

# M45 style

## ***DESIGN:***

This modern Cruiser/Racer was designed to match exiting sailing performances together with unique comfort and safety on cruise.

Many experiences in the racers' optimization field, together with sophisticated studies made in collaboration with specialists in computational fluid dynamics, gave birth to the hull, fin and rudder design.

The deck design is unique and singular and resulted from a research in terms of ergonomics and aerodynamics, not only on race but also on cruise.

The interiors as well as the finishes are designed by young architects, who introduced a modern and minimal design, though keeping all the marine qualities a boat must have.

The M45 project was created in compliance with EC rule (cat. A / unlimited navigation) for pleasure crafts and pursuant to the ORC regulations.

## ***HULL AND DECK CONSTRUCTION***

Hull and deck are made of PVC sandwich with one-way and biaxial E-glass covering, laminated with epoxy resin (lifetime guarantee against osmosis) with vacuum on female molds. The lining of the hull end are made in carbon to assure much structural rigidity. Hull and deck are furthermore processed with a post-cure cycle to get the highest mechanical performance in terms of rigidity.

The so called spider structure is made of high resistant steel and supports the loads of keel, chain plates and mast, so that the boat integrity is always assured, even in extreme conditions.

The bulkheads are made of marine plywood, fibreglassed to the hull and fixed to the deck, with the exception of the fore and aft anti-collision bulkheads and the master bulkhead, which are made of composite with the same techniques used for the hull and deck, in order to keep the boat ends light and to allow a smooth passage on the wave.

## ***HULL AND DECK COLOURS***

The two-coloured exterior paints can be chosen among the pastel colours (metallic colours as optional).

## ***KEEL***

The fin is made of a Weldox 700 high strength structural steel.

The upper end of the structure has a platen, which is put in a housing in the hull, connected with the spider structure through AISI 136 stainless steel screws, screwed with screwnut and locknut.

Steel parts are protected with appropriate epoxy cycle and covered with epoxy adhesives, tied on the entrance and exit boards.

The bulb is made from the casting of lead with a 3% of antimony and is connected to the keel thanks to two vertical hubs.

Aerofoils and keel forms were designed and perfected with the help of external consulting and advanced software, used at present by the America's Cup consortia.

## ***RUDDER AND STEERING***

The distinguishing manoeuvrability of the M45 is given by the considerable sizes of its rudder and by the balanced kneading rate of the steering.

In order to reduce weight without decreasing safety, the rudder stock is made of carbon with variable section and it is housed on self aligning bearings.

Two steering wheels not only enhance the big cockpit, but also have many advantages, such as easy fore-aft passage and excellent forward visibility.

The pedestals on this boat are made of painted composite, designed and made by 2 emme marine.

### ***COCKPIT***

A spacious and ergonomic cockpit with two comfortable seats (2 m long) are characteristic of the M45.

There are also four spacious peaks: right seat, centre cockpit (compartment for the life raft) and aft cockpit (with easy access to the steering).

The halyard compartment is unique and peculiar and is situated in the bottom of the cockpit, near the entrance.

The main traveller is lowered at the level of the cockpit, in order to avoid annoying encumbrances.

The extension table and the cushions for the cockpit seats are standard equipment of the M45. The cushions are made of a waterproof material whose colour can be chosen.

Gas springs are fitted to all hatches.

### ***SKYLIGHTS, PORTS AND WINDOWS***

Skylights in the bow cabin and dinette, as well as the ports in the bathroom, galley and aft cabins, can be opened and are lowered. Their good placement together with their dimensions assure great ventilation without getting in the way of the deck.

The great side windows on the cabin top and on the gunnels, thanks to their studied design, grant a diffuse lightness to all interiors and are typical of this version.

Furthermore, two peculiar windows at the base of the cockpit seats increase the lightness in the aft cabins.

The companion way has a convenient vertical closing with sliding door, that disappears under the cockpit solving the problem of loading cumbersome closing panels.

### ***DECK EQUIPMENT***

All manoeuvres can be easily made from the cockpit, keeping at the same time the deck free from strings and equipment thanks to the structure-integrated passages.

- 2 x B53.2 STA Harken main winches
- 2 x B46.2 STA Harken halyards winches
- 2 x B48.2 STA Harken mainsail winches
- Mainsail line with German system with deck-integrated passage
- Embedded main traveller with Ronstan ball bearings car
- Ronstan jib tracks
- 10 Spinlock stoppers
- Vang with gas cylinder and block and tackle system
- Ronstan/Wichard blocks and equipment
- Suunto back-light magnetic compass

- Embedded curling units
- Gennaker equipment with sheets and blocks

All deck walkable areas are finished off with a high grip non slip material.

Four big closable wing shake mooring cleats assure great functionality during the mooring and no encumbrance during the sailing.

### ***MAST AND RIGGING***

The mast is made of aluminium, tapered and with high performance profile, armed 9/10 with two sequences of spreaders quartered 20°.

The boom has an outhaul rig.

The discontinuous rod rigging is made of high resistant Nitronic 50 steel.

The vertical shrouds are tack side fixed, while the diagonal ones are fixed near the cabin top, so that the fore-aft deck passages are easier.

The M45 Style is equipped with rigging: a main halyard boused 2:1, a jib halyard, a halyard for masthead asymmetric spinnaker .

### ***INTERIOR***

The elegant and spacious interiors are made by practiced craftsmen, using top quality marine plywood, veneered with optionally type of woods. In order to reduce weight, some parts of the furniture are made of composite and then painted with pastel colours that can be chosen by the owner. A prerogative of the M45 interiors is the best use of the available space for stowage.

Doors are finished off with aluminium frames, whose colour can be chosen.

#### **Bow cabin:**

The owner cabin has remarkable dimensions: a double bed more than 2 m long with both sides access, two large hanging wardrobes with shoe rack and an owner bathroom. There are also two LED reading spots, two big drawers on the front of the bed and other stowage compartments under the bed.

#### **Owner bathroom:**

The spacious and ergonomic owner bathroom is fitted with manual toilet, wash basin with mixer tap, high and low cabinets with inclined mirrors and separated shower with glazed polycarbonate box.

#### **Relaxation and navigation areas:**

Starboard there are two comfortable reading armchairs and a chart table with lifting top (where a laptop can be easily stored) and storage place for nautical charts. The wall panel includes the electric control panel, the electronic instrumentation and the LED light.

#### **Main saloon:**

The saloon has comfortable C-shaped couches with soft cushions and two paired flowing folding seats. The big table has two bottle compartments inside and gives the possibility up to six people to eat comfortably. Astern of the dinette there is a wardrobe with high and low compartments, while under the couches there are easily accessible stowage compartments.

#### **Galley:**

The spacious galley is peculiar and has a refined design. Typical of this version is the breakfast bar, there are also a sink with mixer tap, a big top opening fridge (120 l), a three-burners swinging gas stove, drawers and many other compartments. Its C-shape gave the possibility to get more stowage room and better use of ergonomics even if the boat is listed.

**Aft bathroom:**

The second bathroom is starboard and has a manual toilet, a wash basin with mixer tap, high and low cabinets with inclined mirrors and a shower with separated mixer tap.

**Aft cabins:**

The M45 has two spacious mirror aft cabins with double bed more than 2 m long and a big hanging wardrobe with shoe rack.

***ENGINE***

The boat is equipped with a 50hp diesel inboard engine with propeller folding, placed in an easily accessible and sound-isolated compartment. This engine gives the M45 the possibility to reach a remarkable cruising speed. The capacious fuel tank (170 l) allows a considerable autonomy even at high speed.

***SYSTEMS*****Electrical system and lighting:**

The core of the system is the synoptic back-light panel expressly made for the M45. It is placed above the table chart and has magnetothermic switches for every on board service, digital gauges for the diesel oil consumption and for the battery charge status.

In the convenient and accessible compartment of the electrical system there are four 100 Ah gel batteries (three for the services and one for the engine starter).

The M45 interiors are widely enlightened by halogen lamps, which confer everywhere a welcoming atmosphere.

Night sailing is made easier by red courtesy lights in the cockpit along the stairs and in the saloon.

**Fresh water system:**

The M45 is equipped with a well organized plumbing system comprising three drinking water tanks with a capacity of 137 l each with level indicator on the instrumentation panel.

All sea inlets and drainings are at the level of the hull.

**Waste water system:**

Bathrooms are equipped with marine manual toilets with overboard discharge and independent aspiration.

Furthermore there is a waste water holding tank, in compliance with the current EC regulation.

***AFTER-SALE SUPPORT***

24 months guarantee on all components.

Lifetime guarantee against osmosis.

All boats constructed by 2 emme marine undergo strict thermal imaging and ultrasonic controls, made by certified companies.

The 2 emme marine shipyard has furthermore at its disposal a dedicated department for external assistance in Italy.

***Technical data:***

Overall length	13.49 m
Waterline length	12.20 m
Maximum width	4.07 m
Draft	2.40 m
Displacement	8.600 kg
Mainsail	69 m <sup>2</sup>
Jib	52 m <sup>2</sup> (106%)
Spinnaker asym	157 m <sup>2</sup>
Designers	Maurizio Cossutti / Matteo Polli – Design & Engineering 2 emme marine
Builder	2 emme marine Srl

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Contents are only approximate and the producing shipyard reserves the right to modify, cancel or replace at any time any equipment without prior notice.