

## Specialist Press Release

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### **BAUER Maschinen Group at Bauma 2022: Specialist foundation engineering solutions for the challenges of the future**

**Munich, Germany** – After three years, it was finally time again on October 24: Bauma – the world’s leading trade fair for construction equipment, construction material equipment, mining equipment, construction vehicles and construction machines – opened its doors at Munich’s exhibition grounds. In a hall area of roughly 200,000 m<sup>2</sup> and an outdoor area of more than 400,000 m<sup>2</sup>, more than 3,000 exhibitors from 58 countries presented exhibits until October 30. Among them, of course, was once again the BAUER Maschinen Group, which welcomed numerous guests at the entirely redesigned and certified climate-neutral exhibition stand with an urban character. Apart from Bauer drilling rigs, duty-cycle cranes from the MC series and diaphragm wall equipment, Bauer also displayed equipment and machines from the subsidiaries KLEMM, RTG and Bauer MAT – including some world firsts.

“For more than half a century, our high-performance and highly efficient equipment has been setting standards in specialist foundation engineering,” says Dr. Rüdiger Kaub, Managing Director of BAUER Maschinen GmbH. “We are proud of this, but we don’t rest on our laurels: we are making great strides on the path to a sustainable future with our numerous innovations that we presented at Bauma. We look forward to taking this journey together with our customers and partners.”

Michael Stomberg, CEO of BAUER AG, adds: “The topics of urbanization, energy supply and climate change pose a variety of challenges for us. With our machines, equipment and digital solutions, we contribute to mastering these challenges and building the foundation for the world of tomorrow.”

#### ***Alternative drives for increased flexibility on construction sites***

This year’s Bauma was entirely focused on digitalization and sustainability – two keywords that also play a central role at Bauer. In mid-2021, Bauer brought its first drilling rig with an electric drive on the market, the eBG 33. Now the company has opened up another chapter in electrification at Bauma and presented the new, fully battery-powered version of its electrical drilling rigs: the fully electric **BAUER eBG 33 H all electric**. With the additional electrification of the main consumers such as the rotary drive and main winch, it defines new standards for energy efficiency. Locally CO<sub>2</sub>-free operation with highly efficient energy use and low noise emission values are benefits for operators, residents and ultimately the environment as a whole. This new eBG model relies on a completely new generation of the B-Tronic control and visualization system, the B-Tronic 5, with innovative solutions in human-machine interaction and additional functions in the area of data management.

### ***First hybrid model in the telescopic leader segment***

RTG Rammtechnik GmbH also unveiled a true world first: the **RG 19 T hybrid**. The system capacity is achieved with a diesel engine and an additional electric drive, which considerably reduces the CO<sub>2</sub> and noise emissions. With this model, RTG is setting standards in the telescopic leader segment. All RG models on the BS 55 RS and BS 65 RS base carriers can be offered with this hybrid technology in the future. Of course, the "operate" remote control is also available in the hybrid version. The new RTG Pile Driver app allows the operator to handle the machine quickly and safely. In addition, complete service can be carried out on the equipment with the help of the app.

KLEMM Bohrtechnik GmbH also presented an electric model, among other equipment: the exhibited **KR 806-3E** features proven technology from the KR 806-3GS rig, however 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.

The electric equipment portfolio of the BAUER Maschinen Group is rounded off by the electrically powered duty-cycle crane from the MC series, which already attracted attention at Bauma 2019, as well as the innovative **BAUER Cube System**. Bauer brought the system on the market in 2021 and now presented it at this year's Bauma to a wider audience of international professionals. Since its market launch, the system has gone through a number of tests. In order to demonstrate this at the trade fair, a complete overhaul of the equipment was deliberately avoided. What makes this world first unique: the cutter system, including hose drum system, fits into three conventional 20-foot high cube containers. As a result, it can be easily used in 3 x 3 m diameter tunnels, which is a major advantage for trench cutter projects in densely populated large cities. Whether for above-ground or underground use, large-scale closures of urban areas could potentially be a thing of the past, since the impact of construction sites on traffic, businesses, and residents (in particular) are minimized. Last but not least, the electric drive considerably reduces the ecological disturbance of a trench cutter jobsite.

"With our extensive product range, which includes specialist foundation engineering equipment with classic diesel, hybrid and electric drives, we allow our customers to have the highest possible flexibility for their construction site," says Dr. Rüdiger Kaub.

### ***Sustainability – also a question of efficiency***

When it comes to sustainability, in addition to the type of drive in the equipment, another factor plays a decisive role: how efficiently the equipment operates on site. A decade ago already, Bauer Maschinen laid the foundation for today's modern diesel-operated drilling rigs. The TEAM project, which addressed the development of technologies for energy-saving drives in mobile working equipment, resulted in the creation of the **EEP Energy-Efficient Power** package. It includes numerous modifications to improve efficiency. The drive system of the main winch, which represents a significant share of energy consumption especially in Kelly drilling, was thoroughly reworked. The system makes it possible to recapture energy released during the lowering process. Particularly with deep drilling operations, this allows for significant reductions in fuel consumption. Other advantages include needs-based output control of the fan speed. This not only affects efficiency, but also the drilling rig's considerably lower noise emissions compared with earlier generations. The same applies for optimized engine control: depending on the activated consumer function, the speed of the diesel engine is controlled intelligently to the

lowest possible value using the **eco mode**. A large-scale hydraulic system reduces output losses to a minimum. Consequently, in addition to the fuel savings, more power is generated at the consumer. Reduced losses, i.e. improved efficiency, also means more power where it is needed: at the rotary drive and at the main winch.

All these are installed as standard features in today's diesel-operated Bauer drilling rigs and contribute to sustainability, efficiency improvement and reduction of operating costs. Depending on the equipment size, up to 30% in fuel can be saved – with productivity increases of up to 10% and considerably reduced noise emissions by up to 50%.

### ***Sustainable methods reduce the carbon footprint***

In addition, the choice of method has a significant impact on the CO<sub>2</sub> footprint of a site. Soil mixing techniques that are sustainable because they conserve resources, like the cutter soil mixing (CSM) method patented by BAUER Maschinen GmbH or the single column mixing (SCM) method, offer a major advantage: the existing soil is loosened and mixed with a self-hardening slurry. This significantly reduces the number of transports that are needed (e.g., to bring concrete to the site, or excavated soil from the site to the landfill). Demand for such methods is increasing globally, and here Bauer not only delivers the equipment but also the right tools.

At Bauma, two exhibits with equipment for soil mixing were presented: a BG 45 with a single column mixing double head mixing drive (SCM-DH) that can be used to construct columns with a diameter of up to 2,400 mm through the reverse rotation of the mixing tools, and also an RG 21 with the new BCM 5L cutting and mixing unit to execute the CSM method.

### ***Innovation Award and EuroTest Prize***

BAUER Maschinen GmbH was delighted to receive two prestigious awards during Bauma. On the eve of the opening of the trade fair, the Innovation Awards were presented. In the Research category, the Deep Sea Sampling joint project took first place. Martin Sobczyk from the TU Bergakademie Freiberg accepted the award on behalf of the project participants. About the project: Whether copper, cobalt or rare earths, the global demand for these and other raw materials is already enormous. And it will continue to increase in the coming years. To meet the demand for raw materials in the long term, existing capacities must be expanded and new deposits sustainably developed. The issue of deep-sea mining is therefore more topical than ever. It requires a consideration of the potentials and impacts across all disciplines. The Deep Sea Sampling research project is making an important contribution to this. Project partners are the TU Bergakademie Freiberg with its Institute for Processing Machines and Recycling Systems Technology and the Institute for Mechanical Engineering, the University of Rostock, the FAU Erlangen-Nuremberg as well as Krebs & Aulich GmbH and BAUER Maschinen GmbH. The German Federal Institute for Geosciences and Natural Resources (BGR) as well as the Deep Sea Mining Alliance (DSMA) are also represented in the committee accompanying the project.

Just a few days later, Bauer received the EuroTest Prize 2022 from the German Employers' Liability Insurance Association for the Construction Industry (BG BAU) for its innovative Stability Plus assistance system. It aims to further increase the safety and user-friendliness of the drilling rig while significantly improving its performance. Stability Plus optimizes the horizontal extension of the drill mast, the positions of the main consumers and the slewing speed of the upper carriage. The operating forces according to the stability tables in the respective rig state are displayed to the operator in real time on the B-Tronic

user interface. This significantly reduces the operator's workload, eliminating the need to look up and memorize the complex data tables. In addition, the operator can independently select data records already stored in the B-Tronic control system for various equipment configurations and flexibly load them into the machine control system. This eliminates the need for service technicians. If new equipment data sets are required, they can be ordered from Bauer Maschinen and imported into the machine control system via the Internet using Data2Rig functionality via the DTR module.

"The inventive spirit in the many large and small companies is paving the way for Vision Zero in the construction industry. After all, their ideas for occupational safety and health help prevent accidents and work-related illnesses and make construction sites safer," said Prof. Frank Werner, Deputy Head of BG BAU's prevention department, at the awards ceremony. "With innovative work equipment and approaches to solutions that ensure greater safety on construction sites and in the skilled trades, this year's winners of the EuroTest Prize impressed the expert jury."

Apart from all these innovations and world firsts, Bauer did not neglect cherished traditions this year, such as inviting customers and partners to a Bavarian evening at the headquarters in Schrobenhausen, Germany. "Our guests particularly appreciate our friendly, down-to-earth atmosphere. We have known many of them for decades," says Dr. Rüdiger Kaub. "It is important for you and for us that you feel that when you purchase Bauer equipment, you're not just a customer. You become part of our global Bauer family."

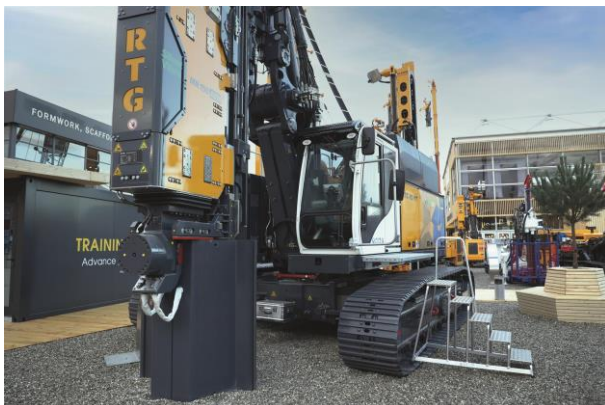
#### **Photos: 2022-11\_BAUER\_Bauma Review...**



(1) Bauer welcomed numerous guests to the completely redesigned and climate-neutral certified exhibition stand with city character.



(2) One of the highlights this year: the BAUER eBG 33 H all electric.



(3) With its new RG 19 T hybrid, RTG Rammtechnik GmbH is setting standards in the telescopic leader segment.



(4) The exhibits from KLEMM Bohrtechnik GmbH (at the front of the picture), including the electrohydraulic KR 806-3E, were also very well received.



(5) The partners of the Deep Sea Sampling project were delighted to receive the Bauma Innovation Award in the Research category.



(6) For the innovative Stability Plus assistance system, Bauer received the EuroTest Prize 2022 from BG BAU.

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, 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](http://bma.bauer.de)

### About Bauer

The BAUER Group is a leading provider of services, 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 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. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2021, it employed about



12,000 people and achieved total Group revenues of EUR 1.5 billion worldwide. BAUER Aktiengesellschaft is listed in the Prime Standard of the German Stock Exchange. More information can be found at [www.bauer.de](http://www.bauer.de). Follow us on [Facebook](#), [LinkedIn](#) and [YouTube](#)!