FARR®

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YACHT DESIGNERS
TLX 140925 FARR UT

SEPTEMBER 1985

DESIGNER'S COMMENTS

DESIGN NO. 155 - 50 FT. I.O.R. RACING YACHT

This 50 foot IOR racer, Design No. 155, was commissioned by well known Olympic Gold Medalist David Forbes of Sydney, Australia. The client wanted a yacht which would be highly competitive on the racing circuit off the New South Wales Coast and in the Pan Am Clipper Cup Series.

A great deal of research was put into achieving an all around high performance yacht which would be extremely fast in all weather conditions...rather than being an extreme performer in a given set of conditions which is typical of most designs for Australian campaigns. The design office created a higher than usual sail area to displacement ratio number to improve running and medium air performance. The sail area to wetted surface area is greater (SHR 16.1) to give light weather advantages while retaining the usual high performance Farr characteristics in moderate fresh air conditions common to the New South Wales Coast which necessitate a good beating and reaching yacht. Much of this has been achieved by responding to Rule changes allowing for a narrower waterline beam which was proven successful in the SORC with SNAKE OIL and the World One Tons with HIGHLAND FLING.

One of the most exciting dimensions of Design 155 and one which is unorthodox in the IOR design world, is the development of a keel with a "bulb" attached at the tip. The "bulb" concept reflects our research in maxi yacht keel design, which has proven that our creation of narrow, deep, high performance foils will work even better in conjunction with a bulb.

The hull and fractionally rigged sail configurations are total Grand Prix IOR race boat rating 40. However, the owner requested interior cruising amenities such as two aft double berths, enclosed head and shower, comprehensive galley including microwave, icemaker, hot and cold running water, freezer and deepfreeze. Accordingly, the deck layout and superstructure lines will not be typical of an IOR race boat.

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Construction requirements, as specified by Russell Bowler, reflect the use of Kevlar vacuum bagged over a Divinycel core. The yacht will be stiff in overall flexure, torsion and panel flexure. Longitudinal weight distribution will reduce pitching inertia, an important factor when sailing in the rough Australian offshore conditions. Australian weather conditions dictated a thoroughly seaworthy yacht. The American Bureau of Shipping is recognized by the design office as providing the benchmark for assessing safety and Farr used these standards as the basis for panel and frame design. This, combined with a deep aluminum ring frame at the mast attached to a centerline longitudinal aluminum supporting frame which takes the keel and engine loads, is attached to another frame aft extending to the topsides to make for an extremely stiff structure.

The Farr design office utilized research from successful One Tonners EXADOR, SUNDANCE and HIGHLAND FLING, 43 footers SNAKE OIL and DRAKE'S PRAYER and the three Whitbread maxi yachts to develop an overall 50 foot IOR yacht which will be a successful performer in all conditions and exceed the clients requirements for an accommodating interior.

LOA	50' 4"	15.33 m
DWL	39'11"	12.16 m
BEAM	15'	4.56 m
DISPLACEMENT	26345.5 lbs.	11950.3 kg.
BALLAST	14645 lbs.	6643 kg
DRAFT	9'	2.75 m

DESIGN 155

15.3m I.O.R. Racing Yacht

FOR: David Forbes to race in 1986 Kenwood Cup

DIMENSIONS:

	M.	Ft.
LOA	15.33	50' 0"
LWL	12.14	39' 11"
BEAM	4.57	15' 0"

RIG:

	M.	Ft.
I	18.30	60.04
J	5.36	17.57
P	19.72	64.70
B	7.09	23.20