BAUER BG 36
Rotary Drilling Rig
Base Carrier BS 95
The BAUER Group

Experience for you!

“100 years of drilling, 4 decades of building machines, and still down to the earth” Prof. Thomas Bauer

We could start by telling you about Sebastian Bauer, who founded a copper forge in the German town of Schrobenhausen some 200 years ago. We could then move on to how his workshop prospered and developed to a leading construction company for specialist foundation engineering. The story would continue to the mid 20th century, when innovation and the drive for perfection prompted Bauer to develop and build their own high-quality and high-performance machinery.

And it still wouldn’t end in the 21st century, Bauer now family-run in the seventh generation and meanwhile a globally operating group with more than 100 branches and subsidiaries operating in the fields of special foundation engineering (Bauer Spezialtiefbau), in manufacturing of foundation equipment (Bauer Maschinen) and focusing on products and services in the fields of water, energy, mineral resources and environmental technology (Bauer Resources).

But we think what really matters about us and to our customers is this: We are a strong partner with face and values, we are down to earth, and we are dedicated to perfection in everything we touch.

1790 Foundation as a copper forge in Schrobenhausen, Germany
1928 Well drilling in Bavaria, Germany
1958 Invention of the ground anchor by Dr.-Ing. K.H. Bauer
1976 First hydraulic rotary drill rig BAUER BG 7
1984 First diaphragm wall trench cutter BC 30
More than machines: Competent consulting

*Quality is not an act, it is a habit.*

Of the thousands of machines Bauer Maschinen has built since production started in the 1970’s with the first rotary drill rig BG 7, many of them are still in operation all over the world – in Siberia as well as in the desert. State of the art technology developed end-to-end by our inhouse engineers and full machine tests prior to delivery are one side of the coin. Bauer Maschinen can serve any customer need with the most comprehensive product portfolio.

The other side is project-specific consulting by highly trained experts, with a focus on your special requirements.

- Quality and experience in specialist foundation engineering
- Global operation – local contacts in over 70 countries
- Reliability in technology, service
- Customized solutions
- On-site support over entire machine service life
The BAUER BG PremiumLine

The BG Premium Line stands for multifunction equipment for a variety of foundation construction systems. The selection between two model ranges allows an optimum choice for differing project or transportation requirements.

Specific highlights of the BG PremiumLine are:
- High safety standards
- Environmental sustainability, economic efficiency and performance
- Easy to transport and short rigging time
- High quality standard
- Long lifetime and excellent resale value

The H-model line

Special features of the H-model line are:
- Fast loading onto transport vehicles
- Easy rigging on-site due to compact design
- Rapid shifting to new working positions on construction sites with underpasses or underneath low bridges

The V-model line

Special features of the V-model line are:
- Big borehole diameters
- Large drilling depths
- Extended service intervals and power transmission with low vibrations due to the robust design of the kinematic system
The Rotary Drilling Rig
BG 36 PremiumLine (BS 95)

Max. drilling diameter: 2,500 mm
Max. drilling depth: 100.0 m
Max. torque: 365 kNm
Max. height: 30.0 m
Engine: CAT C 15 –
Stage III A/Tier 3
– Stage IV/Tier 4 final
433kW @ 1,850 rpm

1 Undercarriage
2 Upper carriage
3 Main winch
4 Auxiliary winch
5 Crowd winch
6 Kinematic system
7 Mast
8 Mast head
9 Kelly bar
10 Rotary drive (KDK)
11 Drilling tool
Modern, ergonomic operator cab
- FOPS compliant with additional protective roof guard
- Premium operator seat, air-sprung and heatable
- Joystick controls with high functionality
- B-Drive for multi-functional potentiometer input

Flexible mast concept
- Vario-masthead
  - Masthead for drill axis 1,100 expandable to 1,400 mm
  - Increased stroke for Kelly bars when using an upper kelly guide
  - Tiltable main jib for for single-pass processes and for optimized transport
- Vario-crowd system
  - Transport possible with built-in crowd ropes (Kelly operation)
  - Reduced Headroom version, possible with integrated Vario-mast section
  - Mast extensions 2 m Vario or 2 m Vario + 2 m

Powerful engine CAT C 15
- Conforming Exhaust Emission standard Stage III A / Tier 3 or Stage IV / Tier 4 final
- Diesel particulate filter in Exhaust Emission standard Stage IV / Tier 4 final
- Low noise emission
- Worldwide CAT-service partners

Spotlights
- Reduction of fuel consumption by up to 30 %
- Increased productivity through improved efficiency
- Significantly reduced noise levels
- Tried and proven suitability for practical application
- Optimized parallel operation of main and auxiliary consumers
Main winch on uppercarriage
- Single layer winch for minimized rope wear
- Constant line pull
- Designed for heavy continuous operation
- Service-friendly winch position
- Swing down mechanism for transport

Remote control for rigging the machine
- The remote control can be used to perform numerous rigging functions outside the danger zone, such as moving the drilling rig, telescoping the undercarriage, etc.
  - Operation within sight of the controlled rigging functions
  - Rugged and compact wireless remote control Multi with LCD screen
  - Lockable storage box for the remote control can be accessed from the ground

Safety equipment
- Walking platform with handrail (foldable for transport)
- Upward folding service doors
- Guardrails on upper level (foldable for transport)
- Rear view cameras
- Low individual weight
Rotary drive
Optional KDK 340 K (single gear drive)
or KDK 365 S (multi gear drive)

Hydraulically operated pin connection on the crowd sledge
− Pin connection controlled via the remote control
− Simple and secure attachment of the rotary drive, no working at heights unsecured

KDK 340 K

KDK 365 S
additional torque casing

<table>
<thead>
<tr>
<th>Gear</th>
<th>1st gear</th>
<th>2nd gear</th>
</tr>
</thead>
<tbody>
<tr>
<td>M nom. [kNm]</td>
<td>342</td>
<td>365</td>
</tr>
</tbody>
</table>
Operating weight 114 t
(as shown)

* depending on equipment
### Technical Specifications

#### Rotary drive (selectable)

<table>
<thead>
<tr>
<th></th>
<th>KDK 340 K</th>
<th>KDK 365 S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque (nominal) for casing operation at 350 bar</td>
<td>342 kNm</td>
<td>365 kNm</td>
</tr>
<tr>
<td>Torque (nominal) for drilling at 350 bar</td>
<td>342 kNm</td>
<td>340 kNm</td>
</tr>
<tr>
<td>Max. speed of rotation</td>
<td>40 rpm</td>
<td>52 rpm</td>
</tr>
</tbody>
</table>

#### Crowd winch system

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. sledge stroke with 2 m Vario + 2 m mast extension</td>
<td>22,800 mm</td>
</tr>
<tr>
<td>Crowed force push and pull, effective / nominal</td>
<td>400 / 513 kN</td>
</tr>
<tr>
<td>Rope diameter</td>
<td>28 mm</td>
</tr>
<tr>
<td>Speed (down / up)</td>
<td>12 m/min</td>
</tr>
<tr>
<td>Fast speed (down / up)</td>
<td>30 m/min</td>
</tr>
</tbody>
</table>

#### Main winch (selectable)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>multi-layer</th>
<th>single-layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winch classification</td>
<td>M6 / L3 / T5</td>
<td>M6 / L3 / T5</td>
</tr>
<tr>
<td>Line pull (1st layer) effective / nominal</td>
<td>287 / 363 kN</td>
<td>320 / 376 kN</td>
</tr>
<tr>
<td>Rope diameter</td>
<td>32 mm</td>
<td>36 mm</td>
</tr>
<tr>
<td>Line speed (max.)</td>
<td>75 m/min</td>
<td>62 m/min</td>
</tr>
</tbody>
</table>

#### Auxiliary winch (selectable)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winch classification</td>
<td>M6 / L3 / T5</td>
</tr>
<tr>
<td>Line pull (1st layer) effective / nominal</td>
<td>80 / 100 kN</td>
</tr>
<tr>
<td>Rope diameter</td>
<td>20 mm</td>
</tr>
<tr>
<td>Line speed (max.)</td>
<td>55 m/min</td>
</tr>
</tbody>
</table>

#### Base carrier (EEP)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>CAT C 15</td>
</tr>
<tr>
<td>Rated output ISO 3046-1 (with/without power package)</td>
<td>403 / 433 kW</td>
</tr>
<tr>
<td></td>
<td>1,850 rpm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust emission EEC 97/68 EC standard acc. to EPA/CARB</td>
<td>Stage III A</td>
</tr>
<tr>
<td></td>
<td>Tier 3</td>
</tr>
<tr>
<td></td>
<td>Stage IV</td>
</tr>
<tr>
<td></td>
<td>Tier 4 final</td>
</tr>
<tr>
<td>Diesel tank capacity / AdBlue Tank</td>
<td>1,000 / – l</td>
</tr>
<tr>
<td></td>
<td>840 / 35 l</td>
</tr>
<tr>
<td>Sound pressure level in the cabin (EN 16228, Annex B)</td>
<td>LPA 80 dB (A)</td>
</tr>
<tr>
<td>Sound power level (2000/14/EG u. EN 16228, Annex B)</td>
<td>LWₐ, 112 dB (A)</td>
</tr>
<tr>
<td>Hydraulic pressure</td>
<td>350 bar</td>
</tr>
<tr>
<td>Hydraulic oil tank capacity</td>
<td>1,000 l</td>
</tr>
<tr>
<td>Flow rates</td>
<td>2 x 425 + 1 x 565 + 1 x 215 l/min</td>
</tr>
</tbody>
</table>

#### Undercarriage (selectable)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>UW 110 standard</th>
<th>UW 110 upgrade</th>
<th>UW 110 transport optimized version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crawler type</td>
<td>B 7</td>
<td>B 7</td>
<td>B 7</td>
</tr>
<tr>
<td>Traction force effective / nominal</td>
<td>771 / 907 kN</td>
<td>771 / 907 kN</td>
<td>771 / 907 kN</td>
</tr>
<tr>
<td>Overall length of crawlers</td>
<td>5,680 mm</td>
<td>6,090 mm</td>
<td>6,090 mm</td>
</tr>
<tr>
<td>Track shoes</td>
<td>800 / 900 mm</td>
<td>900 mm</td>
<td>900 mm</td>
</tr>
</tbody>
</table>
## Technical Equipment

### Base carrier BS 95

#### Standard
- Removable counterweights
- Protective roof guard
- Radio with MP3, USB and Bluetooth hands-free kit
- Platforms with handrail (on both sides and at the cabin)
- Grating in front of cab
- Quadrails upper level, foldable for transport
- Electric refueling pump
- Energy-Efficient Power (EEP)
- Air conditioning system
- Premium operator seat
- Cameras for rear area and main winch surveillance
- Remote control Basic, Fig. A
- Central lubrication system
- Removable crawlers

#### Optional
- Counterweight, variably adjustabler
- Walking platform with handrail (continuous on both sides at cabin level, foldable for transport
- Tool storage in front of operator cab
- High-pressure cleaner with water tank
- Compressor 1,000 l/min
- Electric generator 13 kVA
- Bio-degradable hydraulic oil
- Cab space heater
- Arctic kit / Arctic kit plus
- LED spotlights
- Additional camera (at customized location)
- Front screen guard
- Sun blind small or large
- Climatronic
- Remote control Multi
- UW 110 transport optimized version, Fig. B

### Drilling rig attachment

#### Standard
- Sturdy V-type mast kinematic system
- Main winch with hydraulic free-fall control
- Swivel for main rope
- Hydraulic locking for support trestle
- Vario-Masthead
- Pivoted anchor point for main and auxiliary rope

#### Optional
- Upper Kelly guide
- Extension of drill axis to 1,400 mm
- Mast support unit
- Vario-crowd system with 2 m Vario-mast section
  - Transport possible with built-in crowd ropes (Kelly operation)
  - Reduced Headroom version, possible with integrated Vario-mast section, Fig. C
- Mast extension 2 m
- Lattice mast extension
- Swivel for auxiliary ropes
- Attachment of casing oscillator up to BV 2000, Fig. D
  - Powered by on-board hydraulics of the base carrier
  - Controlled from operator’s cab
  - Weight of drilling rig can be activated through mechanical fixing
- Attachment of automatic casing drive adapter
- Concrete line attachment
- Air line attachment
- Hydraulic bolt connection on rotary sledge for easy mounting and demounting of rotary drive
**Rotary drive**

**Standard**
- Rotary drive KDK 340 K (single-gear drive)
- Selectable modes of operation
- Kelly drive adapter for outer Kelly tube 470 mm
- Integrated Kelly damping system
- Exchangeable Kelly drive keys
- Cardanic joint
- Quick-release hydraulic couplers
- Transport supports
- Lifting gear

**Optional**
- Rotary drive KDK 365 S (multi-gear drive)
- Kelly drive adapter for outer Kelly tube 419 mm
- Torque multiplier BTM 720 K Kelly drilling
  - Torque 470 kNm (nominal)
  - Increase of torque for casing installation in the lower mast section
- Easy attachment
- Separate sledge
- Connection to rotary drive with cardanic joint
- Torque multiplier BTM 400 for CCFA, Fig. E

**Measuring and control system**

**Standard**
- PLC processor for all electrically actuated functions
- Automatic mast alignment with memory function
- Depth measuring device on main winch
- Distance measuring device on crowd winch
- Main winch with electronic load sensing
- Slack rope prevention
- Automatic swivel alignment function
- Hoist limit switch for main and auxiliary winch
- Auxiliary winch with hydraulic load sensing
- Crowd stroke monitoring
- Crowd speed control
- Speed measuring control for rotary drive (KDK)
- Hold-Back control
- Electronic mast reach limiter

**Optional**
- Electronic load sensing for auxiliary winch
- Recording of concrete pressure and volume for Single-Pass processes
- Software modules for further applications
Communication Technology

**B-Tronic**
The BAUER B-Tronic system allows completion of construction tasks in a reliable and accurate manner, even under extreme operating conditions
- The high-resolution touchscreen display ensures excellent user-friendliness
- The display can be optimally adapted to the operating situation and the amount of light present by changing the brightness level, the color scheme and the day/night mode
- The main parameters such as pump pressure, torque and drilling depths can be viewed at a glance

**B-Drive**
The B-Drive is a central operating and visualization system
- B-Drive combines adjustable potentiometer values on one display
- Ergonomic positioning of the display on the right column of the operator cab

**Tablet**
The tablet is the multi-functional tool for the Bauer machine
- Online access to the customer portal, handbooks, equipment management systems and much more
- Standard internet connection via the DTR module, which is located in the machine
- The operator's screen can be mirrored live on the tablet to track the operating process

**Device networking**
**DTR module**
- The DTR module allows equipment and production data to be made available to a wide variety of users

**WEB-BGM**
- WEB-BGM is a software used to retrieve equipment data and establish the locations of various machines, even if you are not on-site

**B-Report**
- Standardized reports for the documentation of drilling progress and verification of performance and quality
Assistance Systems (selection)

One-directional and bi-directional spoil discharge assistant
Automatic emptying of spoil via an alternating or shocking slewing rotation of the rotary drive. Infinitely variable adjustment of the shaking or shocking frequency via joystick.

Automatic drilling and extraction control for Single-Pass processes
The system controls the drilling and/or extraction speed of the crowd system and enables hands-free operation. This ensures the production of a high-quality pile while simultaneously minimizing the amount of concrete.

Kelly drilling assistant
Saves the current crowd speed and the speed of the rotary drive. It enhances drilling performance with simultaneous hands-free operation. Drilling parameters can be adjusted during the automated drilling procedure.

Kelly visualization
Display of the locking recesses, as well as representation of the controlled extension and retraction of the Kelly bar on the B-Tronic system. The rapid approach of the locking position results in a considerably enhanced drilling performance. In addition, the level of wear that the Kelly bar and drive keys are subject to is significantly reduced.

Satellite-based positioning
The BAUER-Assistant Positioning System (B-APS) allows the position of a bored pile to be located extremely accurately. Documentation is provided for the nominal and actual coordinates, as well as the corresponding accuracy of each bored pile. Manual marking of the piles is no longer required.

Numerous other assistance systems are available in our portfolio
### Application – Kelly Drilling

<table>
<thead>
<tr>
<th>Undercarriage</th>
<th>Basic version</th>
<th>Upgraded version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mast extension</td>
<td>UW 110 standard</td>
<td>UW 110 upgrade</td>
</tr>
<tr>
<td>without</td>
<td></td>
<td>2 m + 2 m Vario</td>
</tr>
<tr>
<td>Upper Kelly guide</td>
<td>without</td>
<td>with</td>
</tr>
<tr>
<td>Drill axis</td>
<td>1,100 mm</td>
<td>1,400 mm</td>
</tr>
<tr>
<td>Max. drilling diameter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>uncased</td>
<td>Ø 1,800 mm</td>
<td>Ø 2,500 mm</td>
</tr>
<tr>
<td>cased</td>
<td>Ø 1,500 mm</td>
<td>Ø 2,200 mm</td>
</tr>
<tr>
<td>Operating weight, approx.</td>
<td>114 t</td>
<td>148 t</td>
</tr>
<tr>
<td>with Kelly BK 420 / 470 / 3 / 36</td>
<td></td>
<td>BK 420 / 470 / 4 / 80</td>
</tr>
<tr>
<td>with casing drive adapter</td>
<td>Ø 1,500</td>
<td>Ø 2,000</td>
</tr>
<tr>
<td>with bucket</td>
<td>Ø 1,350</td>
<td>Ø 1,850</td>
</tr>
<tr>
<td>with counterweight *</td>
<td>14.9 t</td>
<td>24.5 t</td>
</tr>
</tbody>
</table>

* depending on equipment
Drilling depth – uncased Kelly drilling

<table>
<thead>
<tr>
<th>3-part Kelly</th>
<th>A (m)</th>
<th>B (m)</th>
<th>G (kg)</th>
<th>H_W (m)</th>
<th>T (m)</th>
<th>H_W (m)</th>
<th>T (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK420/470/3/30</td>
<td>13.2</td>
<td>32.2</td>
<td>8,150</td>
<td>8.3</td>
<td>30.4</td>
<td>10.7</td>
<td>30.4</td>
</tr>
<tr>
<td>BK420/470/3/36</td>
<td>15.2</td>
<td>38.2</td>
<td>9,300</td>
<td>6.3</td>
<td>36.4</td>
<td>9.5</td>
<td>36.4</td>
</tr>
<tr>
<td>BK420/470/3/42</td>
<td>17.2</td>
<td>44.2</td>
<td>10,350</td>
<td>4.3</td>
<td>42.4</td>
<td>7.5</td>
<td>42.4</td>
</tr>
<tr>
<td>BK420/470/3/48</td>
<td>19.2</td>
<td>50.2</td>
<td>11,450</td>
<td>2.3</td>
<td>48.4</td>
<td>5.5</td>
<td>48.4</td>
</tr>
<tr>
<td>BK420/470/3/52</td>
<td>20.6</td>
<td>54.3</td>
<td>12,290</td>
<td>-</td>
<td>-</td>
<td>4.2</td>
<td>52.4</td>
</tr>
<tr>
<td>BK420/470/3/60</td>
<td>23.2</td>
<td>62.2</td>
<td>13,970</td>
<td>-</td>
<td>-</td>
<td>1.5</td>
<td>60.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4-part Kelly</th>
<th>A (m)</th>
<th>B (m)</th>
<th>G (kg)</th>
<th>H_W (m)</th>
<th>T (m)</th>
<th>H_W (m)</th>
<th>T (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK420/470/4/48</td>
<td>15.2</td>
<td>49.8</td>
<td>12,600</td>
<td>6.3</td>
<td>48.0</td>
<td>9.5</td>
<td>48.0</td>
</tr>
<tr>
<td>BK420/470/4/56</td>
<td>17.2</td>
<td>57.8</td>
<td>14,100</td>
<td>4.3</td>
<td>56.0</td>
<td>7.5</td>
<td>56.0</td>
</tr>
<tr>
<td>BK420/470/4/64</td>
<td>19.2</td>
<td>65.8</td>
<td>15,700</td>
<td>2.3</td>
<td>64.0</td>
<td>5.5</td>
<td>64.0</td>
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<tr>
<td>BK420/470/4/72</td>
<td>21.2</td>
<td>73.8</td>
<td>17,250</td>
<td>-</td>
<td>-</td>
<td>3.5</td>
<td>72.0</td>
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<tr>
<td>BK420/470/4/76</td>
<td>22.2</td>
<td>77.8</td>
<td>18,340</td>
<td>-</td>
<td>-</td>
<td>2.5</td>
<td>76.0</td>
</tr>
<tr>
<td>BK420/470/4/80</td>
<td>23.2</td>
<td>81.8</td>
<td>19,170</td>
<td>-</td>
<td>-</td>
<td>1.5</td>
<td>80.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5-part Kelly</th>
<th>A (m)</th>
<th>B (m)</th>
<th>G (kg)</th>
<th>H_W (m)</th>
<th>T (m)</th>
<th>H_W (m)</th>
<th>T (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK210/470/5/85</td>
<td>20.0</td>
<td>87.6</td>
<td>16,300</td>
<td>1.5</td>
<td>85.8</td>
<td>4.8</td>
<td>85.8</td>
</tr>
<tr>
<td>BK210/470/5/90</td>
<td>21.0</td>
<td>92.6</td>
<td>16,900</td>
<td>-</td>
<td>-</td>
<td>3.8</td>
<td>90.8</td>
</tr>
<tr>
<td>BK210/470/5/100</td>
<td>23.0</td>
<td>102.6</td>
<td>17,900</td>
<td>-</td>
<td>-</td>
<td>1.8</td>
<td>100.8</td>
</tr>
</tbody>
</table>

Drilling data have been determined with an effective tool length of NL = 1.9 m and with the mast at a minimum operating radius. These data only apply for the use of Bauer tools. Drilling depth is increased by 0.32 m when using maximum horizontal mast reach.

Torque multiplier BTM 720 for a torque of 470 kNm for casing

Casing lengths with BTM = H_W - 0.5 m
H_W max. = 9.5 m

Kelly drilling with casing oscillator up to BV 2000

Casing lengths without BV = H_W - 0.5 m
with BV = H_W - 1.6 m
### Application – CFA Drilling

#### BG 36 PremiumLine

<table>
<thead>
<tr>
<th>Feature</th>
<th>Basic version</th>
<th>Upgraded version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undercarriage</td>
<td>UW 110 standard</td>
<td>UW 110 upgrade</td>
</tr>
<tr>
<td>Mast extension</td>
<td>without</td>
<td>2 m + 2 m Vario</td>
</tr>
<tr>
<td>Kelly extension</td>
<td>without</td>
<td>8 m</td>
</tr>
<tr>
<td>Max. drilling diameter</td>
<td>Ø 1,200 mm</td>
<td>Ø 1,200 mm</td>
</tr>
<tr>
<td>Max. drilling depth with auger cleaner</td>
<td>17.0 m</td>
<td>29.0 m</td>
</tr>
<tr>
<td>Max. extraction forth with main- and crowd winch (effective)</td>
<td>950 kN</td>
<td>950 kN</td>
</tr>
<tr>
<td>With counterweight</td>
<td>14.9 t</td>
<td>24.5 t</td>
</tr>
</tbody>
</table>

* depending on equipment
**Further Applications**

<table>
<thead>
<tr>
<th></th>
<th>FDP Lost-bit drilling</th>
<th>FDP drilling</th>
<th>SCM mixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mast extension</td>
<td>2 m + 2 m Vario</td>
<td>2 m + 2 m Vario</td>
<td>2 m + 2 m Vario</td>
</tr>
<tr>
<td>Kelly extension</td>
<td>13 m</td>
<td>13 m</td>
<td>13 m</td>
</tr>
<tr>
<td>Max. drilling diameter FDP</td>
<td>710 mm</td>
<td>710 mm</td>
<td>-</td>
</tr>
<tr>
<td>Max. mixing diameter SCM</td>
<td>-</td>
<td>-</td>
<td>1,900 (2,500 **) mm</td>
</tr>
<tr>
<td>Max. drilling depth FDP</td>
<td>33.0 m</td>
<td>33.0 m</td>
<td>-</td>
</tr>
<tr>
<td>Max. mixing depth SCM</td>
<td>-</td>
<td>-</td>
<td>33.0 m</td>
</tr>
<tr>
<td>Max. extraction force with main- and crowd winch (effective)</td>
<td>950 kN</td>
<td>950 kN</td>
<td>950 kN</td>
</tr>
<tr>
<td>With counterweight *</td>
<td>24.5 t</td>
<td>24.5 t</td>
<td>24.5 t</td>
</tr>
</tbody>
</table>

* depending on equipment

** operation only with special equipment
Further Applications

### CCFA drilling with BTM 400

<table>
<thead>
<tr>
<th>Mast extension</th>
<th>2 m + 2 m</th>
<th>2 m + 2 m</th>
<th>2 m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vario</td>
<td>Vario</td>
<td>Vario</td>
</tr>
<tr>
<td>Max. drilling diameter</td>
<td>750 mm</td>
<td>880 mm</td>
<td>1,000 mm</td>
</tr>
<tr>
<td>Max. drilling depth</td>
<td>21.1 m</td>
<td>21.1 m</td>
<td>19.1 m</td>
</tr>
<tr>
<td>Max. extraction force with main- and crowd winch (effective)</td>
<td>950 kN</td>
<td>950 kN</td>
<td>950 kN</td>
</tr>
<tr>
<td>Max. torque: Auger (right-hand rotation)</td>
<td>200 kNm</td>
<td>200 kNm</td>
<td>200 kNm</td>
</tr>
<tr>
<td>Casing (left-hand rotation)</td>
<td>400 kNm</td>
<td>400 kNm</td>
<td>400 kNm</td>
</tr>
<tr>
<td>Ejection system</td>
<td>standard</td>
<td>standard</td>
<td>standard</td>
</tr>
<tr>
<td>With counterweight *</td>
<td>22.5 t</td>
<td>22.1 t</td>
<td>19.6 t</td>
</tr>
</tbody>
</table>

* depending on equipment

### Jet Grouting

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lattice mast extension</td>
<td>20.2 m</td>
<td></td>
</tr>
<tr>
<td>Rod diameter</td>
<td>89 - 133 mm</td>
<td></td>
</tr>
<tr>
<td>Max. jetting depth</td>
<td>35.6 m</td>
<td></td>
</tr>
<tr>
<td>Rotary drive</td>
<td>KDK 10 S</td>
<td></td>
</tr>
<tr>
<td>Max. extraction force with crowd winch (effective)</td>
<td>130 kN</td>
<td></td>
</tr>
<tr>
<td>With counterweight *</td>
<td>24.5 t</td>
<td></td>
</tr>
</tbody>
</table>

*20**
CSM Cutter-Soil-Mixing

Mixing of self-hardening slurries in-situ with native soil using modified cutter technology (CSM) is an innovative and cost-effective technique for the construction of cut-off walls, earth retaining walls, ground improvement measures or foundation elements. CSM is used mainly for stabilizing loose, non-cohesive or soft cohesive soils. The mixing unit is derived from the Bauer trench cutters. The technique can, therefore, also be used in much harder and denser soil formations.

Key advantages of the technique:
- High productivity
- The native soil is used as construction material
- Little spoil removal
- Vibration-free process

Cutter / mixing head | BCM 5 | BCM 10
--- | --- | ---
Panel width | 1.0 m | 1.2 m
Panel length | 2.4 m | 2.8 m
Max. mixing depth | 36.0 m

For detailed information see brochure „Cutter-Soil-Mixing - Process and Equipment“ 905.656.2
BG 36

**Transport Data – Dimensions and Weights**

G = Weight (t)
B = Width (mm)

Weights shown are approximate values; optional equipment may change the overall weight and dimensions.

### Transport with UW 110 standard version

- G = 52.0 t
- G = 55.0 t (with main winch 287 kN)

### Transport with UW 110 standard version

- G = 69.5 t
- G = 72.7 t (with main winch 287 kN)
- G = 74.0 t (with main winch 287 kN and 2 m Vario-mast section)

### Transport with UW 110 upgrade

- G = 75.0 t
- G = 82.0 t (with main winch 320 kN and 2 m Vario-mast section)

### Transport with UW 110 transport optimized version

- G = 77.0 t
- G = 84.0 t (with main winch 320 kN, 2 m Vario-mast section and foldable platform)
Width of crawlers retracted / extended

<table>
<thead>
<tr>
<th>Track shoes 800 mm</th>
<th>UW 110 standard</th>
<th>UW 110 upgrade</th>
<th>UW 110 transport optimized version</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,400 - 4,600 mm</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Track shoes 900 mm</td>
<td>3,500 - 4,700 mm</td>
<td>3,500 - 4,700 mm</td>
<td>4,000 - 4,800 mm</td>
</tr>
</tbody>
</table>

Transport with UW 110 transport optimized version and dismantled crawlers

G = 36.8 t

Width of crawlers retracted / extended

G = 4 x 2.5 t + 1 x 4.9 t
B = 3,000 mm

* depending on application

Crawler unit
G = 2 x 9.8 t

Upper mast section with mast head
G = 5.7 t  B = 1,700 mm

Lower mast section
G = 18.3 t  B = 2,100 mm  (with 2 m Vario-mast section)

Mast head
G = 1.4 t  B = 1,300 mm

Mast extension 2 m
G = 1.0 t  B = 900 mm

2 m Vario-mast section
G = 1.3 t  B = 900 mm

Counterweight *
G = 4 x 2.5 t + 1 x 4.9 t
B = 3,000 mm

Main winch 287 kN
G = 3.4 t (with 95 m rope)

Main winch 320 kN
G = 7.3 t (with 100 m rope)

* depending on application
International Service Hotline
+800 1000 1200* (freecall)
+49 8252 97-2888
BMA-Service@bauer.de

* Where available