

BAUER Maschinen GmbH is setting new standards in torque with the current BG 46

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With the ValueLine and PremiumLine, **BAUER Maschinen GmbH** is offering two drilling rig lines that address the most diverse customer-specific requirements. While the ValueLine rigs are optimized for Kelly drilling, the PremiumLine comprises highly modern, multi-function machines for all different kinds of applications in specialist foundation engineering.

With the BAUER BG 46 a machine from the latest PremiumLine generation was presented at the **Bauma 2016** in Munich. This large diameter rotary drilling rig is equipped with a KDK 550 S rotary head, which provides a maximum torque of 553 kNm. In addition, it is possible to apply a torque of 700 kNm to the drill casing using a mechanically mounted torque multiplier. Through these exceptional forces, the rig has a capability to install casing deeper and overcome unexpected geotechnical conditions better than any other machine. To cope with these enormous forces, Bauer relies on the extremely robust V-kinematics for the mast attachment, which has proven itself over many years. So when it comes to torque, these properties makes the BG 46 to the most powerful rotary drilling rig currently available on the market.

Moreover, the machine that is more than 33 meters tall has a whole range of other features to offer: the flexible mast concept enables the crowd system to be optimized specifically for each particular process or application. The folding auxiliary boom allows the auxiliary winch to be used also in all single pass applications without any restrictions. With the installed vario mast section, the crowd ropes do no longer need to be removed for transport when the machine is configured for kelly operation. The optional single-layer piggyback winch allows the complete pulling force of 450 kN to be used in any working situation without reduction. The design avoids rope jumps, meaning that an exceptional rope service life can be achieved; moreover, the easily serviced position provides straightforward access to the winch. Because of the highly powered base unit of the rig and the dual motor concept of the winch, even at a load of 300 tons, the winch still has a lifting speed of 50 meters per minute granting a highly efficient drilling process.

The optional mast extensions not only offer greater drilling depths but also additional stroke for single-pass applications. In addition, for Kelly drilling the extension possibilities of the drill axis up to 2,000 mm result in drilling diameters up to 3,700 mm, depending on the configuration of the drilling rig. In the continuous flight auger method, the BG 46 can achieve a drilling depth up to 36 m with a maximum drilling diameter of 1,200

mm.

The modern, ergonomic operator's cabin not only offers the rig operator plenty of comfort but also cutting edge technology: the B-Tronic system with the color touchscreen display in Bauer design displays all parameters that are relevant for the machine and production. In addition, the B-Tronic is the central control element for a large number of assistance and automatic systems, which assist the rig operator to carry out the work in hand. The newly developed B-Drive provides a simple and ergonomic way of inputting or recalibrating the drilling parameters during drilling. The DTR module included in the machine allows the rig and production data to be made available to and called up by a large number of users. Networking with the tablet PC supplied as standard forms part of the basic equipment of the PremiumLine machines. Via wireless remote control, it is possible to control all setup functions conveniently, thereby assisting with setting up and removing the machine quickly and safely.

The 563 kW CAT C18 engine is now also available in the Tier 4 final / Stage 4 emissions category. In terms of engines, Bauer continues to rely on its proven cooperation with Caterpillar, the globally active engine specialist. The engineers at the research and development department of BAUER Maschinen GmbH placed particular emphasis on low noise emissions and excellent fuel economy through individual load control. Thanks to the Energy Efficiency Package (EEP), fuel consumption is reduced by as much as 30 percent compared to conventional technology, depending on the process. At the same time, productivity in on-site operation was increased by improved efficiency levels, while the parallel operation of main and auxiliary loads was significantly optimized.

The BG 46 also features state-of-the-art equipment when it comes to safety: the guide rails on the uppercarriage can be folded in conveniently for transport, as can the access walkway with railings at the cabin level. Upward-opening doors in the covering panels provide the greatest possible access for service work. The images from the rear area and main winch cameras are displayed on an integrated screen, thereby providing an optimum overview.

The BG 46 displayed in April at the Bauma in Munich has already been delivered to Deep Foundations Contractors Inc. in Toronto Canada, a long-term customer and leading owner of Premium Line drilling rigs from BAUER Maschinen GmbH.

Source: BAUER Aktiengesellschaft; Bauer Group