

Massenza's new line of geotechnical rigs

Massenza has launched two new, small-scale, soil investigation rigs, which focus on soil testing and sampling within the first 20m.

The MSPT is a stand-alone, manually manoeuvred SPT tower from Italian rig manufacturer Massenza, while the MI1 is a crawler-based, multifunctional soil investigation machine offering everything soil investigators need at the drill site.

The MSPT is a stand-alone SPT mast, carried on two balloon wheels, operating a mechanical SPT drop weight. The drop weight can be modified by removing or adding weights to drive different dynamic probing methods DPL, DPM, DPH – and, of course, SPT.

The basic version is run by a gasoline engine powering the mast chain with a centrifugal clutch. Rod extraction can be done with a manual rod puller offering up to 6t of extraction force. The MSPT is set up on a tripod, which allows it to bend backwards. This way window sampling or direct push is performed with astonishing results down to 20m. Additionally, the tripod offers fast levelling of the rig.

Besides the gasoline version, Massenza offers the MSPT with a hydraulic power pack to run the entire rig on hydraulics, which means rods extraction is done by a hydraulic extraction jack offering up to 15t extraction force.

The MSPT is the perfect low-cost solution for a broad range of soil testing methods. Due to the low weight and the modular set-up, it is also applicable for limited access drilling and working in closed rooms. The entire set-up can be transported in a small van or trailer giving

the operator a great deal of flexibility.

Massenza already offers a small and compact drill rig with the MI2, which with a total width of 780mm can pass domestic doors and other narrow spaces. Of course, the MI2 can be equipped with an SPT auto- and a hydraulic percussion hammer.

The MI2 is a high-tech drill rig focused on powerful operations and can easily investigate the first 20m of all kinds of terrain, also arriving at much deeper levels with several drilling methods. But what if there were a smaller version of the MI2, with just enough power and weight to focus on the shallow soil tests down to the range of 20m? What if, if that rig could be smaller but, in many ways, faster than conventional drill rigs for pulling soil tests?

The core competence of the MI1 is working with the 63.5kg drop weight being applied for SPT testing, split spoon sampling, window sampling and direct push. Speaking of which, the MI1 is one of the very few rigs on the market that works exactly according to ISO 22476-2 (Dynamic Probing) and ISO 22476-3 (Standard Penetration Test) being able to offer the highest quality of results.

The preferred tooling of the MI1 is the hydraulic jackhammer. In softer soil formations the high-frequency blow rate stands for better samples in such circumstances – and faster. This way soil samples can be extracted within the hour of depths of some 20m.

With a base weight of just 850kg, the MI1 is lightweight. Able to be transported in a van or a small trailer, set-up times

are reduced to an absolute minimum.

Slopes up to 30 degrees pose no problem nor do undulating terrain conditions. Since the mast can be moved in all directions it can be brought to a vertical position regardless of the position of the rig. This also includes a lateral adjustment of up to 15 degrees. The crawler tracks find their

way and the towing hitch allows bringing along a small trailer to carry the accessories. In addition, all tooling and supplies can be stored on the rig. Everything operators need at the drill site is stored in or on the rig – including all drill rods.

The MI1 is the multitool for soil investigation offering a great alternative to conventional drill operations.



The MSPT from Massenza meets all the needs of contractor undertaking SPT testing