

BV TOM CREAN

MODERN VESSEL DELIVERING MODERN SCIENCE



FISHERIES SURVEYS
OCEANOGRAPHIC SURVEYS
ENVIRONMENTAL MONITORING
SEABED MAPPING
DEPLOYMENT OF OBSERVATIONAL
INFRASTRUCTURES AND ROVs

Silent Research Vessel (ICES 209 noise
standard for fisheries research)
Class Notations: Lloyd's +100A1,
UMS, Ice Class 1C FS, DP(AM)



An Roinn Talmhaíochta,
Éil agus Mara
Department of Agriculture,
Food and the Marine



Rialtas na
hÉireann
Government
of Ireland

Tionscadal Éireann
Project Ireland
2040

EXEED
EXCELLENCE IN ENERGY EFFICIENCY DESIGN

 *Foras na Mara*
Marine Institute

RV TOM CREAN

The RV Tom Crean is used by the Marine Institute and other State agencies, universities and international users to undertake fisheries research, oceanographic and environmental research, seabed mapping surveys; as well as maintaining and deploying weather buoys, observational infrastructure and Remotely Operated Vehicles.

The vessel is a silent research vessel, designed to meet the stringent criteria of the ICES 209 noise standard for fisheries research.

The vessel is designed to operate in the harsh conditions encountered in the NE Atlantic and the vessel can spend 21 days at sea.

The Tom Crean has the capacity to support Remotely Operated Vehicle (ROV) and Autonomous Underwater Vehicle operations, which enable the exploration of our deep ocean down to 3,000m. Equipped with state-of-the-art scientific equipment, it provides increased accommodation for scientists and for researchers.

VESSEL OVERVIEW

Vessel Specifications	Power
Length Overall: 52.8m	Power Generation: 2 x 1350kw 1 x 400kw
Length PP: 48m	Main Propulsion Motor: 2000kw INDAR
Beam: 14m	Bow Thruster: 780kw Schottle SPJ 132 RD
Draft: 5.2m	Stern Tunnel thruster: 400kw Schottle
Endurance	Imo Tier III compliant
21 Days	DP1 Dynamic Positioning
8000 nautical miles	3 x 20ft Containers



OCEANOGRAPHIC CAPABILITIES

Heave Compensated CTD system with 4500m wire. 24 bottle Carousel

Underway T+S, Fluorescence, PCO₂ in dedicated sea water laboratory

CTD Hangar, CTD Laboratory, 45 kHz ADCP

Controlled temperature Chemical Lab

Bow Mast for Meteorological sensors

Oceanographic winch for Towed samplers/Side scan sonar

Hydrographic winch for Plankton Sampling

-20 and +4 degree refrigeration

FISHERIES SURVEYS

Fisheries Acoustics

- EK80 Fisheries Echosounder on Drop keel - 5 frequencies

- SU92 Omnidirectional Sonar

- FS 70 Headline system

Egg/Larval Surveying

- Oceanographic winch with 2500m wire

Trawling Capability

- Marport net mensuration system

- Trawling capability: 2500m 22mm trawl wire, 25 Ton Pull

- 2 x 7m³ split net drums (Demersal)

- 1 x 9m³ Net Drum (Pelagic)

- 1 x Headline winch with 2500m Headline wire

UWTV Survey

- UWTV survey with Q5/Oceanographic winch

- Sonardyne Ranger 2 USBL system on retraction unit

- Dedicated Video Playback Lab

Catch Handling

- Net Hauler, Gilson Winch, Hopper system

Fish Lab

- 36.7m² with 6m Long conveyor system, 4 Measuring stations, -20 Freezer, separate 6m² freezer store

HYDROGRAPHIC/ GEOLOGICAL CAPABILITY

Multibeam No.1: EM2040 Dual Head

Multibeam No.2: EM2040 Single head (Drop keel)

Capable of accommodating a EM712 1 x 1 degree Multibeam

Sub Bottom profiler: Knudsen 3260, 9 x 3.5KHz, 1 x 12KHz

Moving vessel profiler: AML MVP 30-350, Edgetech Side Scan

MRU: Seapath 380 RGC 3 /RGC 2 Haps System

GNSS: Cnav 5000 High Precision GPS

Usbl: Sonardyne Ranger 2 USBL on retraction unit

Can accommodate 12m Piston /Gravity Core, 6m Vibrocorer, CPT

Can accommodate ROV Etain (UL) and ROV Holland

Optimised for AUV Deployment /Control

FACILITIES/CAPABILITIES

11 – 13 Crew including permanent technician, 13 scientists. Total 26

Gymnasium (12m²)

TV lounge

Additional Lounge area in messroom

Equipped with shore generator for fuel efficiency

Electrical drive winches throughout (Ibercisa)

Multipurpose design with removable net drum to increase deck space

DP 1 (Praxis Mega Guard)

Hoppe Anti Roll system

170 Degree 10 T A Frame /8 T Side T frame

AUV/Glider "Step" in hull to allow easy access to water surface

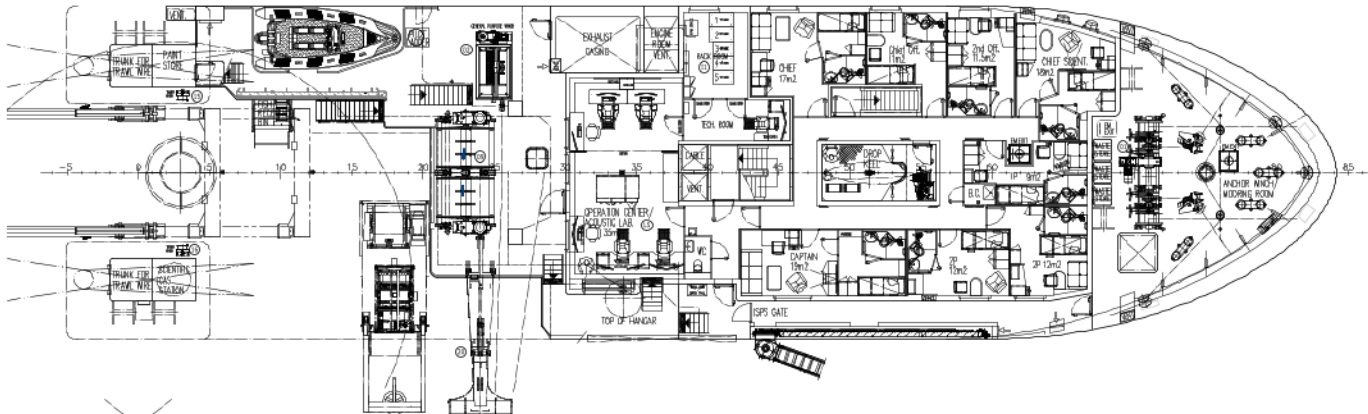
Can accommodate 3 x 20' Laboratory containers

Shore power connection to allow shutdown of all gensets when in suitable port

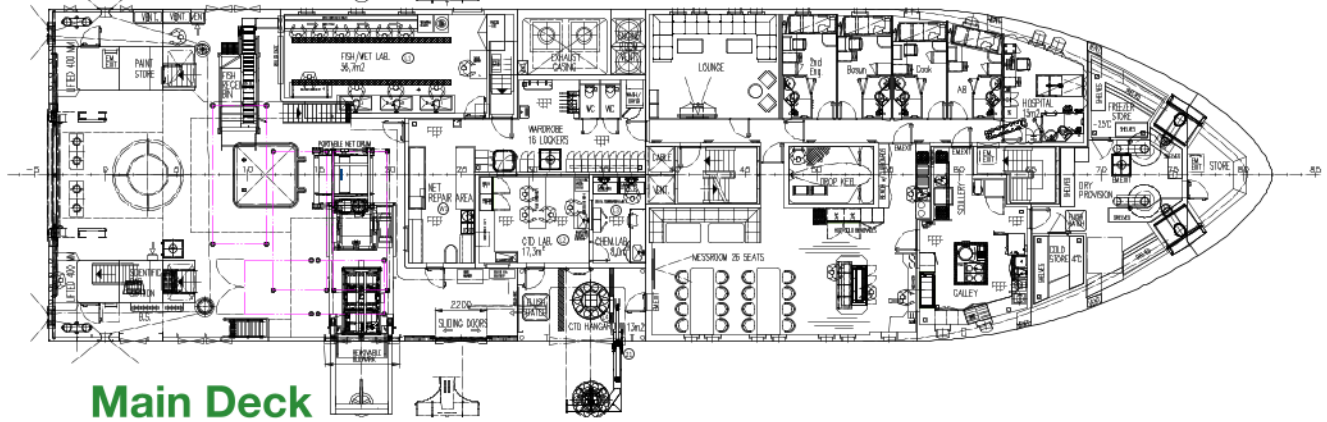
Drop keel (c.2.5m below keel)

Ability to utilise low carbon HVO as a replacement for MGO

First Deck



Main Deck



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