



## HORIZON-FD85 MOTOR YACHT

2020 Standard Specifications

Effective date: Jan 1<sup>st</sup>, 2020

### Principal Dimensions (approximate):

♦ L.O.A.	: 85'- 6 1/2"	( 26.07 M)
♦ L.W.L.	: 76'- 1 3/4"	(23.21 M)
♦ Beam	: 23'- 3 3/4"	(7.11 M)
♦ Draft (half load)	: 5'-9 1/4"	(1.76 M)
♦ Height (half load, W.L. to hardtop)	: 22'- 3 1/2"	(6.80 M)
♦ Displacement (half load)	: 196,210 lbs	(89 tons)
♦ Fuel	: 3,480 US gal.	(13,170 ltrs.)
♦ Fresh Water	: 400 US gal.	(1,500 ltrs.)
♦ Engine	: Twin CAT C-18 ACERT 1136HP	
♦ Generator	: 2 x Onan 27kW (50Hz) or 2 x Onan 29kW (60Hz)	

### A. Hull and Main Structure

1. ABS/DNV type approved fiber/resin & sandwich core material applied.
2. White gelcoat finish for hull above water line, exterior decks, and furniture.
3. One piece hull SCRIMP™ cored lamination w/ deep skeg and longitudinal girders.
4. Hull, deck & superstructure are built with licensed process SCRIMP™ for improved strength and less weight.
5. High-density foam cored hull bottom.
6. High-density Divinycell or equivalent foam cored hull sides, decks, and superstructure.
7. Stringers with high density foam coring.
8. Interior structural components all properly bonded to hull.
9. Strong collision bulkhead structure for extra safety.

10. International anti-fouling bottom paint w/ anti-osmosis treatment.
11. PropSpeed/PropGold metal paint for underwater appendages.
12. Tunnels for reduced draft.
13. High Performance Piercing Bow (HPPB) with S/S protection plates.

### B. Exterior Deck and Equipment

1. Teak aft deck, teak swim platform and teak steps to swim platform, and steps to flybridge. Non-skid for the rest.
2. FRP cap rail.
3. Hidden design for Maxwell VWCLP 3500 windlass and chain way without rope capstan (x2 sets, w/ local foot switches and remote).
4. Maxwell VC 2500 capstan at bow deck as



- per layout (x1 set, w/ a foot switch).
5. 300 ft high tensile 1/2" anchor chains (x2).
  6. 100Kg S/S anchors (x2).
  7. S/S rollers (x2) and chain stopper.
  8. Heavy-duty 316 S/S cleats and fairlead w/ rollers.
  9. Aft deck corner hawser (x2).
  10. Bulwarks w/ flush mounted courtesy lights.
  11. Bulwark side doors (x2) at aft deck for boarding.
  12. Freshwater/sea water anchor chain washdown system by manual operation.
  13. 1-3/4" handrail with 1-1/2" S/S stanchions and steel cable around entire boat.
  14. S/S flag pole at bow.
  15. Standard lines and Polyform F-7 fenders (x6).
  16. Foredeck sunbathing cushion w/ drink holders.
  17. Frameless windows, slightly tinted tempered laminated Low-E glass for windshield.
  18. Frameless windows, tinted tempered laminated glass for side windows.
  19. Stairs from aft deck to swim platform with S/S gate doors and handrails.
  20. S/S sliding saloon entrance door, self-locking.
  21. Deckhouse side entrance doors (x2 hinged doors).
  22. Aft deck Hi/Lo dining table.
  23. Two Integrated stairs from aft deck to flybridge (one for port side, and the other one for starboard side).
  24. Hydraulic Hi/Lo swim platform with function as tender lift up to max. 1500 lb.
  25. Two pop-up cleats on Hi/Lo swim platform.

26. Boat hooks (x2) (ship loose).
27. Built-in shower with hot/cold water above swim platform.
28. One extractable swim ladder.
29. Rub rail around hull sides.
30. S/S portholes.
31. Exterior LED step lights.
32. Removable corner rails on swim platform.

### C. Flybridge and Boat Deck

#### Flybridge

1. Non-skid flybridge deck on entire deck area.
2. Helm station with carbon fiber dashboard panel (as 2<sup>nd</sup> station).
3. Standard choices of Sunbrella fabrics for exterior cushions.
4. Standard choices of Sunbrella canvas covers for flybridge helm seats, aft deck seat, windshield, sunpad, and foredeck cushions and seat.
5. Choice of marble/Corian/Teak choice for countertop from standard collection.
6. One 24" barbecue in custom cabinet per layout.
7. Custom two-level bar with S/S bar stools, sink, refrigerator, and icemaker as per layout.
8. Oversize drains w/ strainers on each corner of flybridge deck and internal overboard drains.
9. Radar arch w/ antenna bracket.
10. Tokai Sanshin LED search light (x1).
11. Chrome plated Buell air horns on top of radar arch.
12. S/S flag pole at stern.
13. LED white lights for Horizon logo on port & starboard side.



14. Boat deck furnishing: 1) a Jacuzzi with heating and FRP cover with sunpad above, OR 2) sun loungers (x3).
15. Hydraulic Steelhead davit (ES1500).
16. Hatch (x1) on hardtop (with a ship loose retractable ladder).

#### **D. Pilothouse and Instruments:**

1. Stidd pilot chair (x1, manual).
2. Integrated instrument panel on helm station, standard choices of wood & leather.
3. Helm station (as main station).
4. L-shaped seats w/ wood table (in accordance with layout).
5. Heavy-duty Speich S/S wipers w/ wiper wash system.
6. Variable speed control on each windshield wiper.
7. Ritchie, or Danforth, or equivalent magnetic compass at both helms (flybridge and pilothouse).
8. International LED navigation lights.
9. Full set of engine gauges at both helms (flybridge and pilothouse).
10. Electric fuel and water level gauges.
11. Monitoring system for importation equipment (bilge pumps, blowers, navigation lights).
12. Surveillance camera system (PTZ cameras at aft deck and engine room).
13. USB charger x1.
14. Chart storage if space allowed.

#### **E. Engine Propulsion and Steering System**

1. Twin CAT C18A 1136HP diesel engines w/reduction gears.

2. S/S shafts Aqualoy 22 HS or equivalent.
3. High performance S class 5 blade propellers in NiAlBr.
4. Main and intermediate bronze struts w/ backing plates.
5. Shaft and rudder packing glands with Tides Marine dripless seals or equivalent.
6. ZF Mathers engine controls with chrome control heads or Glendinning electronic engine control system at each station.
7. Third control station on aft deck (remote handheld type with throttles, gears, and thrusters).
8. Hynautic or equivalent power steering system.
9. S/S rudders w/ zinc plates.
10. S/S emergency tiller in rudder cabin.
11. Custom steering wheels at both stations.
12. Underwater exhaust system for engines w/ bypass mufflers.
13. ABT zero Speed Stabilizer (370/12X).
14. ABT hydraulic bow and stern thrusters (45HP).
15. Bennett or equivalent heavy-duty trim tabs with indicators.
16. Anti-noise treatment to exhaust system.

#### **F. Engine Room and Equipment**

1. Engine room clean designed with lightweight Tubus Bauer honeycomb floor.
2. Heavy-duty insulated engine room door.
3. S/S overhead grab rail on each side of engine.
4. Engine room LED ceiling lights.
5. Engine compartment ventilation blowers.
6. Delta T or equivalent engine room de-misters.
7. Engine load distributed through flexible



mountings on S/S engine bed bonded to FRP hull girder.

8. Engine alarm system as per engine standard.
9. Air compressor.
10. Trident hose or equivalent for engine exhaust.
11. Dyson or equivalent vacuum cleaner (x2).

## G. Electrical Systems

### General Description

1. Color-coded wiring for easy identification.
2. Main electric panel includes AC & DC circuit breakers.
3. 24 volt DC monitoring and main circuit breaker panel.
4. Sub-panel design in each zone for electrical distribution.
5. Emergency power package & lighting system.
6. AC volt receptacles located throughout including engine room.
7. GFI protection for all AC outlets in exterior, heads, galley, and engine room.
8. Fiberglass water/exhaust separator for generator.
9. Electrolysis bonding system.
10. Cathodic protection with zinc anodes for shafts, struts, etc.
11. Indirect lighting under valance in saloon, staterooms, pilothouse, and galley.
12. Dimmer system for LED ceiling lights in aft deck, pilothouse, and flybridge.
13. Dimmer system for LED ceiling lights in saloon, master, and VIP staterooms.
14. Italian Vimar switches for lighting system.
15. Underwater lights (x8).

### AC/DC Main Power System

16. Onan generators(x2) 27kW (50Hz) or 29kW (60Hz) with sound shield.
17. 255 Ah AGM start batteries (x4) for engines/generators with battery chargers (x2).
18. 210 Ah AGM batteries(x8) for ship's DC 24V service power with combined inverter/chargers (x2).
19. 210 Ah emergency batteries(x2) above main deck w/ independent battery charger (x1).
20. All batteries enclosed with proper fixtures.
21. Vapor proof battery switch.
22. Octoplex multiplexing power distribution system.
23. Maretron monitoring and control system.

### Shore Power System

24. Glendinning shore power Cablemasters (x2) 50Amp w/ 75' power cable each. (One Cablemaster for Australia)
25. Shore power connection w/ 50Amp ISO boost transformers which will be wired as polarization transformers (x2) (One step down isolation transformer for Australia).
26. Shore power plugs (x2), 50Amp. (One 3 phases, 63Amp for Australia.)

\* 100 Amp for USA Only

### Navigation System

27. Garmin GPS.
28. Garmin 72" 12kW 72nm open array radar system.
29. Garmin 12" (x1) and 16" (x3) multifunction displays.
30. Garmin fish finder and transducer.
31. Garmin Autopilot system.



32. Garmin Wind/Speed/Depth/Temp transducers.
33. Garmin VHF with second station mic and built-in loudhailer.
34. Garmin AIS.

\*Raymarine system with equivalent spec/ budget can be selected upon requested.

## H. Mechanical Systems

### Fuel Oil System

1. Fuel tanks w/ sight & electric gauges and capacity as specified in Principal Dimension above.
2. ISO grade fuel hose through entire system.
3. Dual Racor 75/1000 MA fuel filters/water separator, each engine.
4. Racor 500 MA fuel filters (x2), one on each generator.
5. Electric fuel transfer pumps (x2).
6. Oil change pump system for engines, gears, and generators.
7. Reverso FPS210 fuel polishing system (x1).

### Fresh Water System

8. FRP water tank, capacity specified in Principal Dimension above.
9. Marine grade pipe lines for hot & cold water system.
10. 30 gallon water heaters (x2).
11. High-volume Headhunter AC fresh water pressure pump and one DC pump for back up.
12. Sea Recovery water maker 900GPD.
13. Fresh-water outlet & hose for filling engine and generator expansion tank.
14. Charcoal filters are plumbed into the fresh

water line: fresh water pump, shore water inlet, galley, and crew galley(if space allowed).

15. Hot water circulation pump.

### Air Conditioning System

16. Marine Air chilled water air conditioning system.
17. Air handlers throughout boat.
18. A back up sea water cooling pump (for USA ONLY).
19. Ship loose a back up air conditioning circulation pump (for USA ONLY).

### Sanitary System

20. 200 gallon holding tank w/ Y-valve and deck fittings for for dockside pump out..
21. 100 gallon sump tank w/ pumps for each shower & washer drainage area.
22. Headhunter toilet system (for USA), OR Tecma, OR equivalent system.
23. Electric level indicators for holding tank and sump tank.

### Bilge Water System

24. Electric Rule bilge pumps.
25. Manual bilge pumps (x2) in engine room and forward staterooms.
26. High water level bilge alarm.
27. Bilge exhaust ventilation fans.

### Fire Safety System

28. Fire insulation in engine room.
29. Fire resistant treatment for pipe penetrations.
30. Fixed fire extinguisher FM200 or equivalent for engine room with remote control.
31. Auto shutdown system.



32. Automatic fire damper system.
33. Portable fire extinguishers (x5).
34. Integrated fire alarm system in pilothouse, with heat or smoke detector in each cabin.

## **I. Interior Design and Equipment (As per layout plan)**

### **Interior Decoration**

1. Standard layout: 4 ensuite staterooms and 2 crew cabins.
2. Forward saloon layout: two options available, 1) saloon with formal dining and dining chairs OR 2) saloon wet bar with refrigerator and icemaker.
3. Standard collection of wood for interior.
4. Standard collection of carpet except in wood floor areas.
5. Interior stairs from main deck to pilothouse.
6. Standard collection of interlocking vinyl ceiling panels throughout.
7. Standard collection of wood or carpet floor in pilothouse.
8. Choice of marble/granite/Corian/wood for floors in galley, from standard collection.
9. Choice of granite/ mosaic/ Corian/ glass/ quartz stone for galley counter top and back splash, from standard collection.
10. High-quality Frascio entrance door lock or equivalent and cabinet door locks per shipyard standard.
11. High density hotel grade pocket spring mattresses for entire boat except crew cabins and upper bunks.
12. Standard choice of fabrics for manual window/porthole blind (one layer per each) with valance.
13. Standard choice of fabrics for bedspreads, decorative pillows and sheet set (flat sheet, fitted sheet, pillow cases), one set per berth.
14. King size bed in master stateroom.
15. Safe (x1) in master stateroom.
16. Upholstered headboard for master staterooms, VIP staterooms and guest staterooms.
17. Wood or upholstered bed frames in all cabins.
18. Hanging lockers in all staterooms.
19. Escape hatch with ladder for master stateroom.
20. Quick/Cantaluppi or equivalent LED ceiling lighting.
21. Indirect lighting system under sofas, beds, valances & all stairways.
22. Choice of marble/granite/mosaic/Corian/ Glass/quartz stone for countertop and backsplash in all heads, from shipyard collection.
23. Choice of marble/granite/Corian/wood for floors in all heads, from shipyard collection.
24. Glass/dishes/plates holders if sample provided.
25. Seamless polyurethane finish with standard color selection in all shower stalls.
26. Hansgrohe or equivalent faucets, towel bars, towel rings, cup/brush/soap/toilet paper holders, toilet brush, in forward heads.
27. Exhaust blower for each head.
28. Kohler or equivalent basins in forward heads.
29. Bathtub in master stateroom (only if space allowed).



30. Day head per layout.
31. One USB charger for each cabin.

#### **Crew Quarters**

32. Rear accommodation arrangement plan, in accordance w/ layout plan – to include aft quarters, efficiency galley (if equipped, two-burner cook top, microwave, sink, undercounter refrigerator), head and shower, hanging lockers, bunks, storage lockers, A/C.
33. Satin finish wood walls, vinyl ceiling, round-dotted vinyl floor, Corian or equivalent countertop and floor in head, head hardware in Justime collection or equivalent. All materials for interior fit-out are from shipyard standard choices.

#### **Appliances**

34. Under counter ice maker (x1) or refrigerator (x1) per layout.
35. Wine cooler per layout.
36. S/S sink per layout.
37. Garbage disposal.
38. Sub-Zero refrigerator (x1).
39. Miele or equivalent electric induction cook top with exhaust blower above.
40. Miele or equivalent dishwasher.
41. Miele or equivalent microwave and oven or one microwave-oven.
42. Trash compactor.
43. Miele or equivalent stacked washer/dryer

(x2).

#### **Telephone and Stereo System**

44. TV antenna on top of radar arch.
45. Cellular router System with Wi-Fi onboard.
46. Flybridge Fusion Marine Stereo (x1) and speakers (x4).
47. Pilothouse Fusion Marine Stereo (x1) and speakers (x2).
48. Saloon 46" LCD TV with Bose home entertainment system and separate Blu-ray disc player and Apple TV.
49. Aft deck Fusion Marine Stereo (x1) and speakers (x2).
50. Master stateroom 40" LCD TV with Bose home entertainment system and separate Blu-ray disc player and Apple TV.
51. VIP stateroom 32" LCD TV with Fusion Marine Stereo (x1) and speakers (x2).
52. Guest stateroom 22" LCD TV with Fusion Marine Stereo (x1) and speakers (x2).
53. Crew mess 22" LCD TV with Fusion Marine Stereo (x1) and speakers (x2).
54. Panasonic PBX Telephones (x5) with intercom features in saloon, pilothouse, master stateroom, VIP stateroom, and crew mess; remaining cabins with a telephone outlet.
55. Exterior connector for shore phone and cable TV.

\*\* All specifications subject to change without notice\*\*

– the end –

#### **Qualifications and Notice to Reader**

*Not included are pieces of free standing furniture and lamps, special designer-specified lighting, art work, cooking utensils, cutlery and flatware, soft goods and the design fees attendant to personalizing the owner's interior arrangement plan and design.*



*Performance statistics, weight, draft, freeboard and height are estimated only and are not warranted, and actual figures will vary depending on tolerances achieved during the vessel's construction process and the equipment, supplies and stores on board, as well as operational and sea conditions. Horizon reserves the right to substitute equipment and materials stated herein to others which it believes to be of equal or superior quality and to make such design and dimensional changes as it believes are necessary to improve the vessel's performance and function. Owner supplied items or special treatment of interior fit-out and/or use of non-standard soft furnishings required by the purchaser may be subject to additional charges.*