

SONIC GEO 601



Geomech Africa,
certified Level 3 B-BBEE contributor adds the
Comacchio GEO 601
drilling rig to its fleet

www.geogroup.co.za



SONIC GEO 601

This state of the art, uniquely designed, sonic and rotary core combination drill rig, is a one of a kind specialist drill rig designed to give the user the best of both worlds.

This unique drill rig is equipped with both a Tone sonic drill head with proven reliability and a standard hydraulic high speed rotary core drill head. The rig is also fitted with a hydraulic trip hammer for conducting SPT's.

The rig is manufactured by Commachio in Italy.

the rig is equipped with two drill heads to allow the operator to achieve excellent core recovery in soft overburden materials while maintaining the advantage of being able to conduct conventional or wireline rotary core drilling efficiently and competitively priced, with the same drill rig.



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Sonic drilling can be employed for virtually any application where good core recovery is a requirement in softer ground.

Applications include use in geotechnical and geothermal projects, in loose alluvial or soft clays and silts, for environmental investigations and for mineral exploration for grade control in mineral sands.

The Sonic drill head works by sending high frequency resonant vibrations down the drill string to the drill bit, while the operator controls these frequencies to suit the specific conditions of the prevailing geology.

The sonic vibration, which is developed in the sonic head by high revolution hydraulic motors, fluidizes the soil particles at the bit face, allowing for fast and easy penetration through most geological formations.

An internal air spring isolates these vibrational forces from the rest of the drill rig. By providing the necessary rotational and vibrational forces, the sonic rig can core and case holes in any overburden material, drilling where most other rigs can't.



BENEFITS OF SONIC DRILLING



Sonic drilling technology offers several distinct advantages over conventional drilling in overburden ground conditions.

SUPERIOR INFORMATION

Sonic drilling provides a continuous, relatively undisturbed core sample of unparalleled quality and accuracy through any type of formation. When using the Iso-Flow groundwater profiling system, hydrogeological and geochemical data can be easily obtained.

WASTE REDUCTION

Sonic drilling reduces waste by up to 80% relative to conventional methods by other competitors.

Sonic drilling is two to three times faster than conventional overburden drilling methods when Sampling in sands and soils.

SUPERIOR WELL CONSTRUCTION

Sonic drilling causes minimal disturbance to the surrounding bore hole wall, resulting in more efficient well development and performance.

RISK MINIMISATION

Sonic drilling greatly reduces the risk of project failure due to unknown or difficult subsurface conditions. Projects finish on time and on budget. Sonic drilling obtains the lowest total project cost possible.

FLEXIBILITY

Sonic drilling advances a temporary outer casing as the borehole is drilled, allowing you to do more within a single borehole.

SPECIFICATIONS



SONIC GEO 601

UNDERCARRIAGE

Wheel base 1.900 mm / 6.2 ft
Max width: 1.600-2.300 mm / 5,2-7,6 ft
Pad width: 300-400 mm / 11,8-15,7 ft
Max. climbing ability: 36 %
Max. Speed: 1,5km/h / 0.93 mph

POWER PACK

HIGH TECH LINE engine: DEUTZ TCD 3.6 L04 (step 3B / TIER 4FINAL)
HIGH TECH LINE engine power: 100 Kw (134 HP) 2.200 rpm
Oil tank: 300 l / 79.2 gal
Fuel tank: 130 l / 34.3 gal

MAST

Feed stroke: 3.500 mm / 11.4 ft
Total length: 5.250 mm / 17.2 ft
Feed force: 4.500 daN / 10,116 lbs
Retract force: 6.500 daN / 14.612 lbs

CLAMPS

Clamping range:
45 – 225 mm / 1,7 – 8.9 in
45 – 260 mm / 1.7 – 10.2 in
45 – 325 mm / 1.7 – 12.8 in
Clamping force: 180 KN / 40.465 lbs
Breaking torque: 2.050 daNm / 15,120 lb * ft

WEIGHT

9.000 – 10.000 kg / 19.500 – 22.000 lbs

SPECIFICATIONS

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ROTARY HEAD	R900	R1000/R1000HS	R1600	R2400S
Gears	2/3/4	6	2/4	3
Max Torque	1.400 daNm 10,325 lb*ft	630 - 1.100 daNm 4.644 - 8,113 lb*ft	1.500 daNm 11,063 lb*ft	2.400 daNm 17,701 lb*ft
Max Speed	190 rpm	210 - 980 rpm	200 rpm	135 rpm
Head Passage	78mm / 3.0 in		116mm/ 4.6 in	



CODE OF ETHICS



Geomech Africa is proudly GeoGroup and is committed to following GeoGroup Code of Ethics.

Wherever we operate we will:

Develop, implement and maintain management systems for health, safety and the environment that are consistent with internationally recognised standards which enable us to:

- Identify, assess and manage risks to employees, contractors and the environment.
- Strive to achieve leading industry practice.
- Meet and exceed applicable legal requirements.
- Set and achieve targets that include reducing and preventing pollution.
- Develop our people and provide resources to meet our targets.
- Support the fundamental human rights of employees and contractors.
- Respect the traditional rights of indigenous peoples.
- Care for the environment and value cultural heritage.
- Advise on the responsible use of our service.

We seek opportunities to share our success by:

- Developing partnerships that focus on creating sustainable value for everyone
- Building relationships based on honesty, openness, mutual trust and involvement, and share responsibility for meeting the requirements of this policy.
- We will be successful when we achieve our targets toward our goal of zero harm and are valued by the communities in which we work.



INNOVATION THROUGH IMAGINATION



THE GROUP

GeoGroup Companies

GeoGroup comprises of a group of companies, each a leader in it's own field, providing a range of services to the geotechnical, civil and mining industries in Southern Africa.



GEOMECHANICS



GEOMECH AFRICA



GEOPILE AFRICA



GEO STRUCT

Services

- Geotechnical and Exploration Drilling
- Deep Driven Pile Foundations,
- Geophysical Instrumentation, Monitoring and Testing Service
- Water boreholes
- Metal Welding and Fabrication
- Project Management expertise within the CSP and PV solar energy sectors

Products

- Geophysical Instrumentation, Monitoring and Testing equipment
- Diesel Generators
- Lighting Towers

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