

Farr IRC 42

LOA	12.75m
LWL	11.21m
Beam	3.94m
Draft	2.55m
DSPL	7,791kg
P	17.31m
E	6.07m
J	4.93m
SA	150.67m ²

It's not hard to see why the internationalisation of IRC continues to accelerate. This new Farr 42 looks modern and fast – and it even has some proper beds! And there are plenty of other similarly attractive and very 'sailable' new IRC designs now coming out of the woodwork elsewhere

Here come the big guns...

After a hesitant beginning there are now several interesting large custom IRC designs building for US owners. Meanwhile, there is plenty going on with series-built IRC designs, an area where it is no surprise to find that Farr Yacht Design have been applying some very serious resources

The 'IRC-friendly' Farr 42

The late-2004 announcement of IRC's use on the USA offshore circuit quickly prompted interest in new IRC-oriented designs, particularly in the mid-sized 40-46ft range that has long proved popular with US club-race sailors. As a result of this spurt in interest, Farr Yacht Design (FYD) received several commissions over the course of 2005 for new IRC racer-cruisers, sufficient to prompt the Annapolis-based design team to embark on a new research programme to understand this 'Anglo Saxon' rule in greater depth.

Jim Schmicker of FYD explains the process: 'While specific formulae used to determine the IRC ratings are not published, the style of boat favoured by these formulae can be deduced by examining the published rule policy, reviewing race

our existing designs that have already done well under IRC, and applying to the rating office for trial certificates where variations in ratings given for different design choices can be compared against our VPP results.

'The IRC rule has all the challenges that a single number handicap system presents to the designer. While it is possible to bias the design to specific course types and wind strengths, for our new 42-footer we aimed to provide good all-round performance in a wide range of conditions. There is ample sail area for light wind speed – particularly crucial off Long Island and also in southern California – complemented by the high stability necessary to ensure competitive performance upwind in stronger winds.'

Schmicker says that Design #588M was commissioned in a bid to offer the market

the demands of real cruising and yet still be a serious contender for handicap wins in both round-the-buoys and long-distance events under IRC, while also being competitive when using PHRF, ORR and Americap. The 2005 IRC rule yielded a TCC of 1.158 for the design on a test certificate, and a standard rating request has been submitted for 2006 (the design's PHRF rating for Lake Michigan has been assigned as +6 sec/mile).

The table opposite summarises how the Farr 42 should perform against a known benchmark, the Farr 40 One Design, based on FYD's own VPP-generated data. For a true dual-purpose yacht, the Farr 42's claimed speed upwind and down appears impressive, being faster than the Farr 40 OD in all but light air upwind and breezy offwind conditions, where the lighter raceboat will start to plane earlier.

While IRC does have clear typeforming policies set out within the rule, Schmicker believes that considerable freedom exists for the designer to develop sweet hull shapes with favourable volume distributions, optimal appendage placements and good stability. Before moving towards a final design, the Farr team researched numerous beam and beam waterline ratios, LOA and length waterline values and other basic hull parameters over a wide range of boat sizes to find

deck volume distribution and transom immersion effects were also closely examined to ensure good performance and handling over a wide range of conditions.

The keel chosen for the new IRC 42 is T-style with a lead bulb supported by a cast-iron fin to give the boat a low centre of gravity and minimum wetted area. This allows the rig and interior to be positioned to optimise the hull centre of buoyancy and gyration, while also producing a relatively simple structural solution.

Deck and interior have been designed around the dual requirements of comfortable, workable cruising accommodation and the necessary cockpit workspace for round-the-buoys manoeuvres. A fairly standard and well-proven interior layout has been adopted, with central saloon berths, galley to port, navigation station to starboard, and well-apportioned locker space. The interior comes with the option of double or single berths aft. Twin wheels afford the helmsman good viewing for sailing and offer a passage through the centre of the cockpit for crew movement.

The rig is a now quite standard 20-degree swept-spreader carbon spar with the option of a bow prod or standard over-length pole for downwind work. The sailplan is generous, and masthead kites promise brisk offwind pace. The sailplan is offered in two downwind modes: one features a generous-sized masthead asymmetrical spinnaker flown off a retractable bow prod, alternatively a masthead symmetrical (or asymmetrical) kite can be flown off an over-length conventional pole attaching to the mast.

The hull and deck are constructed in a sandwich of unidirectional E-glass, Corecell and post-cured epoxy for the prototype, and vinylester resin for the produc-

tion models. While Austral Yachts in South Australia have the first production-built boat nearly finished for an Irish client, Jim Betts in Anacortes, Washington is building a prototype for Jim Moller of Chicago in epoxy with a launch planned for mid-June.

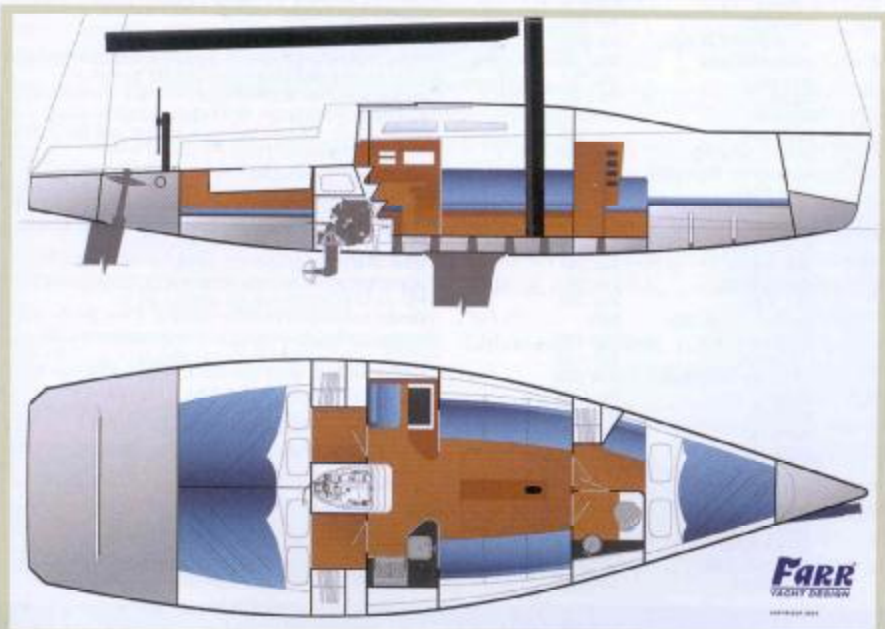
In line with the latest IRC designs in Europe, Moller's boat will have an over-length mast-mounted pole rather than bow prod, and asymmetrical as well as symmetrical masthead kites. The carbon spar will be built by Hall Spars (with spreaders and boom also all in carbon). Winches are from Harken, with upwind 3DL sails and asymmetrical kites made by North, plus one Ultra jib and two symmetrical kites that are being built by Ulmer Kolius, targeted specifically at inshore course racing.

Jim Moller's new boat will compete in all the major Chicago-area inshore and offshore events in the 2006 season, including the annual Chicago-Mackinac Race, which will be scored primarily in ORR, but which will have 'shadow' scoring in IRC, with prizes awarded in both.

While Austral Yachts are currently leading the way with series-builds to this design, should Moller's new boat generate sufficient interest in the US then it is anticipated that tooling will be taken off the prototype for a local production run here.

And while the New York YC can be rightly proud of the growing order book for their own new, Frers-designed, Nautor-built one-design 42, the creators of the Farr IRC 42 are hoping to be able to take some market advantage of the fact that their new offering goes on the water for substantially fewer US dollars. The Farr IRC 42 will also be available in time for much of the 2006 racing season...

Dobbs Davis



Performance comparison

Farr 42 vs Farr 40 One Design (IRC TCC 1.174)

Windspeed	8kt	12kt	18kt
Upwind	13 sec/mile slower	2 sec/mile faster	9 sec/mile faster
Downwind	11 sec/mile faster	4 sec/mile faster	3 sec/mile slower

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Fax: 614-9339-0132
E Mail: brad@ullmansails.com.au

Sydney

Tel.: 612-9529-8546
Fax: 612-9529-3425
E Mail: bruce@ullmansails.com.au

Sunshine Coast

Tel.: 617-5492-8220
Fax: 617-5492-8221
Email: yancy@ullmansails.com.au

Whitsunday

Tel.: 617-4948-3322
Fax: 617-4948-3065
Email: aaron@ullmansails.com.au

EUROPE

FRANCE

Brittany

Tel.: 33-298-660-634
Fax: 33-298-823-802
E Mail: top.regate@wanadoo.fr

ITALY

ISEO

Tel.: 39-030-98-22-178
Fax: 39-030-98-21-807
E Mail: ullmango@iol.it

Trieste

Tel.: 39-040-8323434
Fax: 39-040-8323435
E Mail: ullmans@tin.it

Palermo, Sicilia

Tel/Fax: 39-091-637-4471
E Mail: ullmansicilia@tiscali.it

UNITED KINGDOM

Tel.: 44-2380-457711
Fax: 44-8452-807939
E Mail: ian@uk-ullman-sails.com

NORTH AMERICA

United States

CALIFORNIA

Newport Beach

Tel.: (714) 432-1860
Fax: (714) 432-1865
E-mail:

Ullman@UllmanSails.com

San Diego

Tel.: (619) 226-1133
Fax: (619) 226-3244
E Mail: ullmansdi@networld.net

Long Beach

Tel.: (562) 598-9441
Fax: (562) 598-9441

Ventura

Tel.: (805) 644-9579
Fax: (805) 644-8643
E Mail: ullmanventura@worldnet.att.net

FLORIDA

Sarasota

Tel.: (941) 951-0189
Fax: (941) 951-4758
E Mail: ull@verizon.net

St. Petersburg

Tel.: (727) 327-5361
Fax: (727) 327-4275
E Mail: masthead@mastheadsailinggear.com

MARYLAND

Havre de Grace

Tel.: (410) 539-9261
Fax: (410) 539-9364
E Mail: skots@erols.com

NEW YORK

Port Ontario

Tel.: (315) 298-3960
Fax: (315) 298-3000
E Mail: RAHAME@qjunio.com

VIRGINIA

Tel.: (804) 776-6151
Fax: (804) 776-6751
E Mail: jony@ullmansails.com

WASHINGTON

Puget Sound

Tel.: (206) 789-2171
E Mail: ullmansails@comcast.com

MEXICO

Acapulco

Tel.: 5274-83-84-32
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