

Specialist Press Release

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Bauma 2022: BAUER Maschinen Group presents numerous innovations at the world's leading trade fair

Munich / Schrobenhausen, Germany – This October, another trade fair of superlatives is taking place: the Bauma in Munich. "After the last few years, where personal contact was only possible to a very limited extent due to the pandemic, we are particularly looking forward to welcoming many customers, partners and friends from all around the world at our stand," says Dr. Rüdiger Kaub, Managing Director of BAUER Maschinen GmbH.

At Stand FN 520 (outdoor area north), alongside the core area of Bauer drilling rigs, duty-cycle cranes from the MC series and diaphragm wall equipment, the exhibits also include devices and equipment from the subsidiaries Klemm, RTG and Bauer MAT. "Our guests will be treated to a few very special premieres that we are presenting to trade professionals for the first time ever," continues Kaub. This year, the particular focus of the equipment exhibited as well as the CO₂-neutral exhibition stand of the BAUER Maschinen Group is one main topic: Sustainability.

For all applications: Bauer's multi-functional drilling rigs

At Bauma, Bauer is presenting a small selection of the various possible applications and equipment lines, with a total of four large rotary drilling rigs. In the area of multi-function equipment, the BG 45 and BG 23 H offer a small glimpse into the range of applications, kinematic systems and base carriers available.

The **BG 45** is the largest drilling rig at the Bauer stand. Thanks to V-kinematics, where the mast is shifted to the front in transport position, it offers a high level of rigidity for difficult applications, and above all, excellent versatility in the mobilization phase. As a result, a transport weight of around 35 tons for the heaviest individual components can be achieved with high efficiency. The flexible mobilization process is supported by the wireless remote-controlled mobilization package featuring hydraulic actuation of the main connection bolts for the mast and kinematics. At Bauma, the unit is exhibited with an equipment package for soil mixing technology: the Single Column Mixing-Double Head (SCM-DH). Two mixing tools with reverse rotation achieve thorough soil mixing and column quality due to this contrary motion.

The smallest drilling rig on display is the **BG 23 H**, a compact machine with H-kinematics. This equipment can be completely mobilized and loaded using wireless remote control. With this model, the mast is stored on the machine in transport position, and the counterweight can be removed by the machine itself if necessary. This facilitates rapid and easy mobilization from one construction site to another. The complex undercarriage allows for a transport width of just 2.5 m and a transport height of just 3.1 m when the rotary drive is dismantled. This makes it easier to pass through narrow entrances and gates, as often found on urban construction sites. Thanks to a divided mast, the equipment is also prepared for work with restricted heights. Using the appropriate expansion kit, it is possible to work on construction sites with a working height of

less than 9 m. But compact does not mean weak: In Kelly operation, a powerful capacity of 235 kNm is available for installing the casings, and with the Crowd Plus assistant it is possible to activate a retraction force of up to 400 kN for retracting the casings. The compact BG 23 H is equipped with a new assistance system. This system provides the operator with a considerably extended range of outreach for work with continuous monitoring by the control system. Thanks to the powerful 225 kW CAT diesel engine, there is also enough power for applications with two rotary drives.

The Bauer base carrier BT 65 for the BG 23 H is equipped with important safety details: It features integrated service platforms for easy, convenient and safe access for maintenance work. The practical scaffold can be pulled out like a drawer, transforming the engine cladding into fall protection. The cladding concept also provides excellent noise protection. In combination with the EEP drive concept, very good sound pressure levels are achieved during normal operation. All of these elements underscore the excellent suitability of the BG 23 H for site requirements in urban areas.

For Kelly drilling: ValueLine drilling rigs

Bauer's ValueLine equipment is specially optimized for Kelly drilling. The **BG 36** is the latest development in this line. EEP technology is now the standard for the upper end of the ValueLine range of equipment. For the toughest applications with large drilling diameters of up to 3 m and drilling depths of up to 115 m, the V-kinematics provide a solid and robust foundation with large bearing width. The feed cylinder with a length of 8.5 m and a retraction force up to 50 t enables the use of long casings as well. The B-Tronic system has also arrived for the special Kelly equipment. Apart from the large-scale display of drilling data and equipment parameters, the drilling assistant system allows for low-fatigue work during long drilling processes. The adaptive Kelly speed assistant is available for the new BG 36. This modern assistant enables fully automated, safe, fast and gentle extension and retraction of the heavy Kelly bars with up to five thrusts in places. The configuration exhibited at Bauma with a **BV 1500** casing oscillator, automatic turning table and a long Kelly bar is specifically coordinated to the requirements for reworking existing wells.

Electrified Bauer drilling rigs – consistent enhancement

In 2021, the BAUER Maschinen Group presented the new eBG 33 during its in-house exhibition "BAU ERLEBEN". The equipment enables locally CO₂-free operation thanks to the large electric drive. Apart from standard drilling methods, high-performance methods (e.g. soil mixing and double-head drilling methods) are possible as well as use with a trench cutter. At this year's Bauma, Bauer is now introducing a new chapter and presenting the next generation of electric drilling rigs in the top torque class.

Future technologies for the construction of cut-off walls and diaphragm walls

Cut-off walls, which are used for retaining structures, sealing off dams or as a foundation element, can be constructed using a variety of methods and equipment. One option is the cutter soil mixing method (CSM), which is applied particularly at great wall depths or final depths. It combines features of the diaphragm wall technique and the soil mixing method. The CSM equipment that Bauer is presenting on an RG 21 T at Bauma enables a maximum mixing depth of 20 m. A new model of the **BCM mixing unit** delivers enhanced performance for narrow soil mixing walls.

In the area of diaphragm wall technology, Bauer is presenting a **BC 48 cutter** with turnable HDS-T hose drum system and a new cutting tool at Bauma. The base carrier is a BAUER MC 96 duty-cycle crane. But that's not all: visitors can also experience the innovative **BAUER Cube**

System, which will be transported directly from the test site to the Bauma stand. The complete cutter including hose drum system fits in three conventional 20-foot-tall high cube containers. As a result, the system can be easily used in 3 x 3 m diameter tunnels, a major advantage for cutting projects in densely populated large cities. This means that large-scale closures of urban areas could potentially be a thing of the past. The impact of construction sites on traffic, businesses, and residents (in particular) are minimized, even during daytime use. The electric drive system considerably reduces the ecological disturbance of a cutting site. When it comes to logistics, the system's compact dimensions are another major advantage. Instead of expensive heavy haulage, individual elements of the system can be easily transported to their place of deployment as conventional containers.

Innovations in impact driving technology

The RTG Rammtechnik GmbH also has multiple innovations to display. For example, the exhibited **RG 21 T** has a newly developed **BCM 5** cutting and mixing unit. Particular features include the expanded cutting width and a markedly increased performance capacity. This results in a highly efficient CSM unit with low noise emissions and an excellent CO₂ footprint: after all, the CSM method eliminates the need to remove excavated material because the existing soil is used. The RG 21 T is equipped with the latest B-Tronic version and can be operated entirely using "Operate" remote control.

A true world first is the **RG 19 T** on display, which is setting standards as the first hybrid model in the telescoping leader segment. The system capacity is achieved with a diesel engine and an additional electric drive, which considerably reduces the CO₂ and noise emissions. All RTG models on the BS55RS and BS65RS base carrier can be offered with this hybrid technology in the future. The fitted vibrator features the SilentVibro package and the sheet pile assistant, which enormously increases occupational safety while also enhancing productivity. In addition, the "Operate" remote control is also available in the hybrid version. All equipment and attachments including the BCM 5 are equipped with the ACS clutch system for rapid change of attachments. The RTG Pile Driver app enables the operator to operate the equipment quickly and safely. In addition, complete service can be carried out on the equipment with the help of the app.

KLEMM's compact small and universal drilling rigs

Within the BAUER Maschinen Group, KLEMM Bohrtechnik GmbH is the competence center for compact drilling rigs in specialist foundation engineering. At Bauma, the company is presenting a total of four machines from its KR series:

The mini drilling rig **KR 606-3** with full anchor kinematics is perfectly suited for use in cramped urban conditions. The power packs are available in a diesel version or electrohydraulic version; the smallest drilling rig in the KLEMM portfolio is optionally available on a crawler, tire chassis or in a steel frame. With an operating weight of less than 10 tons and a total width of 1.8 m, the exhibited **KR 800-3G** is the smallest universal drilling rig with anchor kinematics and rollover. Its smart feed function with divisible feed is designed for low-headroom applications. The **KR 805-3GW** is a drilling rig for probe drilling involving near-surface geothermal heat. This makes it possible to reach drilling depths of up to 200 m using the double-head drilling method. A crane and drill string manipulator as well a hydraulic pulling mechanism in the clamping and breaking device are included on this equipment weighing nearly 20 tons. The series of KLEMM exhibits is rounded off by the **KR 806-3E**. This features proven technology from the KR 806-3GS, yet as an electrohydraulic, emission-free variant. The intelligent control system enables the use of batteries as a booster for drilling operation to reduce the required electricity load. Compared to the diesel-hydraulic variant, there are no restrictions when it comes to power and application.

Mixing and separation technology

At Bauma, BAUER MAT Slurry Handling Systems is presenting its **BE 300-C**, the most compact desanding plant of its capacity class worldwide. This is installed in a 20-foot container frame. In two stages, the plant separates solids up to a particle size of $d_{50} = 30 \mu\text{m}$ (known as the cut point) from rinsing fluid (known as slurry). In the area of mixers, the Allgäu-based branch of BAUER Maschinen GmbH is presenting a mixer of the type **CMS 30** (a machine for colloidal mixing of solids smaller than 1 mm with liquids), including grouting and rinsing pump **DP 160**. This equipment also features an impressively compact design. Like the BE 300-C, it is installed in a 20-foot container. Additional equipment features include an intelligent, self-learning control system, which guarantees precise dosing of the solid and liquids components in the slurry, continuous fill level monitoring in the storage tank using radar sensors and the option to preset up to ten different recipes. The CMS 30 can process up to three solids, two liquids and two additives. One characteristic element of both devices is the SPS control system, which enables fully automated operation. Using data transmission, remote maintenance can be carried out on the equipment. The series of exhibits from BAUER MAT Slurry Handling Systems is rounded off by the battery-powered **HP 30** hose pump and the **AVS 550-D** grouting station, a plant that produces and pumps out materials such as cement slurry for anchor grouting.

Photos: 2022-06_BAUER_Bauma+preview...



(1) In the field of multifunctional rigs, the BAUER BG 45 and BG 23 H will give a small insight into the variety of applications.



(2) KLEMM Bohrtechnik GmbH presents a total of four drilling rigs of the KR series at Bauma.



(3) The BE 300-C is the most compact desanding plant in its capacity class worldwide.

All photos: © BAUER Group

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, Russia, China, Malaysia, Italy, Singapore and Turkey. Component suppliers within the Group are Schachtbau Nordhausen and Olbersdorfer Guß. The company operates a global sales and service network. More at bma.bauer.de

About Bauer

The BAUER Group is a leading provider of services, equipment and products dealing with ground and groundwater. With over 110 subsidiaries, Bauer can rely on a worldwide network on all continents. The Group's operations are divided into three forward-looking segments with high synergy potential: Construction, 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, oil and gas. The BAUER Group was founded in 1790 and is based in



Schrobenhausen, Bavaria. In 2021, it employed about 12,000 people in around 70 countries and achieved total Group revenues of EUR 1.5 billion. BAUER Aktiengesellschaft is listed in the Prime Standard of the German Stock Exchange. More information can be found at www.bauer.de. Follow us on [Facebook](#), [LinkedIn](#) and [YouTube](#)!