Press release

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BAUER eCSM 100 compact – electric, quiet, and compact, designed for demanding construction sites

- Electrified upper carriage with a newly developed powertrain—a milestone in the electrification of BAUER equipment
- Compact dimensions thanks to the side-cutter configuration and mixing depths of up to 70 m
- Optimized transport logistics with a maximum transport weight of 30 t per unit and an integrated jack-up system

Schrobenhausen, Germany – Limited space and a wide range of site-specific constraints: Specialist foundation engineering projects in densely built-up urban areas place high demands on people, equipment, and construction methods. With the new eCSM 100 compact, BAUER Maschinen GmbH is introducing a fully electric machine for cutter soil mixing (CSM), tailored to meet these challenges. It was developed in close collaboration with SEIWA Renewal Works Co., Ltd., a specialist foundation engineering company within Japan's Taisei Group.

What is cutter soil mixing?
In cutter soil mixing (CSM), the existing soil is loosened using rotating cutting wheels and mixed on-site with a cement slurry. This creates a soil-cement mixture that can be used, for example, in the construction of cut-off walls. The process is used, among other applications, where excavation pits need to be sealed against groundwater ingress or where specific areas of the subsoil need to be stabilized.

Compact design, deep reach
On inner-city construction sites, every meter counts. Thanks to its side-cutter configuration, the eCSM 100 compact can operate even in extremely confined spaces. The machine achieves mixing depths of up to 70 m. It thus combines a small footprint with considerable working depths, a combination that is particularly valuable for demanding urban specialist foundation engineering projects.

The next-generation tandem cutter system is also designed to ensure an efficient mixing process. Optimized material flow and improved flap kinematics complement BAUER Maschinen's proven BCM gearbox technology, which is known for its robustness and reliability under challenging operating conditions.

"With the eCSM 100 compact, we have translated the requirements of demanding urban construction sites into a machine concept. Our key objective was to combine compact dimensions, deep mixing capabilities and a fully electric drive without compromising performance or reliability. Our close collaboration with SEIWA helped us tailor the machine specifically to the requirements of the Japanese market," says Christian Riedl, Product Manager at BAUER Maschinen GmbH, describing the development of the new machine.

Electrified upper carriage with a new powertrain
At the heart of the eCSM 100 compact is its electrified upper carriage. It is based on a cable-powered base carrier specifically designed for electric operation. During electric operation, the machine produces no local exhaust emissions. The sound power level of the upper carriage is half that of the diesel-powered version. The result is a significantly quieter working environment. These characteristics are particularly important when working near residential buildings and sensitive infrastructure.

Developed in close collaboration
BAUER Maschinen worked closely with SEIWA Renewal Works Co., Ltd. to develop the eCSM 100 compact. The Japanese company carries out specialist foundation engineering projects in densely built-up metropolitan areas.

Nobuo Otaka, Executive Officer and Project Manager at SEIWA Renewal Works, explains: “Our projects require a high degree of precision in execution within limited space. At the same time, we must minimize noise and vibration and meet high safety standards. The compact design, side-cutter configuration, and fully electric drive of the eCSM 100 compact open up possibilities for us that were difficult to achieve with conventional CSM machines. BAUER Maschinen understood our requirements and translated them into a solution tailored to the conditions of the Japanese market.”

Efficient transport and mobilization
It’s not just operation on the construction site that presents challenges for machine operators, transporting the equipment to the site does, too. That’s why BAUER designed the eCSM 100 compact with efficient mobilization in mind. The unit can be disassembled into transport-optimized units. The maximum transport weight per unit is 30 t. An integrated jack-up system facilitates on-site handling and setup.

Proven performance
The successful field test at BAUER Maschinen’s facility in Aresing demonstrated that the new machine delivers results in practice, not just on paper. In the presence of SEIWA Renewal Works Co., Ltd., two CSM panels were successfully constructed to a depth of 25 m. The machine demonstrated its capabilities impressively and fully met the expectations of everyone involved.

A new generation of CSM technology
With the eCSM 100 compact, BAUER is expanding the range of applications for the cutter-soil-mixing process. The combination of a compact design, fully electric drive, deep mixing capabilities, and carefully engineered transport logistics makes the machine particularly attractive for demanding construction sites – especially where space is limited and the protection of the surrounding area is a key priority.

Images: press-image-eCSM-100-compact-bauer-maschinen…



(1) With the new eCSM 100 compact, BAUER Maschinen GmbH is introducing a fully electric machine for cutter-soil mixing (CSM).



(2) Thanks to its side-cutter configuration, the eCSM 100 compact can operate even in confined spaces, for example on urban specialist foundation engineering projects.



(3) BAUER Maschinen worked closely with Seiwa Renewal Works Co., Ltd. to develop the eCSM 100 compact.

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About BAUER Maschinen Group

For almost 60 years, equipment from BAUER has represented the highest performance and quality and constant innovation. The BAUER Maschinen Group is the world market leader in the development and manufacture of specialist foundation engineering equipment. BAUER Maschinen GmbH, which is also the holding company for a number of subsidiaries, designs and builds large-diameter drilling rigs, duty-cycle cranes, trench cutters, grabs and vibrators as well as the related tooling at its plants in Schrobenhausen, Aresing and Edelshausen. The subsidiaries manufacture state-of-the-art mixing and separation equipment as well as rotary drive systems and equipment for drilling small-diameter boreholes and wells. The BAUER Maschinen Group also operates manufacturing facilities in the USA, China, India, Malaysia, and Turkey. A component supplier within the Group is Schachtbau Nordhausen. The company operates a global sales and service network. More at https://equipment.bauer.de/en.

About BAUER

The BAUER Group is a leading provider of deep drilling equipment, equipment and products dealing with ground and groundwater. The Group can rely on a worldwide network on all continents. The Group's operations are divided into three forward-looking segments: Geotechnical Solutions, Equipment and Resources. BAUER profits enormously from the collaboration of its three business segments, enabling the Group to position itself as an innovative, highly specialized provider of products and services for demanding projects in specialist foundation engineering and related markets. BAUER therefore offers suitable solutions to the world's greatest challenges, such as urbanization, the growing infrastructure needs, the environment, as well as water. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2025, it employed about 10,500 people and achieved total Group revenues of EUR 1.7 billion worldwide. More information can be found at https://www.bauer.de/en. Follow us on Facebook, LinkedIn, Instagram and YouTube!