



FUGRO

FUGRO VOYAGER

The Fugro Voyager is a new build vessel, part of a series of Fugro custom designed and constructed DP2 geotechnical drilling vessels

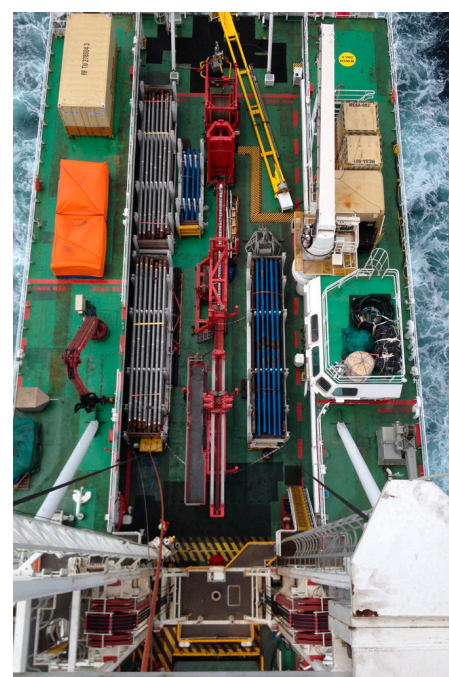
GEOTECHNICAL DRILLING VESSEL

The Fugro Voyager is a fit for purpose designed and constructed geotechnical drilling vessel that provides a stable platform capable of operating independently in remote regions around the world. The design of the Fugro Voyager allows integrated investigation methods to be deployed during one survey program.

The Fugro Voyager is designed and constructed in compliance with the Code of Safety for Special Purpose Ships (2008). It has been specifically designed for operating in water depths up to 3000 meters for both drilling and seabed sampling and in situ testing.

The twin tower type drilling derrick is installed over a centrally located moonpool, drilling is performed with a heave motion compensated ram type drilling system.

The drilling machinery and equipment, rig pumps, drilling fluid bulk storage and mixing equipment, and ancillary equipment is installed below deck providing a clear, uncluttered main deck / drill floor area that when combined with automated pipe and tool handling equipment, promotes safe drill floor operations.



Plan view of drill floor

FUGRO VOYAGER

Technical Specifications

General

Vessel name	Fugro Voyager
Builder/year	Tebma Shipyard/2013
Owner/operator	ICON Voyager Pte. Ltd./Fugro Singapore
Flag	Singapore
Speed	Transit 10-12 knots
Call sign	9V3888
Classification	DNV+1A1, -E0-SF, SPS, Dynops AUTR, CLEAN, COMF-V(3), NAUT-OSV(T), DK(+), h1(1.2)
Port of registry	Singapore
Endurance	Max 35 days
Operational water depth	25 m to 3,000 m

Dimensions

Length over all (L.O.A.)	82.9 m
Beam (mid)	19.8 m
Free board	2.5 m
Draft	5.65 m
Displacement	6,600 tons
NRT	1,394 tons
GRT	4,644 tons
Derrick height above keel	42 m
Moonpool	3.1 m x 3.1 m

Accommodation / rooms

Cabins	14 x single cabin, 23 x double cabin
Day room	1
Fitness room	Yes
Conference room	16-18 persons
Client office	1
Hospital	Yes

Machinery

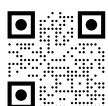
Main engine	4 x MAN 9L21/31 @ 1980kW each
Main engine generators	4 x Hyundai HFJ7 @ 2351 kVA each
Power management	ConverTeam 690V Distribution
Propulsion	2 x Berg CPP, 233 rpm; 2300 kW each with Becker rudders
Bow tunnel thruster	2 x Schottel 800 kW
Stern tunnel thruster	2 x Schottel 590 kW
Emergency generator	1 x 300 kW

Capacity

Fuel capacity	800 m ³
Fuel consumption	DP 12-15 m ³ , transit 14-24 m ³
Water capacity	Fresh 327 m ³ / drill 753 m ³
Water making	50 m ³ /day

Deck machinery

Deck crane 1	1 x SWL 5 tons McGregor
Deck crane 2	1 x SWL 3 tons Plimsoll
A-frame	Stern Mounted 15T SWL



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Safety

Hospital	1 x 2 beds
Lifeboats	N/A
Life rafts	4 x 35 men RFD, 2 x 25 men RFD
MOB boat	1 x 6 men NOREQ 25 hp
EPIRB	1 x Jotron, 1 x Sailor
Other aids	140 x life jackets, 74 x immersion suits, 11 x life buoys

Communications

V-sat	K/Cu Band; Internet & Communications Singtel, Voice Fleet Broadband 77, Voice & Data (Fax)
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Positioning / navigation

Echosounder	1 x Skipper GDS 102, 50 & 200 Khz
S-band radar (ARPA)	1 x Sperry, Vison Master FT CATI 34
X-band radar	1 x Sperry, Vison Master FT CATI 34
Gyro compass	3 x Teledyne
Automatic pilot	1 x Sperry /Navipilot 4000
Doppler log	1 x Sperry /Naviknot GPS
	2 x SAAB R4 Navigation
ECDIS	TRANSAS 4000
Transporter (SART)	2 x sailor, 9 Ghz

Drilling system / seabed frame systems

Drilling derrick	Twin Mast, 100T SWL
Drilling rig	R100 Heave Compensated Ram Rig
Max load	70T Compensated (80T Ratchet Mode)
Heave compensation	Passive with hard tie option, 6 m stroke length
Top drive	Seacore T1.0-A100
Drill pipe length	2500 m
Pipe handling	Knuckle boom pipe handler
Iron roughneck	Aker hydraulic
Automatic tool handler	Fugro design
Rotary slips	Calvins FFH 100-S, hydraulic
Mud pumps	2 x Gardner Denver THE Triplex
Mud mixing pumps	2 x 50HP
Mud tanks	2 x 30 m ³ , 1 x 28 m ³
Bentonite dry/liquid	3 x 50 m ³ /2 x 80 m ³
Barite dry	1 x 50 m ³
Heavy load winch	Traction Winch 35T @ 9m/min, 10T @ 30m/min
	2 x 3200 m of 32 mm wire rope
Seabed frame	3 m x 3 m x 4 m

Geotechnical systems / laboratory

Downhole	Wilson® MK IV and EP systems
Seabed	Wheeldrive SEACALF, Box Corer, Piston Corer
Seismic/vane/coring	Optional upon request
Onboard laboratory	Permanent 7 m x 5 m
Sample storage	1 x 20 ft reefer container

Control and navigation

DP system	Converteam DPS 21 Duplex DP, WS x 2, DP IIS x 1, DP Portable Joystick x 1
Reference systems	1 x HiPAP Sonardyne USBL, 2 x DGPS, Fugro SeaStar 9205, 1 x ATW Series LTW
Wind indicators	2 x Ultrasonic Gill Wind Observer, 1 x Young 09106
Vertical reference system	3 x DMS 05