



# FUGRO

## M.V. FUGRO FRONTIER

M.V. Fugro Frontier has been built to the highest standards demanded of modern internationally operating multi-purpose survey vessel.

The diesel electric propulsion, specially designed hull, resilient engine mounts and rudder propellers maximize station keeping and navigational control while ensuring acoustically quiet running at survey speeds.

Designed with the highest considerations for safety and environment, the compact flexible platform supports a wide range of offshore services. With a typical operational profile of geophysical survey and shallow geotechnical investigations operations are available up to 2000m WD.

Its limited 3m draft, specially designed T-frame and versatile back deck add to its operational capabilities both offshore

and close inshore. The 53m-long vessel is prepared for dynamic positioning and equipped with state-of-the-art survey equipment.

The vessel can be configured to tow a variety of survey equipment including up to a four source and four streamer 3D seismic spread. It is also outfitted with a large T-frame to allow the deployment of two large scale gradiometers at once. The Fugro Frontier can deploy up to eight ROTV controlled magnetometers at once providing the most efficient UXO survey available. The vessel can also be set up to support ROV, geotechnical and environmental operations as well as 2D seismic projects.



*Fugro Frontier port side*



*Fugro Frontier starboard side*

# M.V. FUGRO FRONTIER

## Technical Specifications

### General

Names	Fugro Frontier
Classifications	Bureau Veritas
Flag state/ Port	Bahamas Maritime Authority (BMA)
Build(er)	December 2014 – Damen Shipyards Galati
IMO/Cal sign	9701657 / C6BH4 (Charlie Six Bravo Hotel Four)
Official Number	7000675
MMSI No.	311 000 263
YN Contr.	556068/1272

### Dimensions

Length overall	53.7 m
Beam (mid)	12.5 m
Draft (summer)	3.1 m + 0.25 m blister
Net Tonnage	1,400 GT
Deck area aft	250 m <sup>2</sup>
Deck strength	5 T / m <sup>2</sup>
Deck load	60 T

### Machinery

Propulsion	2 x Azimuth thrusters (electric)
Bowthrusters	1 x Tunnel thrusters (electric)
Cruising speed	10 kn
Survey speed	Variable as required
Maximum speed	11.2 kn

### Electric power

Diesel generator sets	4 x 372 kW
UPS supply survey	1 x 30 kva, 220 vac

### Capacities

Fuel capacity	300 m <sup>3</sup>
Fuel consumption (FOC t/day)	Survey 2.7 m <sup>3</sup> / Stationary (DP) 4.2 m <sup>3</sup> / Transit 6 m <sup>3</sup>
Potablewater capacity	115 m <sup>3</sup>
Watermaking	6 m <sup>3</sup> / d

### Accommodation

Cabins	31 Bunks / 9 x Single cabins, 11 Double cabins
Crew (Typical)	11 x Marine Crew, 20 x Survey Crew
Recreational	1 x Dayroom, 1 x Gym
Work Offices	2 x Survey, 1 x Meeting room

### Control and navigation

DP System	Imtech DP-0
Radar	Hagenuk Bridgemaster FT CAT 1 / 2 S-band and
Electronic chart	Transas 4000
DGPS	2 x Kodan KGP920 / 2 x FugroStarpack
Magnetic compass	Sperry Jupiter
Gyro	Navigat XMKI + TSS Meridian Surveyor

### Deck machinery

Deck craneaft	Palfinger PK65002 MD
Storage crane forward	Palfinger PK15000 MC
Hydraulics Ring Main system	300 bar / 200 ltr.
T-frame aft (geophysical)	1 x 2 / 3 T SWL
A-frameside (geotechnical)	1 x 9 T SWL
CTD winch / davit	1 x 200 kg / 1000 m (environmental sampling)
Tugger winch aft deck	4 x 3 T SWL
Moonpool	Rectangular 1630 x 883 mm (freespace)
Geophysical tow winch	2 x EMCE (3.5 Te / 1000 m / Rochester)
Geotechnical hoistingwinch	1 x EMCE (9 Te / 1500 m / 19 mm)

### Communications

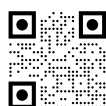
GMDSS	Motorola- 3 x VHF Handheld
Vsat	2 x Seatel 5009 Ku-band
Iridium	Iridium Openport (Fall back)
UHF/ VHF Radios (Operational coms)	Motorola- 2 x VHF Handheld / 3 x UHF Mobile / 9 x UHF Portable
CCTV Camera system	Orlaco
TVRO	Intellian t40W

### Safety

MOB boat	RIB
Liferafts	6 x 20 persons
Survival suits & Life jackets	44 pcs
Lifeline Pulley System	3 pcs SeaMarshall
Personal Locator Beacons (PLB)	SeaMarshall

### Survey equipment

DGPS Positioning	Fugro Starfix Starpacks
Navigation package	Fugro Starfix Suite
Acoustic positioning	KongsbergHiPap 501 incl Cymbal
Motion Reference Unit	1 x Sea HydrINS / 1 x Sea Octans 3000
Echosounder	Simrad EA400
Draft monitoring	2 x Rosemount Pressure Sensors
Multibeam Echosounder	Kongsberg EM2040
Side Scan Sonar	Edgetech 4200FS (100/600)
Sub Bottom Profiler	Innomar Medium / Edgetech 3200 Chirp Massa array 4 x 4 c.w. SES transceiver
Magnetometer	Geometrics G-882 / EIVA Scanfish Katria / Fugro Geowing
Seismic Compressor	Hamworthy 185E MK2 / 2 x Wärtsilä Water Systems Ltd
Environmental sampling	Ground truthing Underwater camera
2D & 3D Seismic survey setup	as required
Geotechnical sampling	Vibro coring CPT sampling
Seismic source	as required



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