

To the Baltics



Above and right:
Geomachine's
GM 100 GT rig

Finnish Geomachine drill rigs have been busy at work in Sochi in the run-up to the Olympics and will soon assist on a large railway project in Estonia

Last year Estonian infrastructure company Reaalprojekt signed a contract to do preliminary work for the Rail Baltic railway, a project that is intended to connect Estonia, Latvia, Lithuania and Poland through a continuous new rail link, also improving connections to central Europe.

Reaalprojekt's tasks include designing civil-engineering works and roads, conducting traffic surveys, providing a geological overview of the options for the route and conducting geotechnical site investigations for the preferred route in Estonia.

The company has chosen Geomachine's GM 100 GT rig to conduct the soil investigations due to its multipurpose drilling functions and off-road manoeuvring capabilities.

The rail line is planned to pass through deep forests, swamps, rocky hills and semi-urban fields. Accordingly, it is important for the chosen rig to be able to carry along all tooling needed.

It also needs to perform all the required investigation work independently, making the GM 100 GT, with its large 280L hydraulic and diesel tanks, suitable for the job.

The GM 100 GT is Geomachine's most multipurpose



investigation rig in the large-rig range. Due to its compact size and limited weight, up to 6-7t, it is capable of performing all investigation drilling from cone penetration tests (CPT), weight sounding and percussion drilling to standard penetration tests (SPT).

Big water pipes, up to 150mm in diameter, can also be installed by auger or percussion. The built-on powerful 5cc compressor makes flushing effective in deeper holes as well. The rig's undercarriage has traction wheels for better grip in demanding off-road terrain.

The rig will be delivered to Estonia from the Geomachine factory near Helsinki, Finland, in early March.

SOCHI FOUNDATIONS

While the GM 100 GT is being prepared for Estonia, Geomachine's GM 75 GT rigs are finishing work in Russia – for the 2014 Winter Olympics.

Two of the rigs have been on site in Sochi for over 12 months now for investigation drilling, and construction work continues after the games.

While the GM 75 GT is smaller than the GM 100 GT, with a weight of around 3-4t, it can perform almost all the investigation drilling just as well, including CPT, percussion drilling, weight sounding and so on.

Sochi's landscape is extremely diverse, varying from mountains to beaches. In the region in general, the depths of the investigation holes used were rather shallow and the construction took place parallel on many sites, requiring fast rig-transport capability, which is why the GM 75 GT was selected by the Russian construction companies.

The investigation work focused on not only the big arenas and sports facilities but also traffic infrastructure projects, including roads, bridges and railways. ▼



Above and below:
the smaller
GM 75 GT rig as
used in Sochi



Geomachine rigs

Geomachine has four product families of drill rigs, ranging between 2t and 10t:

- soil investigation rigs;
- mining exploration rigs;
- geothermal drilling rigs; and
- underground DTH and jet-grouting rigs.

During the last two years, Geomachine has introduced two new rigs:

- GM 8 GT for soil investigation: a body-steering eight-wheeler, which leaves no traces in the ground in

urban areas, with superior climbing capacity in demanding terrain.

- GM 300 GE for geothermal drilling: capacity for holes up to 300m deep; all pipes, rods and tools are on board even though the rig is very compact.

The manufacturer continuously develops new features for its rigs, and this year will introduce larger built-on compressors, new rubber traction belts and new CAN-drive control.