

60' High Performance Classic **Mystic**

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Mystic rewrites the rules of modern classics, combining the grace of tradition with the DNA of a modern racer to reach past compromise and provide the ultimate balance of style and performance. Just as the classic finishes of oiled teak and varnished mahogany can be complimented by the gloss of clear-coat carbon and polished stainless steel, the strides in modern naval architecture and composite engineering can elevate the timeless beauty of a traditionally styled yacht to new levels of performance.

The starting point of the proposal was to produce a classically styled design that reflected a modern lifestyle, where daysailing and weekending represent the opportunities for enjoyment on the water. It had to be a pleasure to shorthand or daysail with friends and family who shouldn't have to focus on the mechanics but instead should be able to relax to embrace the experience, both on deck and below. And this pleasure should be had without having to relinquish the high performance that represents the goal of any modern design office.

The aesthetic goals have been influenced by the trends in modern performance daysailers: to pursue clean simple styling and layouts; with the minimum of intrusion on deck from sail handling systems; a combination of modern and traditional finishes; and a large open plan interior for casual



entertaining or relaxing.

The core of the design revolves around the hull shape and its relationship with the overall displacement and the size of the bulb. These factors combine to produce the balance of stability and drag that dictates the ultimate performance. By ensuring that the bulb is large enough to provide the stability necessary to ensure an enjoyable family yacht, the hull shape



can benefit from a slim waterline beam for low drag in light and medium conditions. This provides stunning 9kt+ upwind performance in a breeze while the light overall displacement ensures that reaching and offwind speed are exceptional—nothing will stop Mystic being raced competitively when the desire arises!

On deck the first thing to become apparent is the lack of any sail-handling hardware. Every effort has been made to lead the control lines internally to powered systems such as captive reel winches and magic trim hydraulics to produce a clean and inviting deck. A curved coaming surrounds the large cockpit, the perfect spot for enjoying a sparkling sail to Block Island, curling up with a book, or enjoying a family lunch.

Like the open uncluttered deck, the spacious interior reflects the reality of how we use boats today, and removes the un-

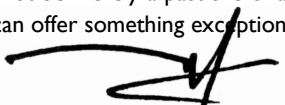
necessary weight and clutter of a dark interior that rarely gets used. The large saloon lit by the central glass panel above is where everyone congregates, with a nav center to one side of the companionway and an entertainment center on the other. Forward the head compartment and galley flank the passage to the owners cabin. Two aft cabins complete the accomodation: perfect for an overnight or weekend trip.

The runnerless carbon swept spreader rig is the ultimate transformation of high-performance to shorthanded practical. The main can be hoisted on slides out of its park avenue boom by the push of a button and controlled by the single-line sheet system, while the non-overlapping jibs ensure easy tacking, with a recessed furler under the foredeck to roll it away, and with a furler or sock controlled spinnaker system even the largest kites can be handled safely. The fixed sprit works because the apparent wind rarely comes aft of 115 degrees, removing the complexity associated with poles and guys, and providing the ideal tack point for a large drifter on a furler for pace on even the lightest day. And when the time for motor-ing does come the retracting propeller arrangement provides the benefits of a three-bladed fixed prop without any of the drag, producing extraordinary handling and speed under power.



Mystic blends the finest elements of a century of yacht design development into a single yacht, ready to fulfill your dream.

“We cannot ignore the strides made in modern yacht design, Mystic is the expression of my belief that a true Spirit of Tradition design can combine the best of classic and modern, and not be merely a pastiche of an outdated style. For the client who appreciates both style and speed I believe Mystic can offer something exceptional...”



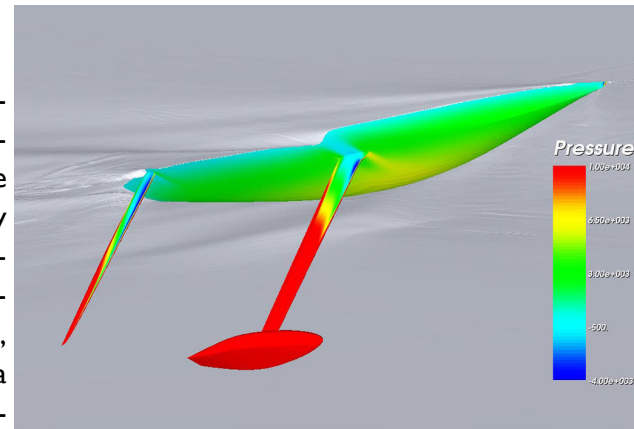
Mark Mills •

The Inspiration for Speed

Inspired by Mills Design's very successful 70' Mini-Maxi Alegre, Mystic draws on technology and configurations proven in competition on the Grand Prix circuit to achieve her unique blend of performance without effort. First to finish and Mini-Maxi winner of both of the most prestigious offshore races in the Mediterranean the Rolex Middle Sea Race and the Rolex Giraglia Race, as well as inshore round the cans victor the at Giraglia Rolex Cup, Alegre has beaten the worlds best to demonstrate her pedigree.

The lessons that come from competition at this level have been used to produce a new generation of high performance classics like Mystic. America's Cup grade Computational Fluid Dynamics (CFD) research, VPP analysis, finite element analysis and three-dimensional modelling of the complete design provides the theoretical basis for speed. Turning that knowledge into reality relies on the finest engineering and construction values available. Alegre's high technology construction of unidirectional prepreg carbon over nomex core cured in an oven is the highest refinement of the advanced composite engineering principles Mills Design applies to all its yachts, which allow not only reduced displacement for higher performance but as importantly allows a larger proportion of the boats mass to go into the bulb to provide the stability and seaworthiness required to allow a performance classic to thrill its owner without 20 more crew on the rail.

Alegre demonstrates that high performance brings it own rewards: greater excitement, higher speeds, shorter passage times, and higher apparent wind speeds, allowing for example the simplicity of a swept spreader carbon rig and fixed sprit to offer the highest offwind performance with easy to gybe masthead asymmetrical spinnakers. However what Alegre brings a team of grinders to achieve can be done with the push of a button on Mystic, with the encouragement of IRC allowing her to race at any major race or regatta worldwide such as Antigua Week, Voiles De St. Tropez, or Newport-Bermuda.



Mills Design Ltd.

Mills Design is a performance yacht design firm headed by Mark Mills. Originally from California, Mark has raced at the top level including Admiral's Cup and Commodore's Cups among others, before returning to University in the UK for his Naval Architecture qualification. Mills was appointed to the Royal Ocean Racing Clubs Technical Committee in 1999, and joined the US-IRC Technical Committee on its formation in 2006, reflecting his ongoing deep involvement in Rating and Handicapping.

Since opening the firm in 1995 it has enjoyed continuing success particularly under the IRC rule where his boats both custom and production have proved to be winners worldwide, in 2009 its designs are National IRC Champions in 4 different countries alone. Mills' belief in simple discrete solutions offering the key to both style but more importantly competitive success in a complex field such as yacht racing has helped its boats win trophies from the smallest daysailers to Maxi events.

Increasingly working on larger performance projects both for both racing and cruising Mills Design Ltd. has a worldwide range of partners and contacts to draw on to provide the perfect team for any project. These include composite engineers, high tech builders, Fluid Dynamics (CFD) specialists, project managers, spar manufacturers, deck gear suppliers, interior designers, and systems experts to offer the finest team possible for any new project.

Mills Design welcomes any enquiries about new or existing designs, please contact us and let us see how we can help to create something special.

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Specification

Type: High performance classically styled cruiser/racer

Length Overall	18.30 m
Waterline Length	14.73 m
Beam	4.50 m
Draft	3.45 m
Displacement	13250 kg
Main	101.27 m ²
Jib	74.097 m ²
Spin	255.00 m ²

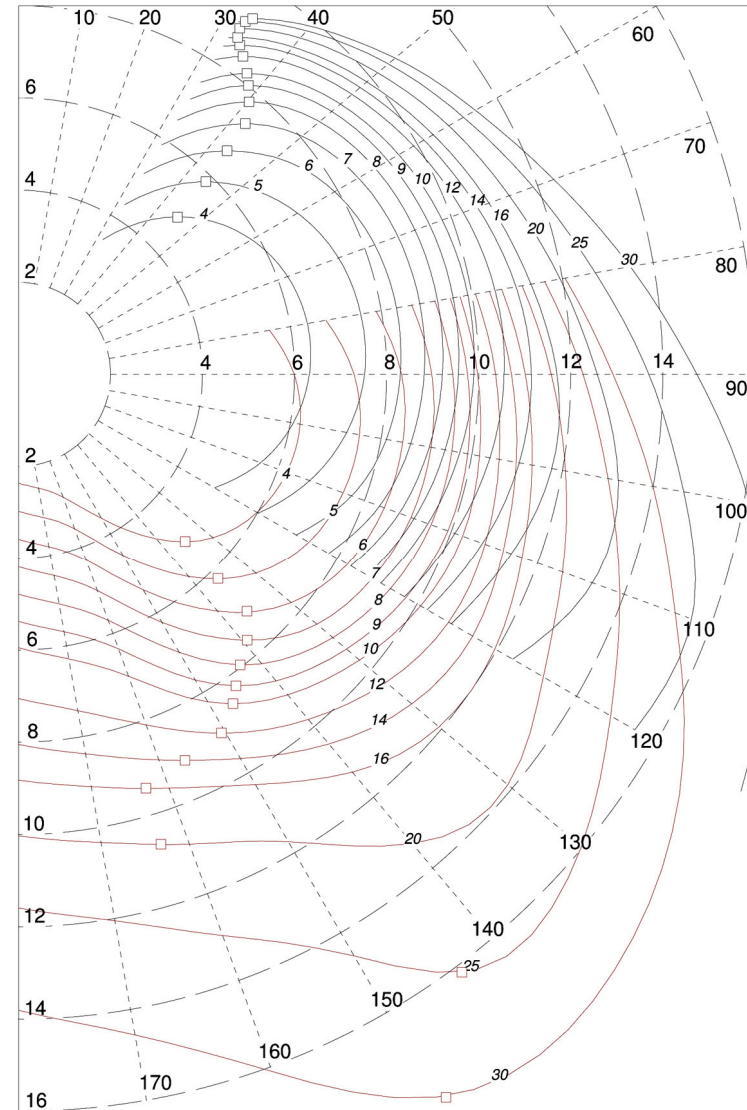


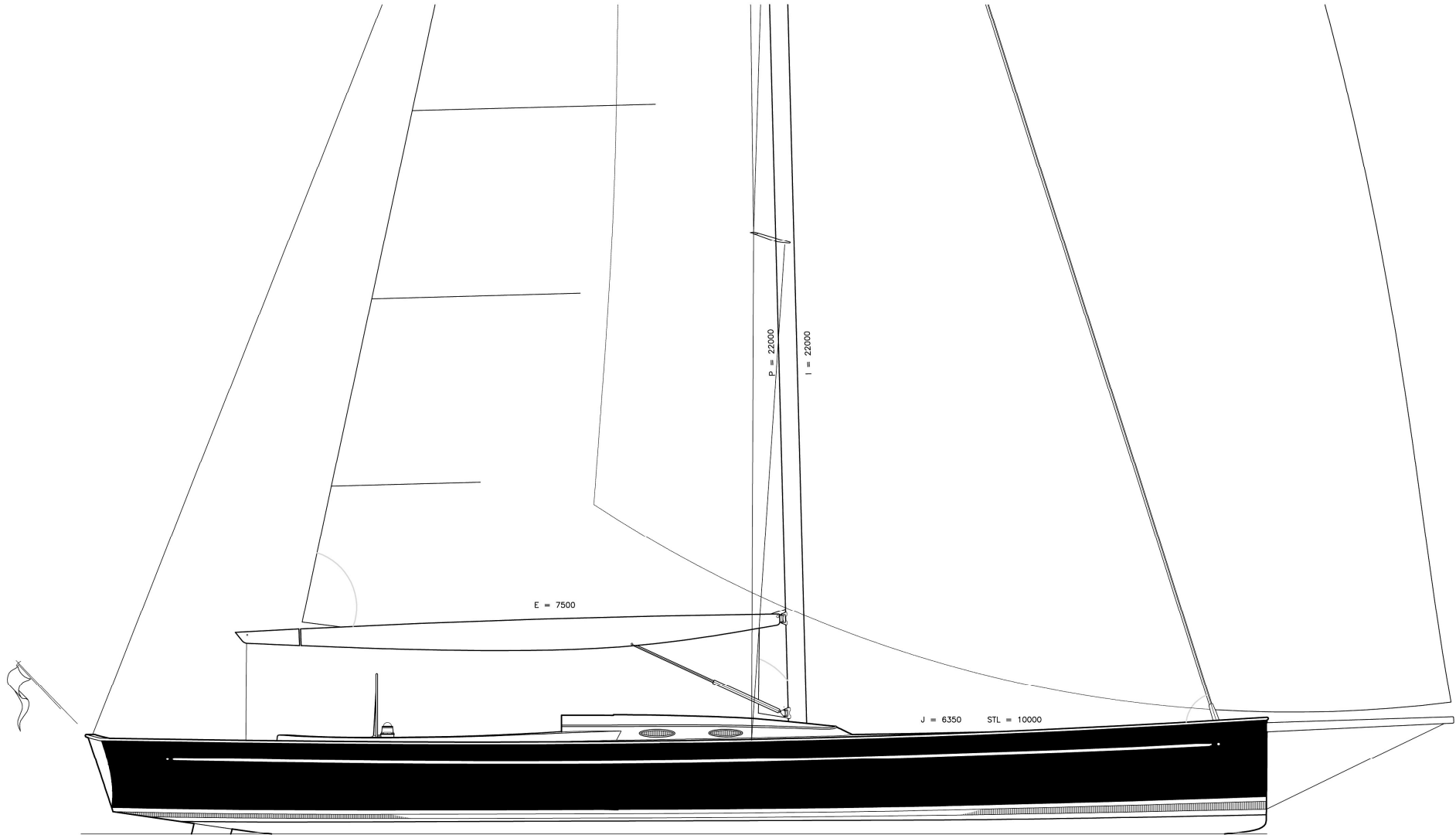
Construction:

- Composite sandwich hull, deck, and interior structure, vacuum bagged or prepreg epoxy/carbon and e-glass laminate
- Steel milled fin (hydraulic lift keel option)
- Lead bulb
- Carbon rudder stock and blade turning in roller bearings
- Carbon rig, 2 20 deg. Swept spreaders
- Carbon fixed bowsprit
- Composite standing rigging
- Powered rig and sail control systems incl. recessed roller furler
- Underdeck line runs
- 75hp diesel driving retracting propeller system
- Genset with synchronised inverter and shorepower

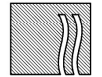
Performance

Best Boatspeeds (kt)													
	4	5	6	7	8	9	10	12	14	16	20	25	30
32.0	3.45	4.35	5.15	5.88	6.51	7.05	7.48	8.06	8.40	8.61	8.86	9.02	9.09
36.0	3.93	4.90	5.76	6.52	7.18	7.70	8.06	8.53	8.81	8.98	9.22	9.41	9.50
40.0	4.36	5.39	6.29	7.07	7.72	8.17	8.47	8.86	9.11	9.28	9.53	9.74	9.86
45.0	4.84	5.91	6.85	7.64	8.20	8.58	8.85	9.19	9.42	9.59	9.87	10.12	10.26
52.0	5.38	6.50	7.47	8.17	8.64	8.97	9.22	9.55	9.79	9.98	10.31	10.62	10.84
60.0	5.85	7.00	7.93	8.53	8.95	9.27	9.54	9.91	10.17	10.40	10.79	11.16	11.46
70.0	6.22	7.40	8.23	8.77	9.16	9.50	9.79	10.28	10.61	10.88	11.34	11.89	12.37
80.0	6.37	7.55	8.34	8.85	9.24	9.59	9.91	10.51	10.97	11.30	11.95	12.72	13.49
90.0	6.32	7.51	8.32	8.98	9.43	9.76	9.97	10.55	11.14	11.70	12.57	13.70	14.74
100.0	6.21	7.52	8.48	9.10	9.56	9.91	10.17	10.60	11.04	11.76	13.23	14.67	16.13
110.0	6.20	7.50	8.45	9.07	9.54	9.92	10.26	10.79	11.20	11.64	13.27	15.56	17.28
120.0	5.98	7.28	8.25	8.88	9.33	9.71	10.08	10.79	11.39	11.95	13.16	15.46	18.12
135.0	5.14	6.29	7.30	8.08	8.61	9.03	9.40	10.13	10.86	11.68	13.83	16.38	18.30
150.0	3.61	4.54	5.42	6.23	6.98	7.68	8.22	9.01	9.64	10.29	11.72	14.58	18.12
160.0	2.83	3.57	4.30	5.01	5.70	6.36	6.99	8.11	8.92	9.57	10.86	12.96	16.10
170.0	2.50	3.15	3.80	4.44	5.07	5.69	6.28	7.42	8.37	9.09	10.32	12.05	14.55
180.0	2.36	2.97	3.58	4.19	4.79	5.38	5.95	7.05	8.04	8.81	10.02	11.59	13.80
Up.Vs	4.86	5.84	6.64	7.34	7.75	8.02	8.20	8.45	8.61	8.72	8.92	9.10	9.24
Up.Bt	45.4	44.2	43.1	42.2	40.3	38.5	37.2	35.2	33.9	33.1	32.6	32.8	33.4
Up.Vmg	3.41	4.18	4.85	5.44	5.92	6.27	6.53	6.90	7.15	7.31	7.51	7.65	7.72
Dn.Vs	5.13	6.21	7.15	7.63	7.95	8.26	8.54	8.96	9.14	9.41	10.67	16.16	18.23
Dn.Bt	135.1	135.7	136.1	139.3	142.7	145.1	147.0	150.5	156.7	162.9	163.1	143.4	149.4
Dn.Vmg	3.63	4.44	5.15	5.78	6.32	6.77	7.16	7.80	8.39	9.00	10.21	12.98	15.69





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MILLS DESIGN

Mills Design
 60' High Performance Classic

Profile
 Scale @ A1 = 1:30

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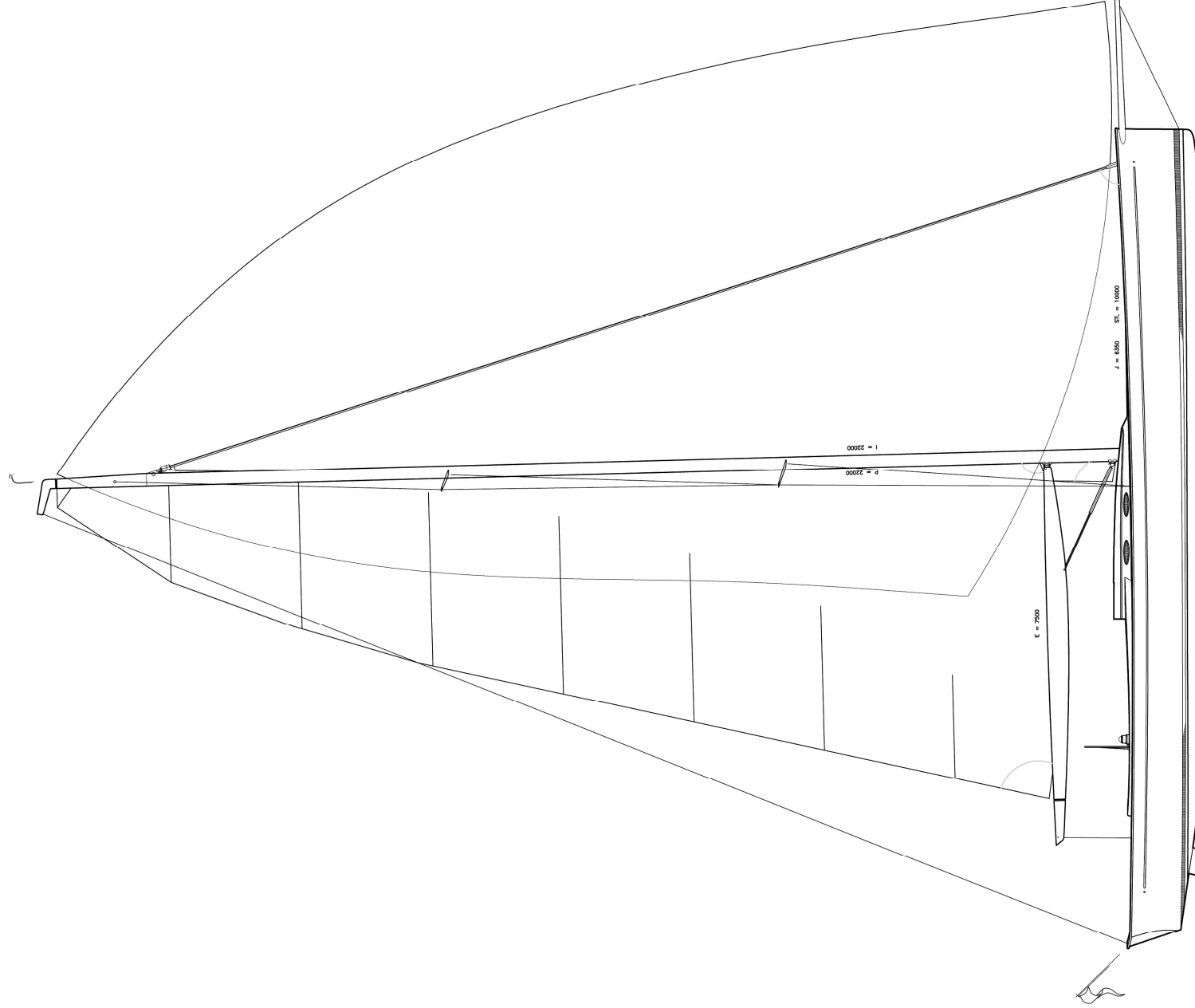
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MILLS DESIGN

Mills Design
60' High Performance Classic

Sail Plan

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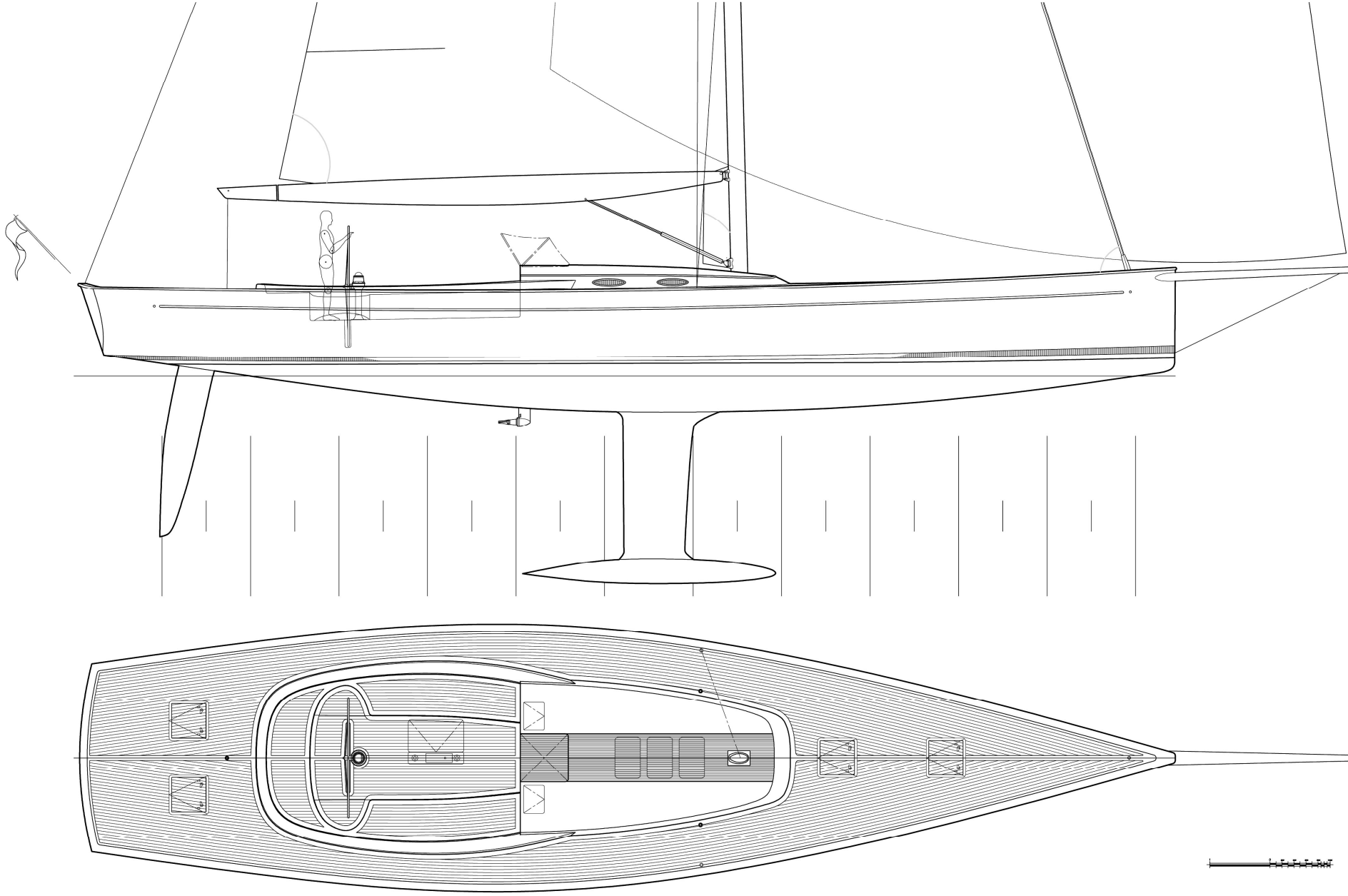
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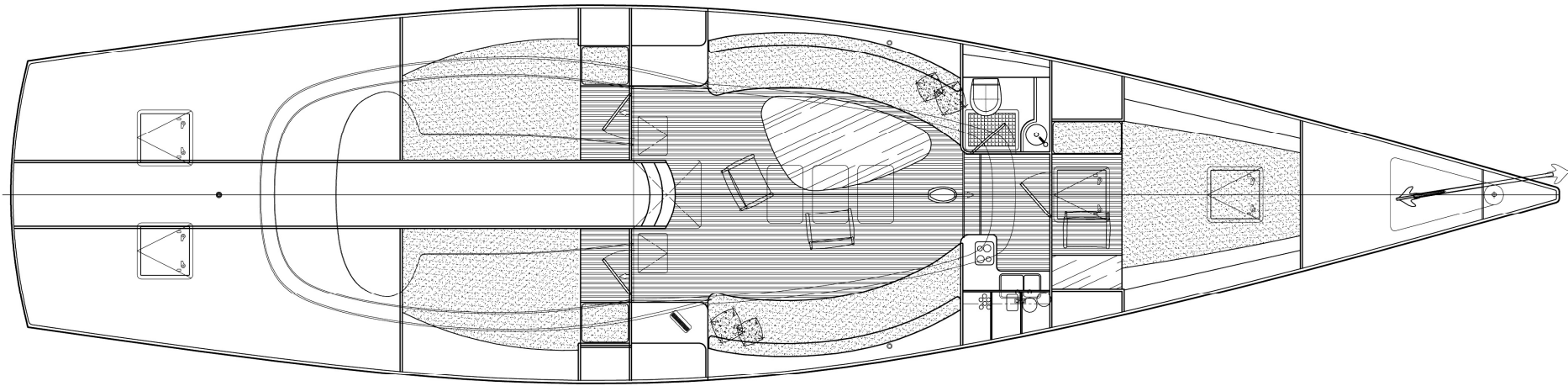


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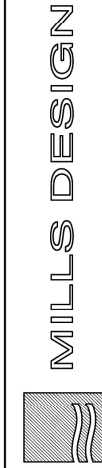
Mills Design
 60' High Performance Classic

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Mills Design
 60' High Performance Classic

Interior Plan
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