

Soilmec at  
GEOFLUID  
**External area,  
Aisle G, Stand 9**





# Very deep jet grouting

More flexibility, more performance, ease-of-maintenance and a better environmental impact, these are the key points of the new restyling of the Soilmec SM-22

John Melegatti

**T**he Soilmec SM-22 is an evolution of the historic PSM-1350 and SM-20 models that overall have sold more than 300 units worldwide, and have been completely redesigned to ensure high efficiency and productivity levels on site together with the highest safety standards. Thanks to its modular design it can be easily configured in different single rotary fittings, double rotary, top-hammer and vibro-rotary to carry out consolidation, micropiles and anchors with different drilling technologies, direct circulation, reverse circulation, DTH, CFA, jet grouting. With an operating weight of 22 tons the rig is assembled on steel crawler track complete with 2 rear outriggers and 2 extendable hydraulic front stabilizer pads to give an increased stability on any soil formation. It is powered by a Cummins CUMMINS QSB6.7 that delivers 194 kW at 2200 rpm, while ensuring

at the same time a low environmental impact due to reduced noise, fuel consumption and emissions. In order to improve the Soilmec "green target" the technical department have designed a new type of sound proofed openable canopies giving further noise reduction and located the

Diesel Engine on the rear side of the chassis to easy maintenance.

The machine is fitted with proportional, hydraulic servo-assisted controls so that drilling and positioning operations become easy, precise and smooth. Its particular kinematic mechanism composed by a swiveling





#### SM-22

It is powered by a Cummins CUMMINS QSB6.7 that delivers 194 kW at 2200 rpm

boom on a slewing ring driven by two cylinders and a new articulated joint 90° without pins removal allowing the operator to work in parallel to the undercarriage tracks in total safety.

In order to guarantee the maximum safety for operators and the maximum handiness of operations, SM-22 can be ordered equipped with radio remote control or with hydraulic/proportional panel on pivotal support arm for all the drilling operations and a wired remote control for tramping. Moreover the base machine is fitted with a fixed control board that display consumption of Diesel engine, rotary rotation speed, working pressure and temperatures of oil & water.

The machine equipped with Jet-Grouting version meets the highest application performance for this model. Jet-Grouting technique consists of disaggregating the soil and mixing it with cement admixtures by means of high pressure jets, this technique have been used in a wide range of soils and for several application as: underpinning, cut-off, bottom plugs. Deep columns in single pass means better production and a high quality of treatment so it is very important for a rig to be able to reach high depth in a single step. The SM-22 in jet grouting version features a monolithic mast,







rotary head with a maximum torque of 3660 daNm mounted on cradle with 600 mm side shifting actuated by hydraulic cylinder. The rig can be supplied by Soilmec along with the entire job-site installation for a jet-grouting project: the high pressure jetting pump, the mixing plant for the grout and all the necessary ancillaries like additional pumps, rods, monitors and pipings. ◀

10200 mm stroke, that can be fitted with a boom extension to reach a jetting treatment depth of 27 m in single pass. The boom lattice extension is composed by two framework elements, 11 m and 7 m long, complete with flexible hoses kit, cradle for swivel, cradle for rod guide and electric

equipment. Moreover the machine can be set up with rod loader actuated by hydraulic arm that allows to load two rods 9 m long in total safety to reach the very important depth of 45 m.

To drive the drill string the SM-22 is equipped with variable displacement

## INFO

### Soilmec S.p.A.

Via Dismano, 5819  
47522 Cesena (FC) - Italia  
Tel: +39 0547 319111  
[www.soilmec.com](http://www.soilmec.com)