New M.A.T. 12\textsuperscript{45}

IRC 12.45 m racer cruiser

Specification
August 2012v2

M.A.T. 12 Redesigned
400 kg lighter keel fin
110 mm deeper keel with less surface
Adjustable draft
Redesigned bulb for less wetted area
Adjustable bulb weight
New rudder for lighter helm and less friction
New windows
Updated interior

Type
12.45 m production dual purpose yacht aimed at providing competitive IRC performance and comfortable accommodation

Design
Mills Yacht Design, Mark Mills

www.mills-design.com

Design Category
CE category A 10

Dimensions

\begin{tabular}{|l|l|l|}
\hline
Configuration & Draft & Keel weight & Bulb weight \\
\hline
A – M.A.T. 12 & 2.55 m & 950 kg & 2.675 kg \\
B – M.A.T. 1245 & 2.66 m & 580 kg & 2.640 kg \\
C – M.A.T. 1245 & 2.55 m & 580 kg & 2.600 kg \\
D – M.A.T. 1245 & 2.66 m & 580 kg & 2.800 kg \\
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\end{tabular}

Construction

Hull and deck produced with vacuum assisted resin infusion technology (VAI) in PVC foam cored vinylester/e-glass
Bulkheads produced with VAI in PVC cored vinylester/e-glass, laminated and structurally bonded to hull and deck
Multiaxial structural e-glass reinforcement fabrics
White colored isophthalic NPG acid gelcoat on hull, deck, bulkheads and interior molding
Molded nonskid on deck and cockpit floor
Composite structural IGU for interior arrangement
Light composite interior components in PVC cored polyester/e-glass

*Vacuum assisted resin infusion technology

Resin will fill every little gap that is under vacuum
The structure is free of voids
65/35 glass/resin content

Keel

380 kg SG iron fin with 2840/2860 kg lead/antimony bulb, total 3240/3380 kg (approximate), adjustable draft and bulb weight.
Recessed in the hull
Coated and faired with a layer glass/epoxy

Comparison to M.A.T. 12 keel:
110 mm deeper draft option
400 kg lighter fin
0.5 sqm less surface area for the fin
2.640 or 2.800 kg bulb weight
0.1 sqm less surface area for the bulb

Right to modification without prenotice reserved
Harken Performa racing winches on request

Harken Black Magic racing block and car package including:
- 2:1 mainsheet to winch
- Mainsheet traveller and track, blocks for 6:1 windward sheeting traveler purchase system
- Longitudinal jib tracks, ball bearing cars and blocks for 12:1 purchase system
- Spinnaker sheet and deflector blocks
- 2:1 Spinnaker sheet tweaker blocks
- 2:1 Foreguy blocks
- Halyard lead blocks
- Halyard crossover blocks
- 4 Spinlock XX and 2 XTS series clutches
- Custom alloy fairleads
- Wichard folding pad eyes
- Recessed new cabin windows.
  - Tempered laminated scratch and impact resistant safety glass.
  - If laminated glass is shattered, the broken glass adheres to the interlayer.
- 4 opening BSI Moonlight portlights
- 4 opening BSI Moonlight hatches
- 1 opening BSI Moonlight round foredeck hatch
- Portlights interior trims in anodized alloy
- Stainless steel open bow pulpit and stern rail, stanchions, 5 mm S/S lifelines, 620 mm high
- Custom stainless steel chainplates recessed in hull
- Anchor locker with drain, provision for mounting the windlass in the locker
- 40 mm molded toe rail to mast
- Composite mast collar
- Recessed companionway sliding hatch
- Locker for gas bottle
- Plastimo 135 mm compass

Mast and Rig
- Alloy mast with 2 sets of 20 deg. swept spreaders
  - Optional:
    - Carbon fiber mast, carbon spreaders
    - Carbon fiber racing boom
- Carbon fiber spinnaker pole.
- Rod rigging, PBO backstay.
- Hydraulic integral backstay adjuster,
  - Optional:
    - Two hydraulic panels in cockpit for backstay control by main trimmer.
- Provision for:
  - 1 main halyard 2:1
  - 1 GI I height jib halyard
  - 1 wing spinnaker/jib halyard to spectacle at I height
  - 2 masthead spinnaker halyard
  - 1 pole lift 1 m below I
- Lopolight combined LED navigation lights/anchor light on mast

Engine
- Yanmar 30 Hp diesel engine with SD20 sail drive
  - Yanmar 40 Hp diesel engine with SD250 sail drive on request
- Fresh water cooling
- Sea water filter
- Exhaust with water trap
- 110 l diesel tank, level indicator, fuel filter, water separator
- Shut off valve between the diesel tank and the engine
- Diesel fill on deck
- 2 bladed folding propellers
- Telexf single lever engine control
- Engine panel recessed in the cockpit for protection

Electrical
- 12 volt DC
- 12 volt 60/80 A alternator on engine
- 2x90 amp hour group 27 Deka AGM deep cycle house batteries
- 1x90 amp hour group 27 Deka AGM deep cycle starter battery
- Blue Sea Systems main DC panel with house, engine and emergency switches
- Blue Sea Systems 12 volt DC distribution panel with 13 automatic circuit breakers
- 3 position voltmeter
- 12 volt DC plug
- LED interior lights

Plumbing
- 200 l flexible fresh water tank
- Jabsco pressurized water system
- Hand basin in head
- Right to modification without prenotice reserved