

Relaunch of BG 28 Rotary Drilling Rig

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The BG 28 mounted on a BS 80 base carrier has been the best-selling model of BAUER Maschinen GmbH since 2004.

Relaunching the BG 28-BS 80 as BG 30-BS 95 rotary drilling rig is an excellent demonstration that even best-selling models can be improved and suitably adapted to make them fit for new challenges and applications. In addition to the suggestions made by our customers and our own improvement plans, this process was also driven by statutory requirements. New and stringent exhaust emissions regulations require **new generations of diesel engines** and emissions management technologies.

Since the beginning of 2011, new diesel engines have to meet Stage IIIB (EU) – Tier IVi (US EPA) emissions standards. The exhaust gas emissions limits dictated by these new emission performance standards are significantly more severe than currently applicable limits. This current phase of tightening regulations requires substantial changes in diesel engine technology, as the new exhaust gas emissions limits can only be achieved by exhaust aftertreatment devices. For construction machinery and equipment, leading engine manufacturers are offering a system of cooled exhaust gas recirculation (EGR) and an integrated exhaust filter for diesel particulate matter (PM). Diesel engines must only be operated with ultra-low-sulfur diesel fuel with a maximum sulfur content of 15 ppm.

The exhaust aftertreatment and the increase in cooling capacity require more space on the uppercarriage. This has been taken into account in the new design of the uppercarriage of the new base carrier BS 95. Both the BG 28 and its successor the BG 30 are marketed worldwide. As exhaust emissions regulations are not, however, uniformly applied throughout the world and ultra-low-sulfur diesel fuel is not yet available in every country, BAUER Maschinen will still be offering current Stage IIIA / TIER III diesel engines in regions outside Europe, USA and Japan.

The **main winch** has been redesigned and mounted at the rear of the uppercarriage. Key features of the new main winch are:

- Increased line pull of 274 kN in the 1st layer (as opposed to 250 kN with the BG 28)

- Good accessibility
- Easy to exchange
- More space on uppercarriage for other equipment
- Wide winch drum (2-layer operation for great drilling depths)
- Rope length 75 m (2nd layer)

In addition to the technical improvements, the rear mounted main winch also provides an optical characteristic feature for the new BG 30.

The **rotary drive** has also been re-engineered. The torque has been increased from 275 kNm to 295 kNm at an hydraulic pressure of 350 bar.

The **counterweight** design concept has been completely redesigned:

Stackable horizontal counterweight slabs offer numerous advantages over vertically mounted counterweight elements:

- Constant tail radius
- Low deadweight (4.9 or 1.8 tonnes) for easy and safe assembly
- Flexible configuration for different applications

As part of the relaunch of the equipment many other details have also been modified which have improved both the rig's operational safety and operator comfort, such as the following features:

- Upward-folding hinged service doors
- Ergonomically optimized operator cab with sliding door
- Newly designed clearly arranged display and control buttons with night mode.

Source: BAUER Aktiengesellschaft; Bauer Group