The helm is always light and responsive, while tacking is dinghy like. Tacking can even be done with the rudder lifted clear of the water, using sails only. The instant acceleration and speed allow you to tack on even the slightest windshift, a great asset when racing to windward.

One disadvantage of the wide 19' beam is limited access to some narrow passages while unfolded, but get

into a tight spot and the F27 can do an instant 360 degree turn. In fact it can continue to do such turns infinitely in one spot if you wish, helm hardover, with no need to touch the sails.This is quite a useful characteristic, particularly on starting lines!

Auxiliary

A built in outboard well, on the port side just aft of the cockpit puts the outboard in an easily reached position. The prop is well foward, similar to an inboard prop, helping to avoid cavatation, which is often a problem with transom mounted outboards. Once underway, the outboard can be tilted up clear of the water. An 8 H.P. motor is ample, giving a cruising speed of 6 to 7 knots.

Safety

The hundreds of original Farrier designed Trailertris have established an impressive safety record, over some 500,000 sailing miles, mostly in Australian waters, which are considered among the most hazardous in the world. The F27 will enhance this record, and in addition offers an emergency safety gear access hatch as standard, and a simple, proven, inbuilt righting system (by utilizing the folding system)—a first, we believe, in any production multihull.

The single most important safety feature is total unsinkability. There are numerous watertight compartments throughout the F27, and even with all of these flooded, she would still float. Punch a hole in all three hulls and not only would she float, but she can still be sailed as well!

High stability is another essential safety feature for any type of boat. In this regard the maximum righting moment of the F27 is an incredible 29,000 foot pounds. By comparison, the righting moment of a similar size conventional yacht is about 4000 foot pounds, while a fourteen foot catamaran is only about 1600 foot pounds

Crew safety is unmatched by any other type of craft. The wide, near level, decks give one a sense of security that just cannot be found elsewhere. For kids on board there's simply no better or safer boat on the water. They can be virtually anywhere on deck with little danger of being thrown in the water by unexpected heeling.

You are not alone

When you become an F27 owner, you will automatically receive a quarterly Newsletter, completely devoted to news about Trailertris of all types. It has been published quarterly for the last 5 years, and offers sailing tips, news, views, cruising stories, and keeps you in touch with all that is happening in the world of trailerable trimarans.

Included with every F27 is a complete and thoroughly detailed owner's manual, with operating instructions, sailing hints, and complete specifications. The F27 is intended to be a strict, one-design class, and as numbers build up, class racing will be encouraged and organized world wide.

The modern 'state of the art' multihull is now dominating all aspects of unrestricted open ocean racing, with incredible speeds being achieved. Hi-tech materials combined with completely new concepts in design have made the modern multihull a highly developed dynamic sailing machine. Their wide beam enhanced stability, unsinkability, and modern technology, has given a whole new aspect to safe, high speed sailing. Yachting is entering a new era, and the F27 makes it possible to participate in this exciting new form of sailing.

Specifications

L.O.A.	27' 1"
L.W.L.	26' 3"
Beam	19' 1"
Folded Beam	8' 5"
Draft (hull only)	1' 2"
Draft (board down)	4' 11"
Approx. Weight	2000lb.
Sail areas: Mainsail	280sq.ft.
Jib	176sq.ft.
Genoa	247sq.ft.
Spinnaker	625sq.ft.
Designer	Ian Farrier

Availability: The first boats will probably not be available until early 1986.

Corsair Marine
150 Center St.
Chula Vista,Ca. 92011
Ph. (619) 585-3005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