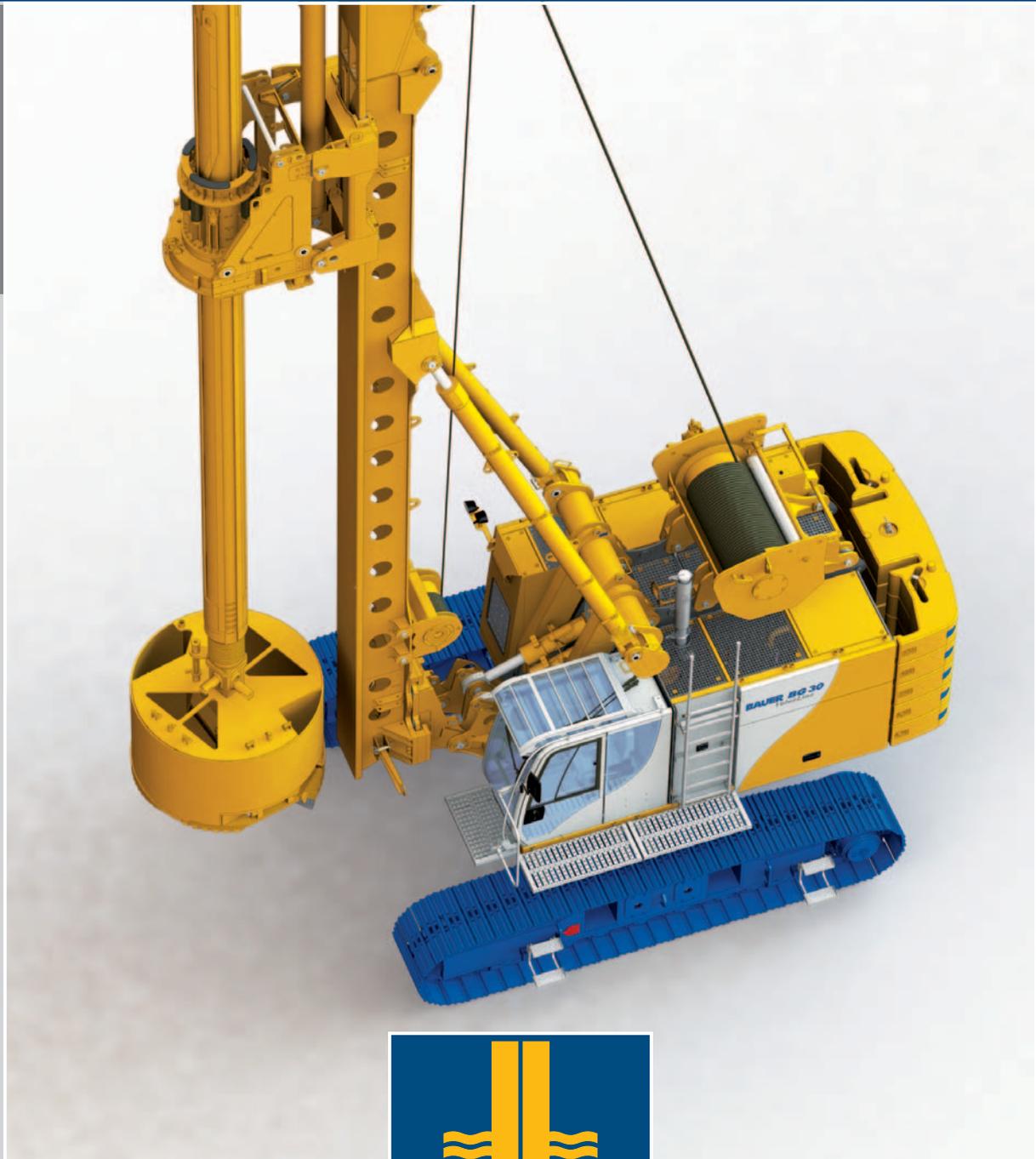


# BAUER BG 30

## Rotary Drilling Rig

Base Carrier BT 80

*ValueLine*



## 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 20<sup>th</sup> 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 21<sup>st</sup> 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.



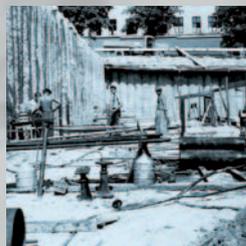
**1790**

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 and service**
- **Customized solutions**
- **On-site support over entire machine service life**



**1980's**  
Start of international  
equipment sales



**2001**  
Bauer Maschinen  
established as  
independent  
company within the  
Bauer Group



**2006**  
Stock market launch  
of BAUER AG,  
directed by  
Prof. Thomas Bauer



**2011**  
Introduction of  
BG ValueLine and  
BG PremiumLine



Regular showcasing  
of new developments  
on various exhibitions

## The BG ValueLine

*Perfection is achieved  
when there is nothing left to take away.*

Drilling uncased deep boreholes stabilized by drilling fluid, or drilling cased boreholes with installing casings by the rotary drive or by a hydraulic casing oscillator. If Kelly drilling is your task, then the BG ValueLine is our solution. The machines of the ValueLine are specifically adapted to no other purpose than Kelly drilling – and that perfectly.

You can expect superior Bauer performance and customary Bauer durability at affordable costs for acquisition and operation. How we do it? By applying cutting-edge technology, reduced to nothing less than the essentials.



- Long mast for more drilling depth
- Large drill axis for big diameters
- Well balanced concept for high productivity and economic operation
- Hydraulic system for high dynamic performance
- Easy handling, easy maintenance
- Variable transport concept

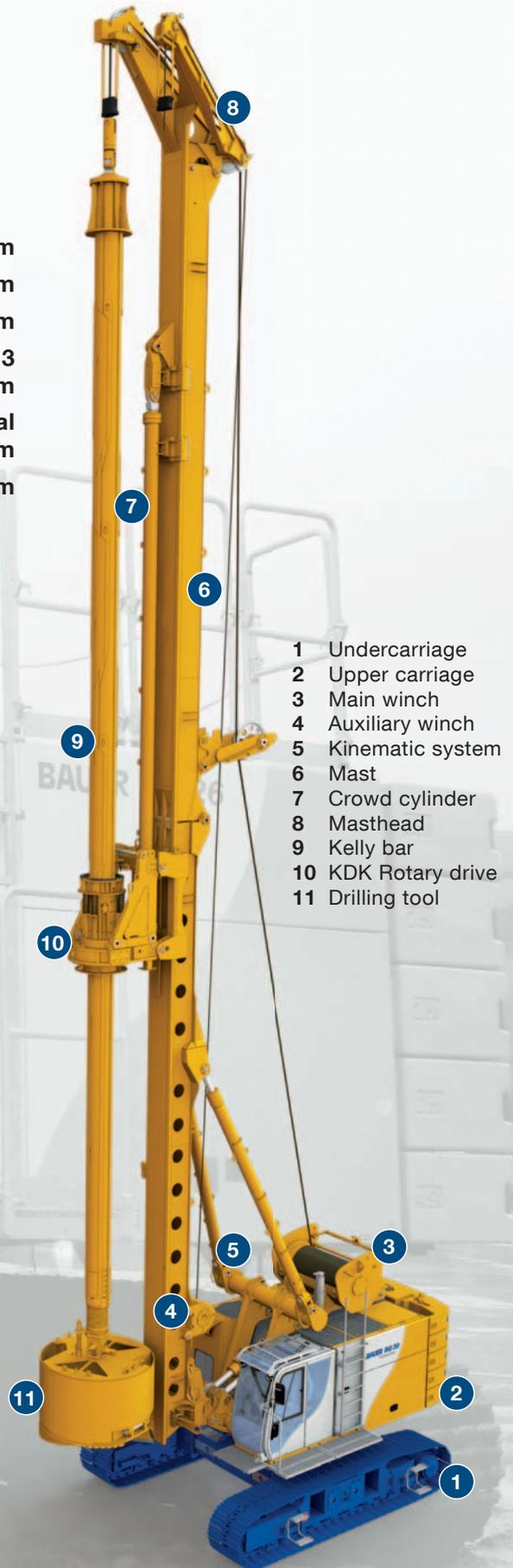
## The Rotary drilling rig BG 30 ValueLine (BT 80)

Max. drilling diameter:	2,500 mm
Max. drilling depth:	87.0 m
Max. torque:	300 kNm
Engine:	CAT C 9 – Tier 3 280 kW @ 1,800 rpm CAT C 9.3 – Tier 4 final 298 kW @ 1,800 rpm
Max. height:	26.9 m



BG 30  
BT 80

BG 38  
BS 80



- 1 Undercarriage
- 2 Upper carriage
- 3 Main winch
- 4 Auxiliary winch
- 5 Kinematic system
- 6 Mast
- 7 Crowd cylinder
- 8 Masthead
- 9 Kelly bar
- 10 KDK Rotary drive
- 11 Drilling tool



#### Kinematic system

- Proven Bauer kinematic system with support trestle and backstay cylinders for maximum stability
- Heavy-duty base frame optimized for attachment of front-end equipment
- Easy rigging due to compact design



#### KDK rotary drive

- High dynamic performance
- Single-gear drive with strong and robust design and high mechanical and hydraulic efficiency
- Adjustment to various soil conditions and Kelly bars with 3 selectable modes of operation
- Protection of the rotary drive by an integrated Kelly damping system
- Easy assembly of rotary drive



#### Winches

- High, measured effective line pull and line speed
- Load classification M6 / L3 / T5 for heavy-duty, continuous operation
- A special grooving system on the drum and a rope pressure roller reduce wear on the wire rope
- Pinned connection for easy mounting and demounting of winches on mast
- Transparent ring for easy oil check



#### Undercarriage

- Solid Bauer design for 360° working radius
- Hydraulically extendable tracks
- Large footprint to resist high overturning moments
- High traction forces
- Optional: UW 100, optimized for oscillator attachment



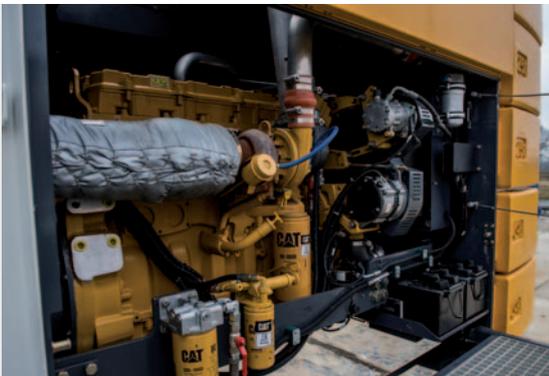
### Modern, ergonomic cabin

- FOPS compliant
- Bauer comfort cab meets highest comfort standards
- High-resolution 7" color screen
- Clear layout of instruments and display screens
- Excellent view of drilling position
- Easy operation



### HSE safety features

- Integrated service platform for easy and safe maintenance work
- Maintenance work can be carried out from ground or platform level
- Hydraulic connections on rotary drive can be made from ground level
- Access ladder to upper structure
- Gratings on side and in front of operator's cab
- Rear view camera, flashing warning light and audible reverse warning system
- Variably stackable counterweight elements



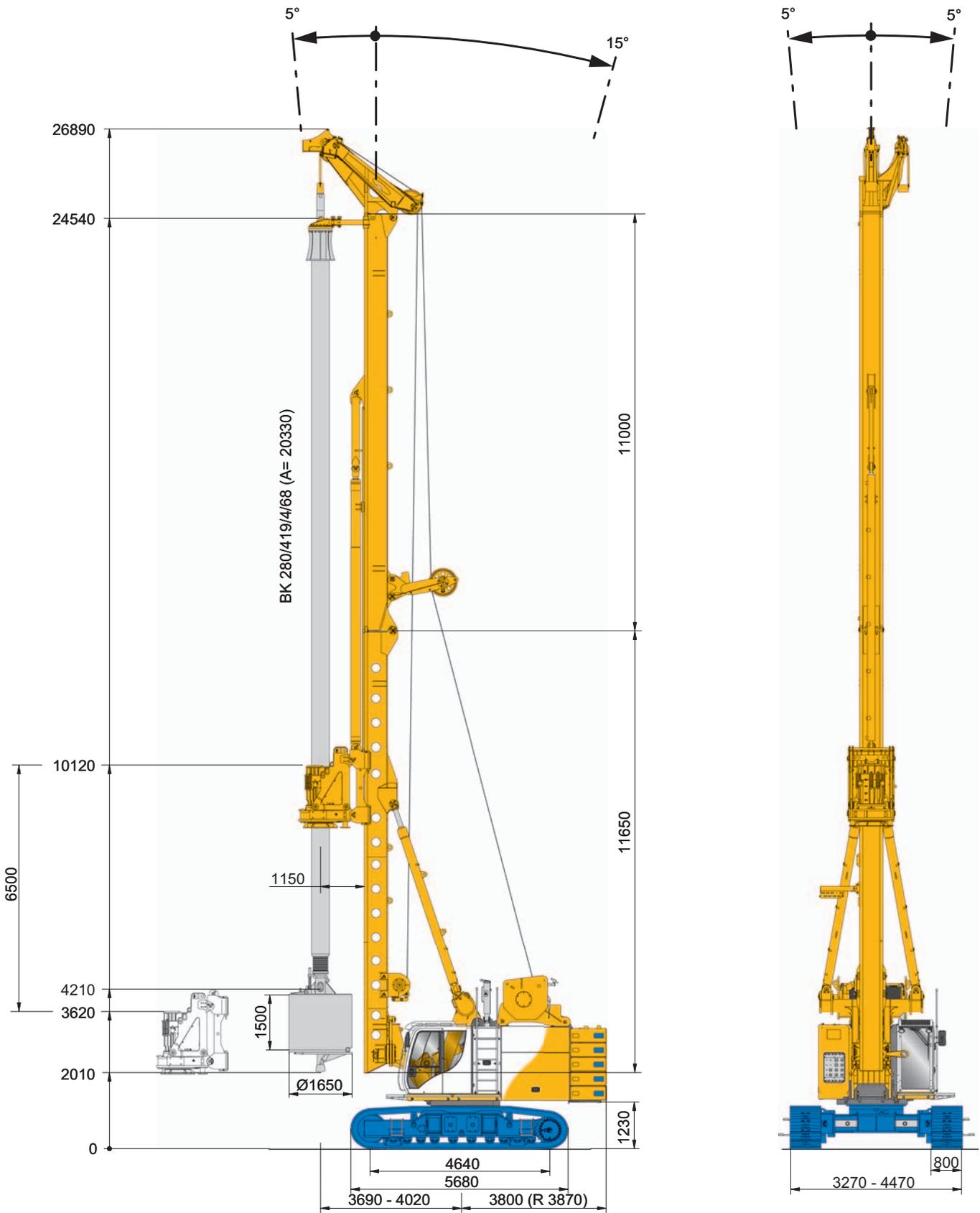
### High-performance CAT engine

- Conforming to exhaust emission standards Stage III A / Tier 3 or Stage IV / Tier 4 final
- Low fuel consumption due to optimized design of the hydraulic system
- Low noise emissions due to clever sound protected installation
- Worldwide CAT-service partner network

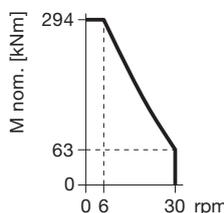
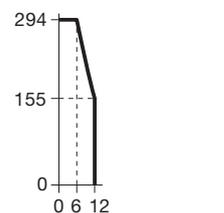
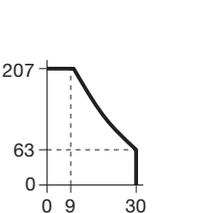
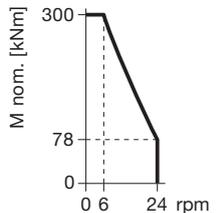
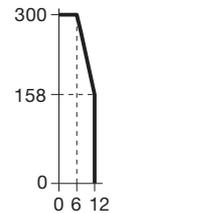
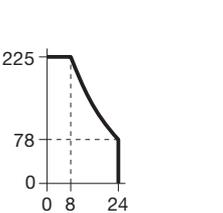
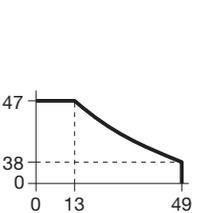


### Final inspection and test run

- Comprehensive Bauer test program
- Optimal adjustment and calibration of all main functions
- Heat transfer test
- Noise emission measurements
- Electromagnetic compatibility test



**Operating weight** approx. 102 t  
(as shown)

<b>Rotary drive</b>		KDK 300 K	KDK 300 S	
Torque (nominal) at 350 bar		294	300 kNm	
Speed of rotation (max.)		30	49 rpm	
<b>KDK 300 K</b>	Standard mode	rpm reduced	M <sub>D</sub> reduced	
Not to scale				
<b>KDK 300 S</b>	1 <sup>st</sup> gear	1 <sup>st</sup> gear	1 <sup>st</sup> gear	2 <sup>nd</sup> gear
Not to scale	Standard mode	rpm reduced	M <sub>D</sub> reduced	Standard mode
				
<b>Crowd cylinder</b>		standard	optional	
Crowd force push / pull (effective)		200 / 350	200 / 490 kN	
Crowd force (measured at the casing drive adapter)		260 / 290	260 / 430 kN	
Speed (down / up)		4.4 / 7.0	6.5 / 3.2 m/min	
Fast speed (down / up)		20 / 20	27 / 23 m/min	
Stroke		6,500	8,500 mm	
<b>Main winch – single layer</b>			M6 / L3 / T5	
Line pull effective / nominal			265 / 340 kN	
Rope diameter			32 mm	
Line speed (max.)			80 m/min	
<b>Auxiliary winch</b>			M6 / L3 / T5	
Line pull (1 <sup>st</sup> layer) effective / nominal			80 / 100 kN	
Rope diameter			20 mm	
Line speed (max.)			55 m/min	
<b>Base carrier</b>			BT 80	
Engine		CAT C 9	CAT C 9.3	
Rated output ISO 3046-1		280	298 kW	
		1,800	1,800 rpm	
Engine conforms to EEC 97/68 EC		Stage III A	Stage IV	
EPA/CARB		Tier 3	Tier 4 final	
Diesel tank capacity / Ad Blue		600 / –	600 / 34,5 l	
Sound power level (2000/14/EG and EN 16228, Annex B)		LW <sub>A</sub> 109	LW <sub>A</sub> 112 dB (A)	
Sound pressure level in cabin (EN 16228, Annex B)			LP <sub>A</sub> 80 dB (A)	
Ambient air temperature (at full power) up to			45 °C	
Hydraulic power output (measured at inlet to rotary drive)			209 kW	
Hydraulic pressure			350 bar	
Hydraulic oil tank capacity			650 l	
<b>Undercarriage</b> (selectable)		UW 95	UW 100	
Crawler type		B 7	B 7	
Traction force effective / nominal		730 / 860	730 / 860 kN	

### Base carrier

#### Standard

- Removable counterweight elements 14.9 t, **Fig. A**
- Engine diagnostic system
- Gratings on side and in front of operator's cab
- Integrated service platform
- Camera-System for rear area surveillance
- Multigrade hydraulic oil
- Bauer comfort operator's cab (FOPS compliant), **Fig. B**
- On-board lighting set
- Air conditioning system
- Radio with CD, MP3, USB and Bluetooth c/w hands-free kit
- Transport securing lugs on crawler units
- On-board tool kit

#### Optional

- Counterweight variably adjustable to max. 19.7 t
- Air compressor 1,000 l/min
- Central lubrication system
- Bauer service kit
- Electric refuelling pump
- Vise attachment
- Arctic kit
- Bio-oil for hydraulic circuit
- Protective roof guard
- Protective front windscreen guard
- Cab space heater with automatic timer
- Undercarriage UW 100
- Triple grouser track shoes (width 900 mm)
- Quick-release couplings for removable crawler side frames
- Service tool kit

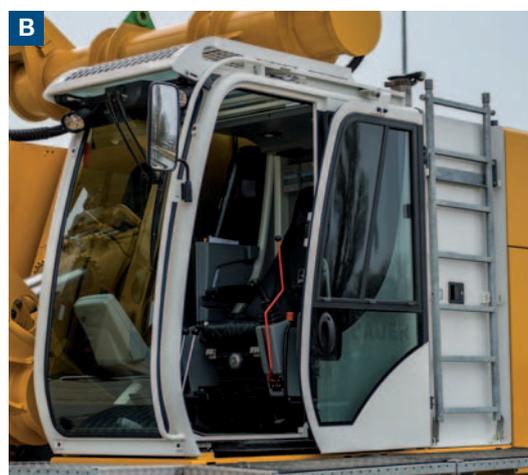
### BG attachment

#### Standard

- Bauer V-type kinematic system
- Masthead for optional use with drill axis 1,150 or 1,350 mm, **Fig. C**
- Inverted crowd cylinder
- Crowd speed fast and slow mode
- Swivel for main rope
- Pivoted anchor point for main and auxiliary rope
- Transport supports for upper and lower mast section

#### Optional

- Swivel for auxiliary rope
- Upper Kelly guide
- Drill axis 1,350 mm
- Attachment of casing oscillator up to BV 1500 HD-07, **Fig. D**
- Thrust rod 1,300 or 2,000 mm



## KDK rotary drive

### Standard

- Integrated Kelly damping system
- Exchangeable Kelly drive adapter assembly KA 500/419
- Exchangeable Kelly drive keys
- Quick-release couplers on hydraulic hoses
- 3 selectable modes of operation
- Easy assembly of rotary drive
- Wear pads exchangeable without removal of rotary drive
- Transport supports
- Trigger plate
- Lifting gear for rotary drive

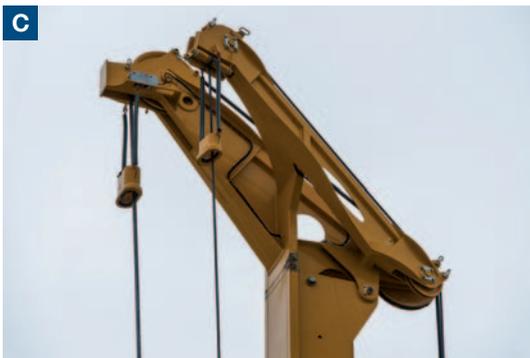
### Optional

- Rotary drive KDK 300 S (multi-gear)
- Cardanic joint
- Brake kit for automatic casing drive adapter, Fig. E
- Kelly drive adapter assembly KA 500/394
- Torque multiplier BTM 720 K (Torque: 400 kNm), Fig. F

## Main winch

### Standard

- Hydraulically controlled freewheeling
- Slack rope prevention
- Automatic swivel alignment
- Depth sensing device
- Electronic load sensing
- Overload protection device
- Winch drum with special grooving
- Pin connection
- Transparent ring for easy oil check



## Measuring and control equipment

### Standard

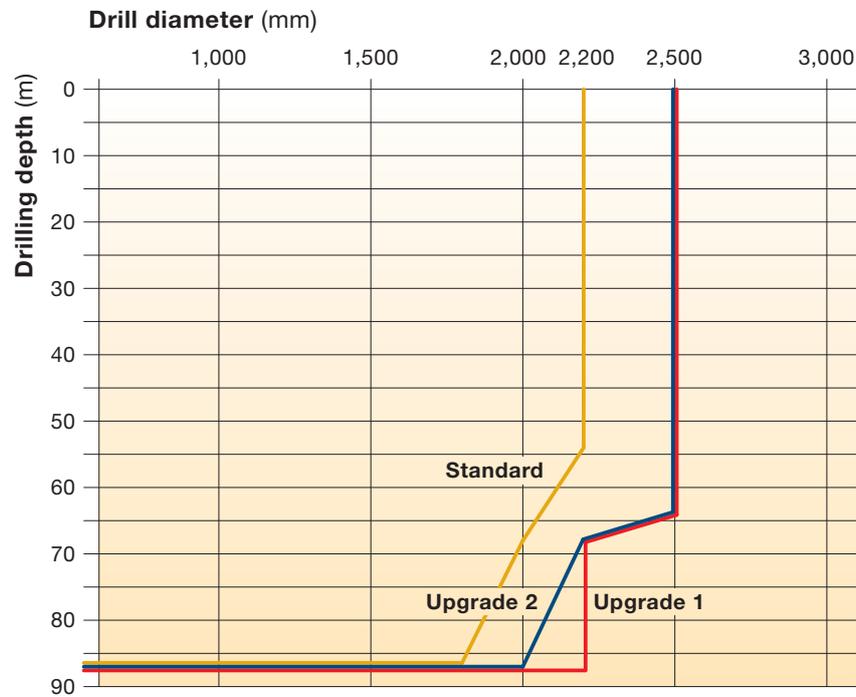
- Bauer extended monitor incl. integrated diagnostic capability, Fig. G
- Display of fault messages as plain text
- Digital display of pump pressures
- Mast inclination measurement on x/y axes (digital / analog display)
- Automatic vertical alignment of mast
- Optical mast inclination monitoring system
- Hydraulic load sensing on auxiliary winch
- Speed sensing device on KDK
- Hoist limit switch on main and auxiliary winch
- Defined torque setting for KDK
- Kelly drilling assistant
- Automatic crowd control
- One-directional spoil discharge assistant
- Casing extraction assistant

### Optional

- Remote transmission of machine data (DTR-module)
- Slewing angle display for upper carriage



Drilling capabilities diagram (uncased)

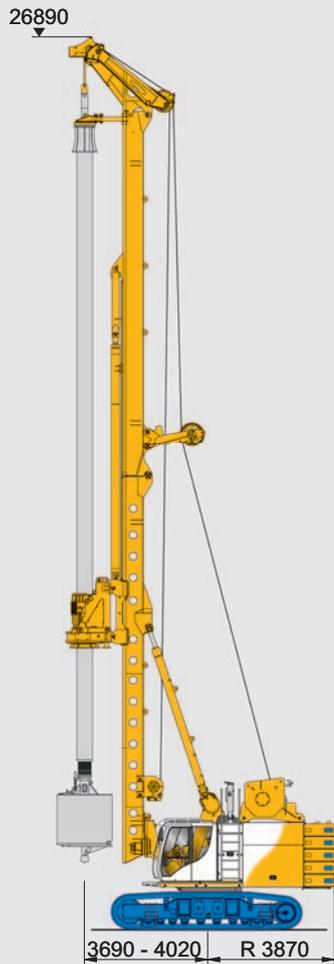


Rig configurations			
	Standard	Upgrade 1	Upgrade 2
Drill axis	1,150 mm	1,350 mm	1,350 mm
Counterweight	14.9 t	17.3 t	19.7 t
Undercarriage	UW 95	UW 95	UW 100
Stroke	6,500 mm	6,500 mm	8,500 mm
	Basic model for all-round use	for fluid supported deep Kelly drilling	for cased Kelly drilling (also with casing oscillator)

Data shown are valid for minimum horizontal mast reach and using BAUER attachment.  
For more information, please contact the BAUER Sales Department.

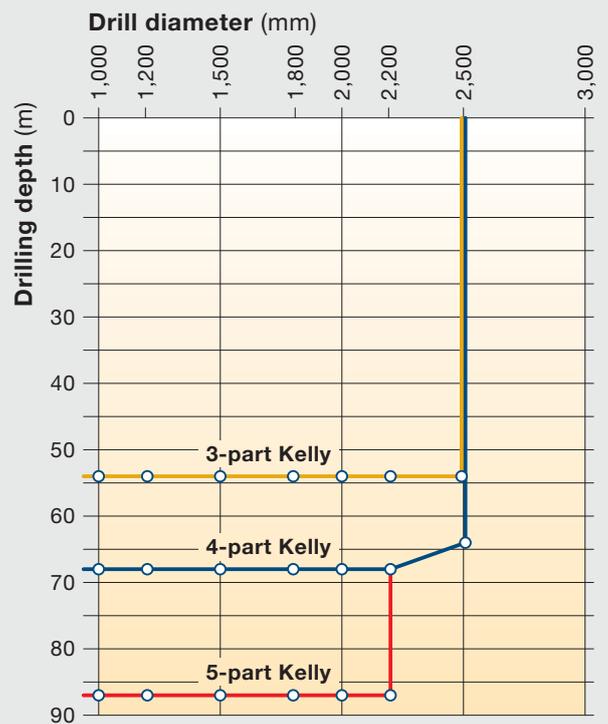
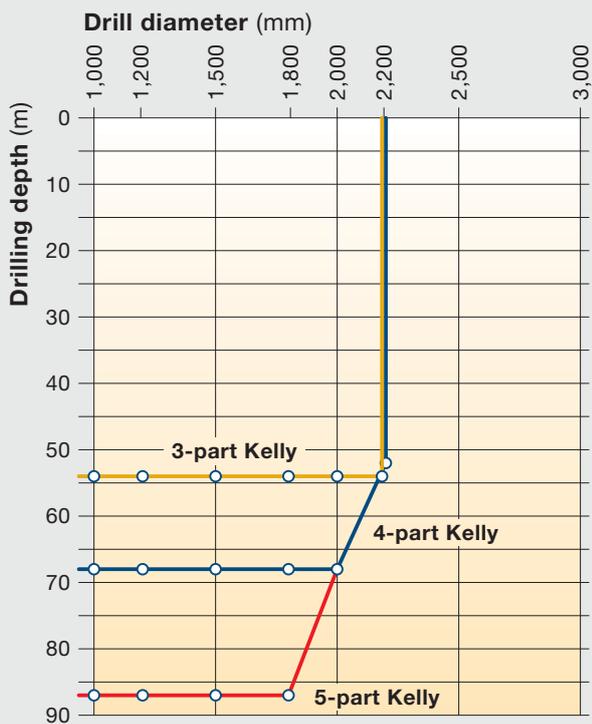
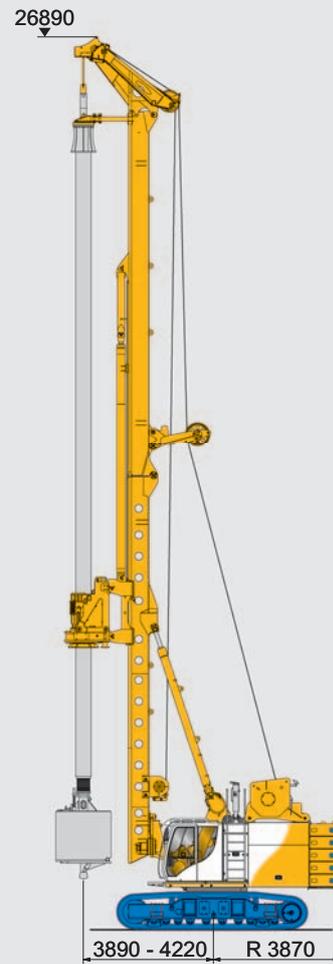
**Standard configuration**

Drill axis 1,150 mm



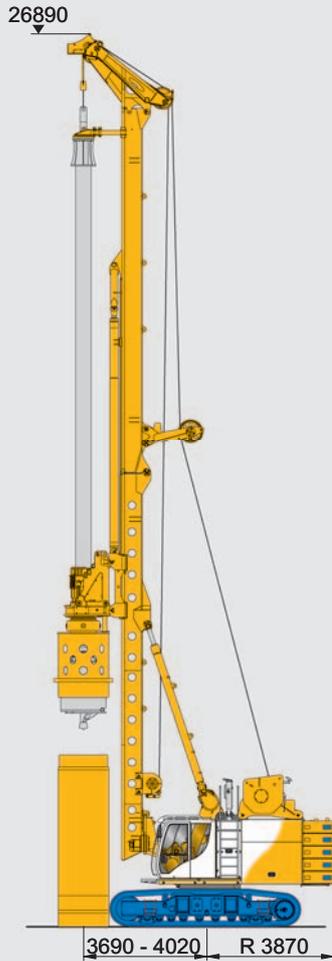
**Upgrade 1**

Drill axis 1,350 mm



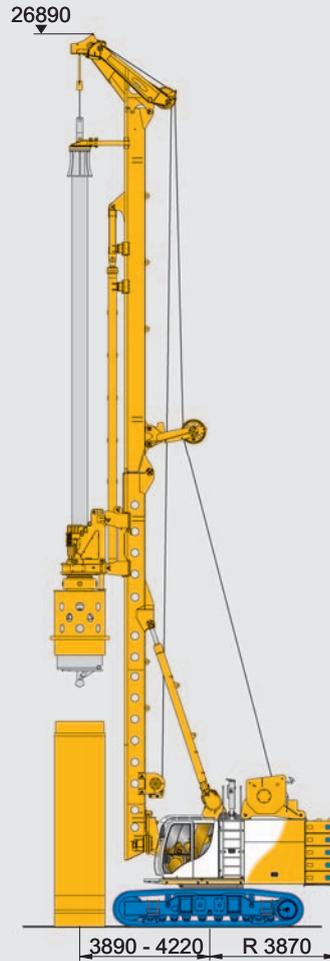
Standard configuration with rotary drive KDK

Drill axis 1,150 mm

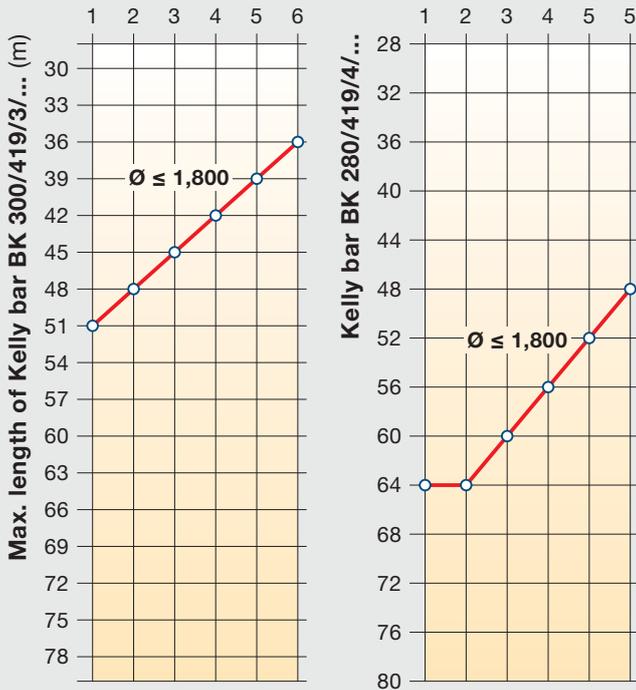


Upgrade 2 with rotary drive KDK

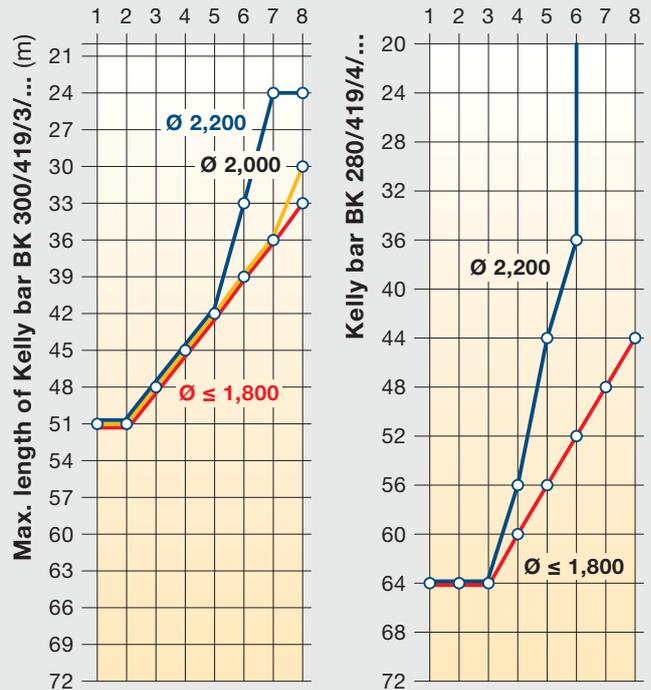
Drill axis 1,350 mm



Length of casing section (m)

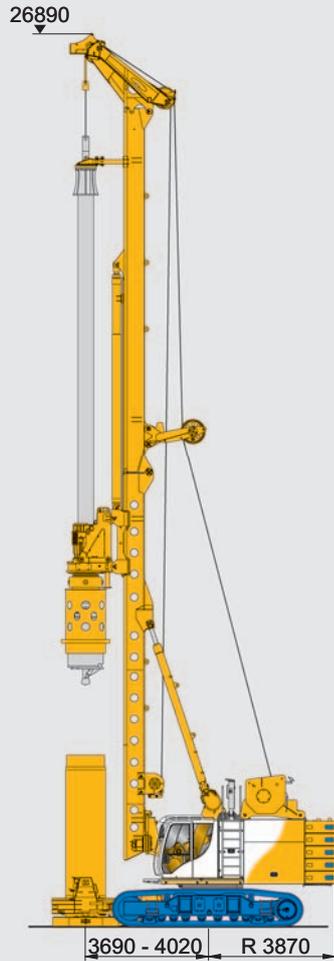


Length of casing section (m)



### Standard configuration with casing oscillator

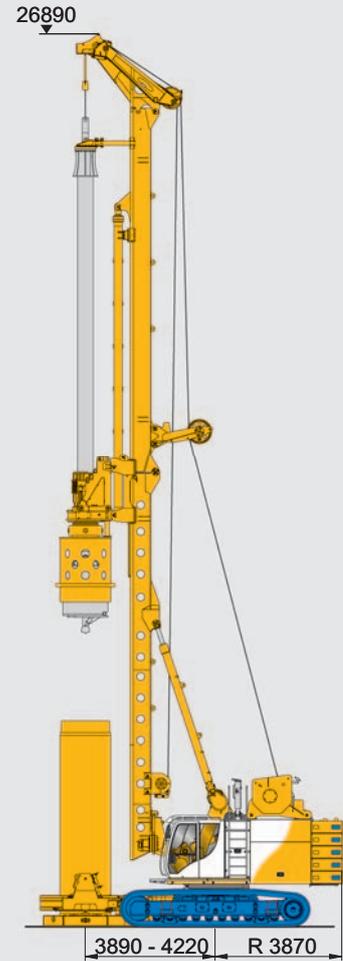
Drill axis 1,150 mm



Applicability:  
up to  
BV 1180HD-03

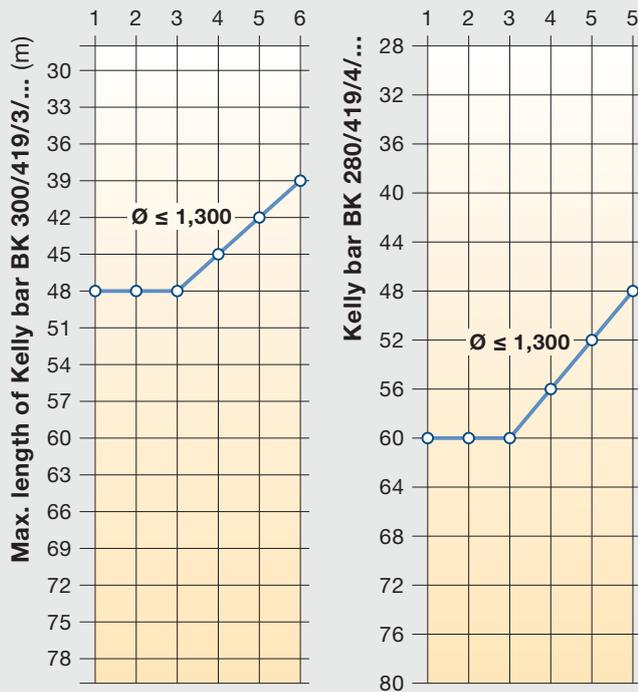
### Upgrade 2 with casing oscillator

Drill axis 1,350 mm

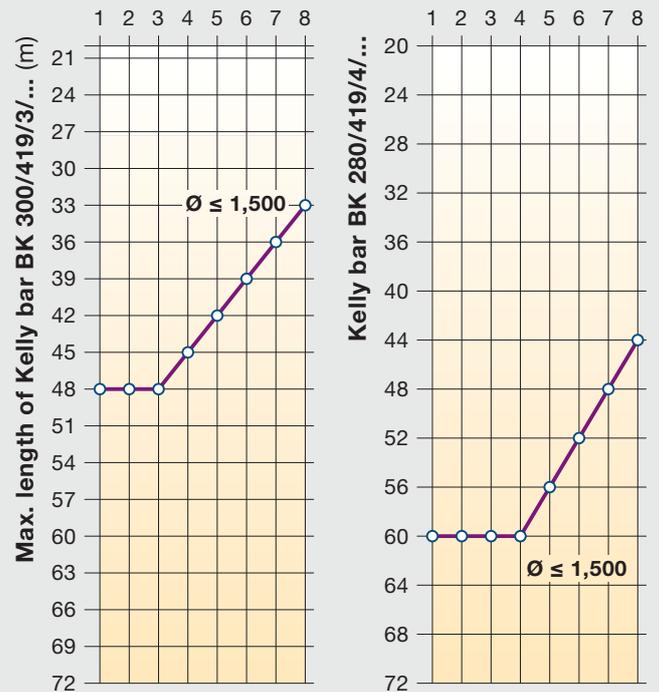


Applicability:  
BV 1180HD-03  
up to  
BV 1500HD-07

Length of casing section (m)



Length of casing section (m)

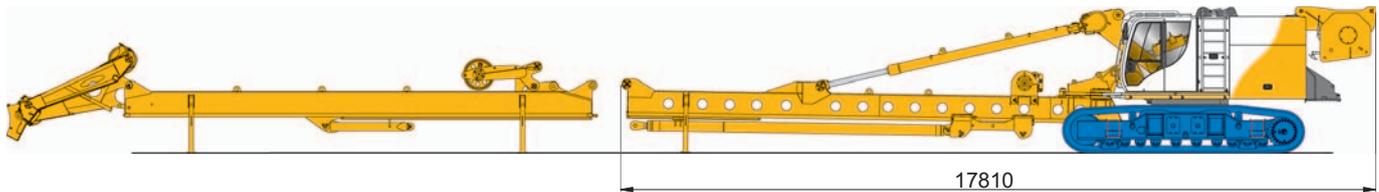
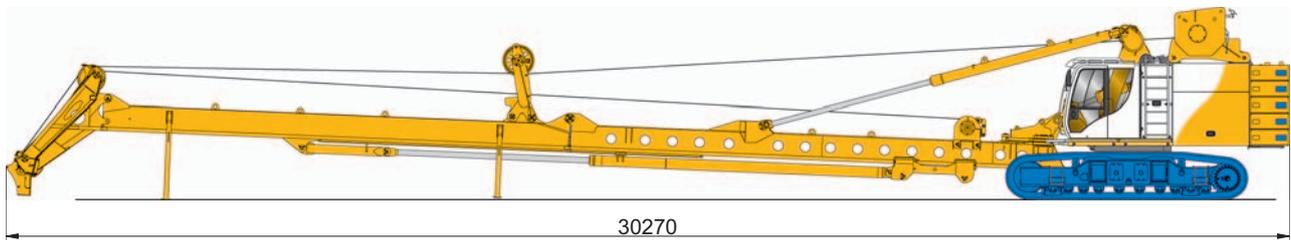




#### Health and Safety features

- All hydraulic hoses of the KDK can be attached from ground level
- The permissible mast inclination is displayed by the inclination monitoring system
- No overflow of hydraulic oil
- Applicable with all thrust rods

Rigging position for connecting of hydraulic hoses

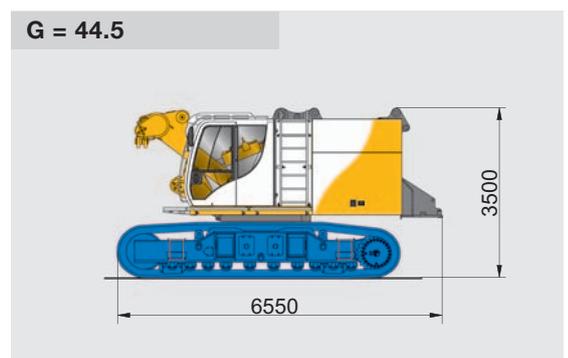
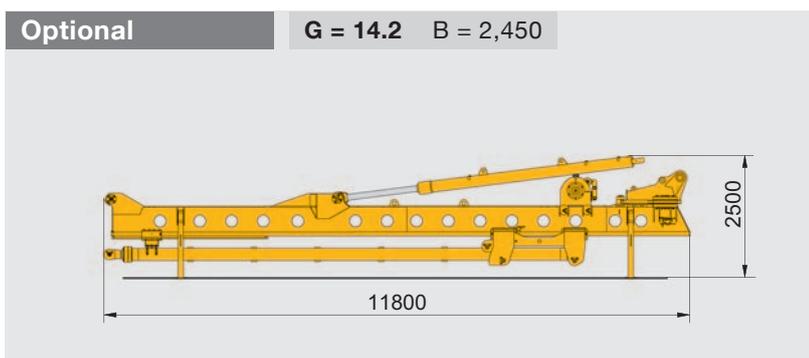
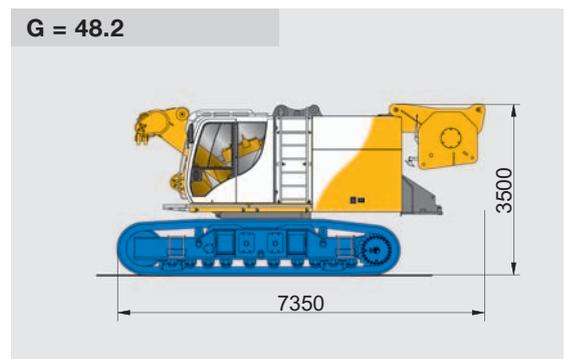
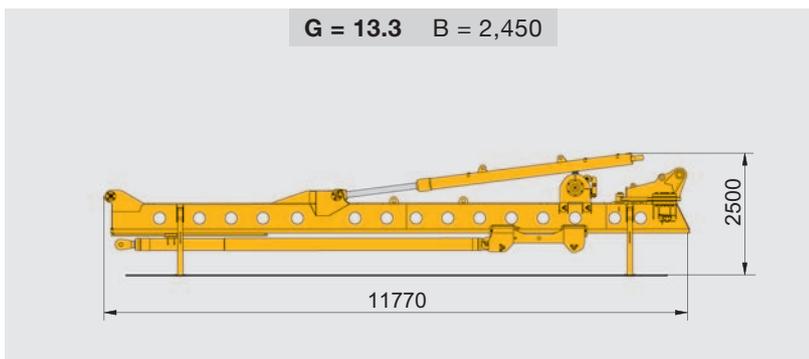
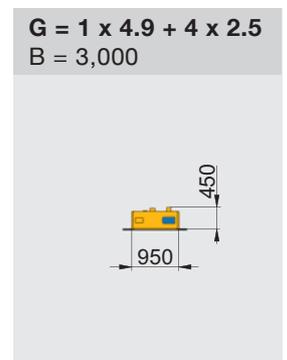
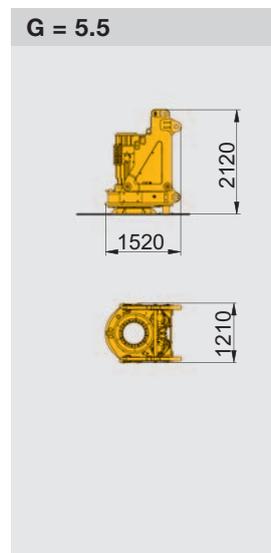
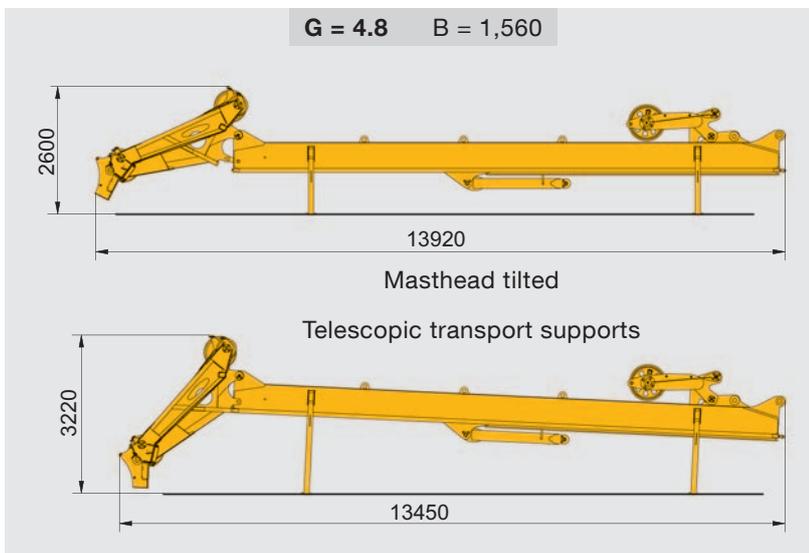
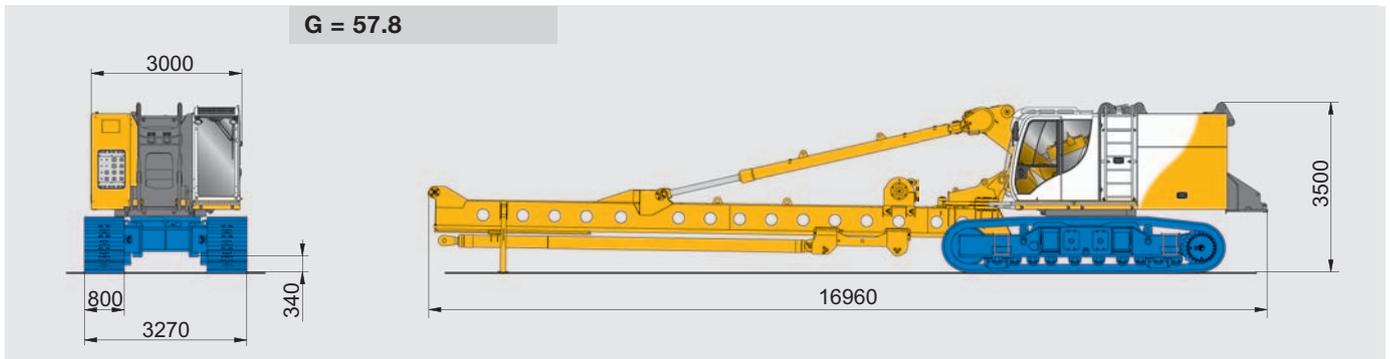


#### Safe and simple disassembly of inverted crowd cylinder system

- Easy disassembly by removing one pin only
- No disconnection of hydraulic lines
- No hydraulic lines in upper mast section
- Hydraulic hoses remain connected (minimized risk of leakages developing at couplings)

**G** = Weight (t)  
**B** = Width, overall (mm)

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





- Global operation and local contact
- Long-term customer care and relationship
- Flexibility in providing customized solutions
- Strong customer orientation
- Unique combination of equipment knowledge and application competency
- Application and process consulting based on knowledge from a variety of projects



If you need more information,  
please contact us: [BMA@bauer.de](mailto:BMA@bauer.de)



- Regional organizations and contacts
- Best educated technicians to ensure a maximum availability of equipment
- Reliable and efficient spare parts supply
- Long term on-site service & support
- Certified on-site operator's and technician's training



# BAUER Service

If you need assistance, please contact us:  
Service Hotline: +800 1000 1200 (toll-free number)  
or: +49 8252 97 2888  
or: [KVT@bauer.de](mailto:KVT@bauer.de)



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



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