

Geotechnical Drilling Rig GMR602



Introduction

The Geoquip Marine GMR602 benefits from over 30 years' experience designing, building and operating heave compensated geotechnical drill rigs worldwide for Clients in the offshore renewable energy market and other specialist industries.

The design and automation of key operations ensures that the GMR6020 can firstly, deliver safe and reliable data and secondly, deliver this data in a timely manner to the Client. Automation of tasks, thereby removing risks to personnel.

Time efficiency when performing multiple boreholes, not only reduces overall contract durations, but also allows the exploitation of short weather windows for productive operations.

Capabilities

The GMR602 is capable of operating in 350m (water depth plus borehole depth) using steel API drill pipe and recover high quality samples and record accurate *in situ* data in all soil types. The oversized GMR602 single derrick has been specially designed to allow the safe operation of wireline coring, specialist oversized coring equipment and high quality piggy back coring as well as traditional sampling techniques.

Sampling, Downhole Testing and Coring

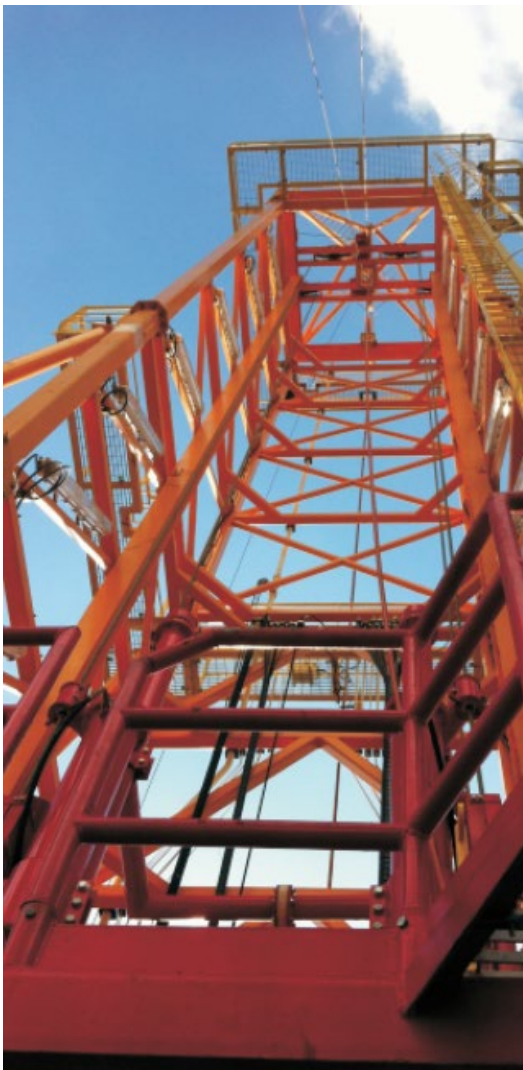
The GMR602 series is compatible for operations with a wide range of downhole tools including wireline sampling and wireline cone penetration testing (PCPT). Each of the downhole tools are fully interchangeable within the drill string set up and can therefore be alternated in turn to suit changing soil conditions / type. This gives Geoquip geotechnical engineers the increased flexibility to meet and exceed the requirements of a Client.

- Push / Piston sampler (1m length thin, medium and thick walled Shelby tubes)
- Triple tube lined coring system (80mm diameter core and maximum 2.8m length)
- Hammer sampler (2" and 3" diameter split spoon)
- PS wireline logging
- 100mm SQ triple tube core barrels
- PQ piggy back coring

'Real-time' data and Reporting

The technical capability of the GMR602 series drill rig in the field, is further enhanced through the provision of a dedicated soil and rock testing laboratory. This facility allows the 'real-time' classification and testing of high-quality samples and the QA / QC of recording *in situ* data.

Logging of drilling parameters with depth registration is also provided as an enhancement to the data reporting and deliverables.



Drilling Rig GMR602	
Top Drive/Power Swivel	Fraste R41D150 6,900N.m-1 160rpm and 13,800N.m-1 90rpm Load capacity 30t. <ul style="list-style-type: none"> • Max torque: 13,800Nm • Max speed: 160rpm • 30 Mt Derrick
Drill String	5½" or 6¾" API drill string
Seabed Frame	12t, with hydraulic clamps and compensation up to 4.0m
Heave Compensation	Effective drill string compensation 0m to 4m. Seabed frame and seabed CPT unit heave compensation with an effective stroke from 0m to 4m
Mud	4,000l mix tank, 8,000l storage tank guar gum seawater miscible
Downhole Sampling	Wireline piston / push sampler, percussion / heavy duty percussion sampler
Downhole <i>in situ</i> Testing Tools	Geomil Orca 1500 cone penetration testing with pore water pressure and seismic velocity measurements PS wireline logging
Coring	<ul style="list-style-type: none"> • 100mm SQ triple tube core barrels • PQ piggy back coring
Pipe Handling	Range two drill pipe handling using a proprietary mechanical handling system. Handles pipe with minimum manual intervention and hence improved safety
Drill Control Cabin	Control cabin for remote control via hydraulic / electric interface of all drilling and sampling operations. Allows driller, assistant driller and PCPT operator coordinated control of all drilling / sampling operations. Rig specific DMS recording
Drill Rig Workshop	Fully equipped workshop, tools and equipment. 220v supply
Equipment Winches	draw-works winch, seabed frame winch, AH Winch (BSL 300wx / S130 wx Hydraulic), Tow works Winch (BSL 300wx / S130 wx Hydraulic)
Seabed CPT Unit	20t deep push seabed CPT system. Straight rod push thrust mechanism allows recording of <i>in situ</i> data to 40m below mudline, or greater, depending on soil conditions