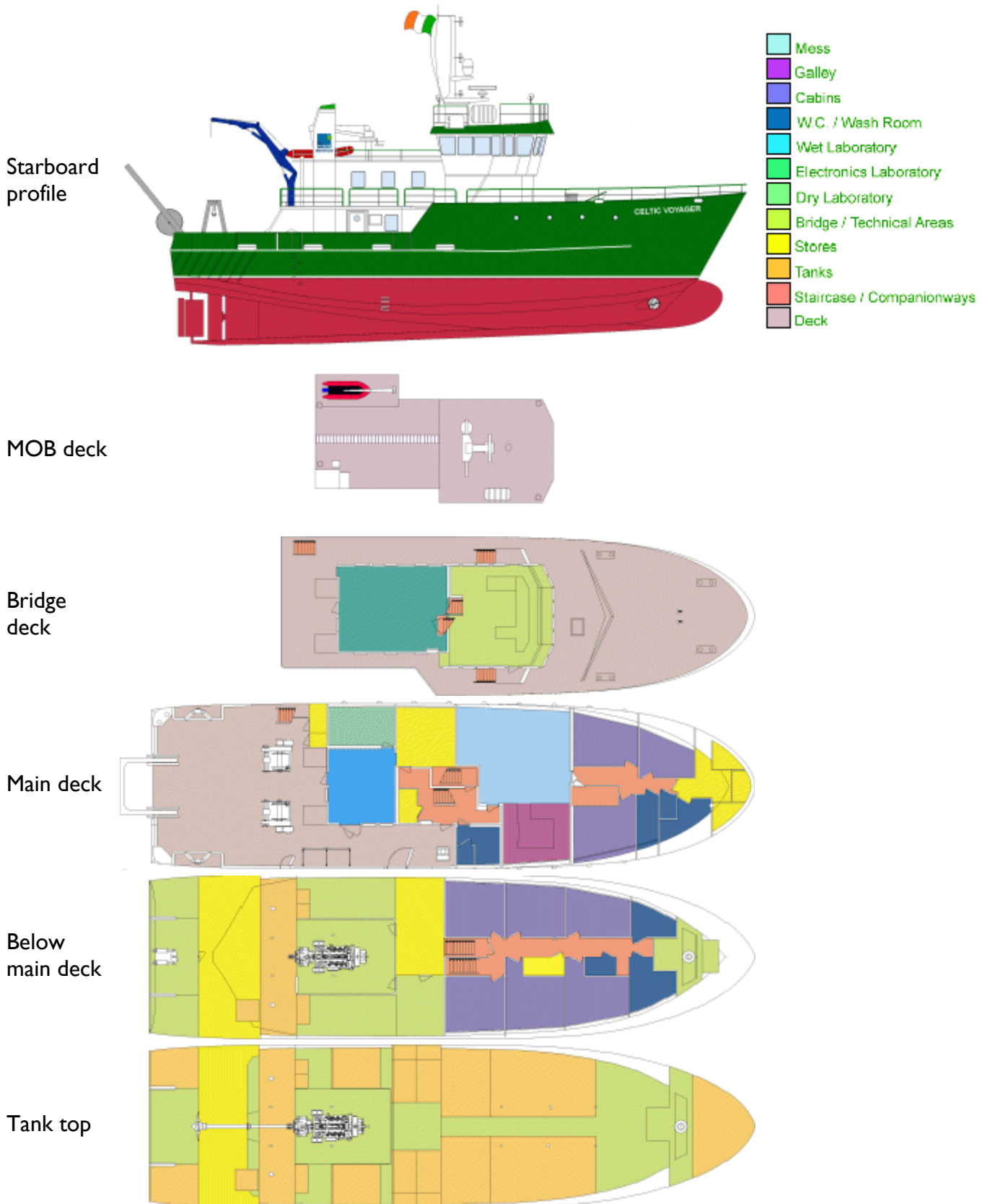




Celtic Voyager

General Layout





Technical Specifications

<p>General</p>	<p>Multipurpose research vessel suited to coastal research and offshore survey operations. Used for a variety of applications including fisheries research, environmental monitoring, seabed mapping, oceanographic, meteorological and radiological surveys, weather buoy maintenance, and student training.</p> <ul style="list-style-type: none"> • Vessel equipped with bulwark door starboard side • Stabilisation tank • Bulbous bow • Acoustically insulated • Main deck provided with matrix of stainless steel flush sockets • Capacity to carry one 10 tonne container
<p>Main features</p>	<p>Length o. a. 31.4 m Beam 8.5 m Draught 4 m Gross tonnage 340 T Type Steel hull, multi-chined construction, single screw Speed Up to 10 knots Endurance 14 days Lloyds classification 100A1 Research Vessel, LMC</p>
<p>Safety</p>	<p>Complies to IMO, Lloyds, and all national and international requirements</p>
<p>Accommodation</p>	<p>15: 8 scientists, 7 crew. Scientists quarters: 4 two-man berths.</p>
<p>Propulsion</p>	<p>Main propulsion Wärtsilä UD25M5 (626 kW) ZF Marine Gearbox + Berg propeller Van de Giessen wing nozzle</p> <p>Bow thruster Berg 104 kW</p> <p>Electrics: 2 x 68 kW, 400 V, 3PH, 50 Hz generator 1 x 38 kW, 400 V, 3PH, 50 Hz generator 1 x 12 kVA, 400 V/220 V clean net converter 1 x 20 kVA, 400 V/220 V clean net converter 24V DC net (emergency and start-up)</p>
<p>Navigation and communication</p>	<p>Depth measurement Furuno FCV 28I Echo sounder GPS Trimble NT Differential GPS Furuno GPS, Maxsea</p> <p>Radar Decca Bridgemaster ARPA C25I/6</p> <p>Gyro compass Anschutz STD 20m</p> <p>Autopilot Robertson AP9</p> <p>Navtex Receiver Furuno NX500</p> <p>Radio Furuno SSB transceiver + DSC watch receiver Furuno FM 8000 VHF ICOM 120 VHF (handheld)</p> <p>Phone Nokia GSM</p> <p>Satellite comm.s (data and voice) Thrane & Thrane Sailor Inmarsat Mini M phone Furuno Felcom 12 Sat C terminal Furuno Felcom 30 Fleet 33 Satellite data communications system</p>



Facilities

Dry laboratory	21 m ² . Workstations for EM1002, ADCP, Seapath 200, Data Acquisition System and winch controls, chart table and storage
Wet + chemical laboratories	14 m ² (wet lab), 6 m ² (chem). Stainless steel work benches, refrigerators, LAN connection, sea- and freshwater supplies
Storage + freezer	Additional 9 m ² of laboratory storage space
Electronics lab	1 electronics laboratory
Containers	Capacity to carry one 10 T container

Deck machinery

General purpose winches (x 2)	Wire capacity 1,000 m of 16 mm wire (each). Pull on bare drum 10,000 kg. Bare drum \varnothing 260 mm minimum. Diamond screw spooling gear with variable ratio to accommodate various wire diameters from 8-24 mm. Both winches are mounted adjacent to each other on a common bed, so that both drive shafts can be coupled together via a dog clutch to provide increased pull on a single drum for coring operations.
CTD winch	Winch equipped with 1100 metres of 6.5 mm CTD cable . 500kg maximum pull
Oceanographic winch	Wire capacity 1,000 m of 14 mm wire. Pull on bare drum 1,000 kg. Bare drum \varnothing 200 mm. Provision for mounting slip rings. Free fall facility. Infinitely variable speed control (forward and reverse). Automatic spooling via diamond screw to be adjustable with in fine limits or - 0.2 mm to allow for various wire sizes from 4-12 mm. Supplied with two interchangeable drums. Hand operated brake easily interchangeable at sea.
Side derrick, forward	Hydraulically operated with one luffing ram and one extension ram controlled as two separate functions. Length extended 3 m, retracted 2 m. Maximum static load at full extension 1,000 kg. Allowance to be made for dynamic load increase in up to sea state 5.
A-frame, stern mounted	Clear opening 2.5 m wide x 4 m high. SWL at the centre of the crossbeam 10,000 kg. Hydraulically operated. Swing through an angle of 90°. Three-eye plates on the crossbeam each with 10,000 kg SWL. Hydraulic circuit incorporates a load damping system of accumulators capable of being adjusted to varying load and sea conditions. Hydraulic rams incorporating load hold checks in the event of pipe failure.
Portable single net drum (x3)	4, 9 and 12 T respectively. Mounted between the vertical legs of the A-frame, which has provision for mounting the drive mechanism. Easily attached to and removed from the A-frame. Maximum speed 20 RPM. Control infinitely variable both forward and reverse.



Permanent scientific equipment

General	
Motion reference system	Kongsberg Simrad, Seapath 200
Underway data logging	Kongsberg Simrad, MDM400
USBL	Ixsea GAPS; installed in dedicated retraction unit
Weather system	Vaisala, Milos 500
Acoustic surveying	
Colour video sounder	Furuno FCV 219
Multi-beam echo sounder	Kongsberg Simrad EM1002
Multi-beam echo sounder	Kongsberg Simrad EM3002
Navigation planning	Starfix Fugro UDI
Seabed discrimination system	SEA, ECHOplus
Single-beam echo sounder (Scientific)	Kongsberg Simrad EK500
Single-beam echo sounder (Hydrographic)	Kongsberg Simrad EA400
Sub-bottom profiler, hull mounted	SES Probe 5000, 2x2 array
Sound velocity profiler	AML SVPlus
Marine biology and fisheries research	
Fluorometer (underway)	Turner, model 10-AU 005
Net drum	MTL
Sorting table + Hopper	MTL
Physical/chemical oceanography	
ADCP, hull mounted	RDI, BV ADCP38, 38 kHz
CTD and rosette sampler	SBE 911 CTD with SBE 32 carousel, 12 position. 12 x 5l water samplers (Nansen type)
TPN water samplers	5 Hydro-Bios Transparent Plastic Nansen bottles, 1.7l
Thermosalinograph	Seabird, SBE 21

*N. B. These specifications are subject to change without prior notice.
The details are believed to be correct but not guaranteed.*