

RV Tonn



RV Tonn, Poolbeg Yacht, Boat Club & Marina, March 2015.

Specifications

Name:	RV Tonn
Registered:	n/a
Call Sign:	EI-PT-7 (Echo India Papa Tango Seven)
MMSI Number:	250003189
License:	Marine Survey Office P6 License
Max passenger and crew:	6

Technical Specifications

Builder	Cheetah marine
Model	7.9m Cheetah Catamaran
Year	2015
Length (m)	7.9
Beam (m)	2.7
Draft (m)	0.3 or 0.7 with survey equipment deployed
Main Engines	Honda 2 x 135 HP (Petrol)
Generator 1	Portable petrol 2.0 kVa
Generator 2	n/a
Shorepower	No
Top Speed	30 knots
Cruising Speed	20 knots
Slow Speed	2 knots
Anchors	1 x Grapnel
Dive ladder	Yes

Permanent Vessel Systems

AIS	Class B
Radio	ICOM model
Handheld VHF	ICOM model
Chartplotter	Raymarine C80
Echsounder	Raymarine fishfinder
GPS	Raymarine C80 GPS Chartplotter and Receiver

Survey Systems

System	Type
Multibeam ES	R2Sonic 2022
Positioning system	POS-MV 320
Base/Control GNSS	Leica GS10
Sound Velocity Sensor	AML SV 'smart probe'
Sound Velocity Probes	AML and Valeport probes

Innovations for INFOMAR operations on the RV Tonn

1. The RV Tonn features Cheetah Marine's patented Hydropod system which enables high resolution surveying to be carried out at relatively fast speeds of 6 to 10 knots. The system in this case is designed to house the **R2Sonic 2022**. The system is lowered through a moonpool for surveying and can be raised via a hand winch for longer transits between survey sites.



R2Sonic Multibeam Sonar mounted on hydropod system

2. Applanix Pos-MV Unit:

The RV Tonn uses an Applanix POS-MV system to provide pitch, heave, roll, timing, positioning and heading information to the survey equipment and software. The POS-MV topside unit is connected to an IMU (inertial motion reference unit) mounted near the multibeam echosounder and to a pair of GNSS antennae all of which, when combined provide accurate attitude, heading and positioning readings to all the hydrographic and geophysical software. A 1 PPS (pulse per second) time-sync signal is provided to the acquisition softwares to insure adequate time synchronisation.

Once the vessel's POS-MV nav. files are post processed with RINEX data from onshore GNSS base stations, the horizontal accuracy is improved to the order of +/-5cm with similar values in the vertical plane. This allows for the calculation of GPS tide heights with the vessel itself essentially acting as a tide gauge.