

BAUER BG 36 H

Drilling Rig
Base Carrier BT 85

 Energy-Efficient
PowerEEP



The Bauer drilling rig stand 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 drilling rigs are:

- High safety standards
- Environmental sustainability, economic efficiency and performance
- Easy transport and short rigging time
- High quality standard
- Long lifetime and excellent resale value



Kelly Drilling



Cased Kelly Drilling Casing
Installation with BTM



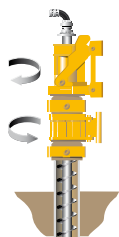
CFA
Continuous Flight Auger
Drilling



FDP
Full Displacement Piling
(Standard or Lost Bit)



FoW
Front of Wall

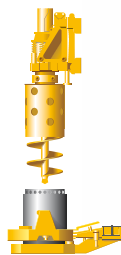


CCFA
Cased CFA system
with KDK+ BTM / Double
Rotary System

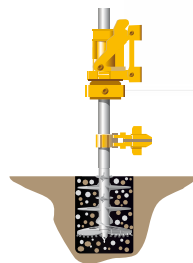


The Drilling Rig BG 36 H BT 85

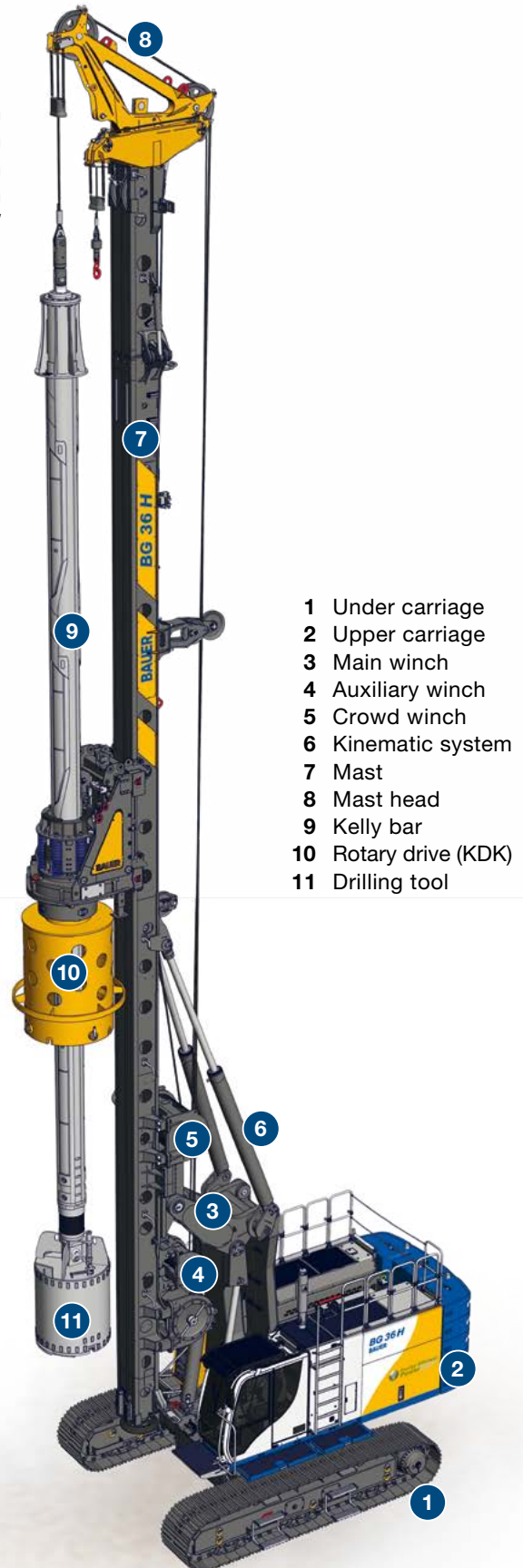
Max. drilling diameter:	2,500 mm
Max. drilling depth:	68.0 m
Max. torque:	385 kNm
Max. height:	27.3 m
Engine:	Volvo TAD 13 345/405 kW



Cased Kelly Drilling
Casing Installation with
Casing Oscillator



SCM/SCM-DH
Single Column Mixing



- 1 Under carriage
- 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's 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



Powerful Volvo engines

- TAD 13 (345 kW UN ECE R96* or 405 kW Stage V, Tier 4 final)
- Diesel particulate filter in exhaust emission Stage V
- Low noise emission
- Worldwide Volvo service partners

Safety equipment

- Integrated service platforms in the upper carriage for easy and safe maintenance work
- Retractable grating on side of cab
- Guardrails on the upper level (foldable for transport)
- Cameras for rear area



- 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

* Exhaust emission equivalent Tier 3 / Stage III A

Variable stackable counterweight elements

- Constant tail radius (irrespective of number of counterweights)
- Low weight of individual elements (4.9 t or 2.5 t)
- Flexible arrangement for various applications
- Mounting and demounting possible with the drilling rig
- Transport of the machine possible without removing counterweights



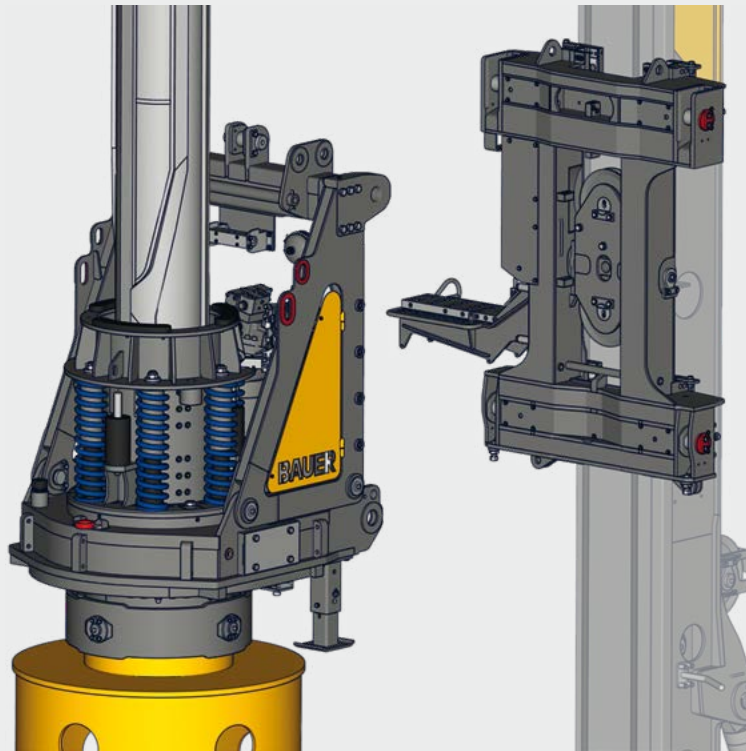
Flexible mast concept

- Vario-masthead
 - Masthead for drill axis distance 1,100 mm, 1,400 mm and 1,700 mm
 - Increased stroke for Kelly bars when using an upper Kelly guide
 - Tilttable main jib for Kelly drilling and single-pass processes
 - Auxiliary winch is always fully usable
- Minimized transport length based on hydraulically foldable and lookable upper mast section

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 under carriage, 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





Kelly set-up

- Long Kelly guide
- Integrated shock absorbing spring-system
- Kelly visualization (see page 11)
- Enhanced drilling performance
- High operation comfort
- Reduction of wear on Kelly bars and drive keys

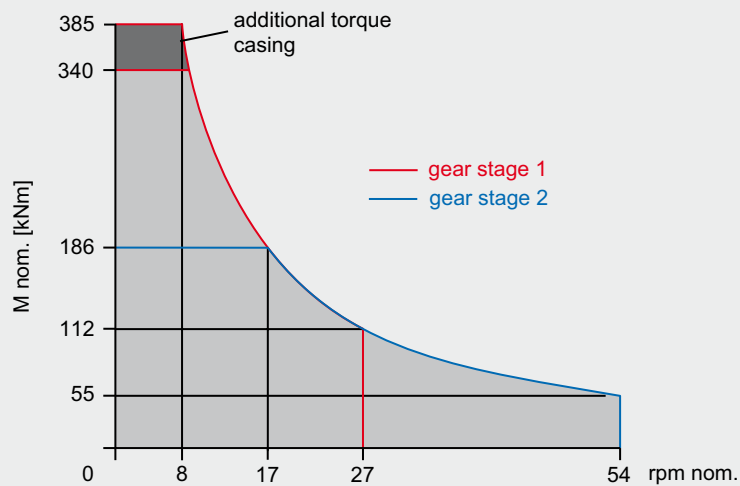
Rotary drive

- Optional single gear drive or multi gear drive
- Max. torque casing 385 kNm
- Max. speed of rotation 54 rpm
- Various modes of operation, partially selectable speed of rotation and torque

Hydraulically operated pin connection on the crowd sledge

- Pin connection controlled via remote control
- Simple and secure attachment of rotary drive, no working at heights unsecured

KDK 385 S



Base carrier BT 85

Standard

- Removable counterweight elements
- Protective roof guard
- Energy-Efficient Power (EEP)
- Premium operator seat
- Cameras for rear area
- Integrated service platform
- Remote control Basic

Optional

- Counterweight, variably adjustable
- Foldable guardrails on the upper level
- Compressor 1,000 l/min
- Electric generator
- Arctic kit
- Cab space heater with automatic timer
- Rear support unit
- High-pressure cleaner with water tank
- Remote control Multi

Drilling rig attachment

Standard

- Main winch with hydraulic free-wheel control
- Swivel for main rope
- Masthead (foldable for transport)
- Pivoted anchor point for main and auxiliary rope
- Vario masthead
- Hydraulic foldable and lockable upper mast section

Optional

- Extension of drill axis to 1,400 mm and 1,700 mm
- Hydraulically operated pin connection on the crowd sledge for easy mounting and removal of the rotary drive
- Mast support unit
- Attachment of casing oscillator up to BV 2000
- Auger cleaner attachment for Kelly system

Rotary drive

Standard

- Rotary drive KDK 385 S (multi gear drive)
- Kelly drive adapter for outer Kelly tube 470 mm
- Integrated Kelly damping system
- Cardanic joint

Optional

- Torque multiplier BTM 720 K Kelly drilling
 - Torque 420 kNm (nominal)

Measuring and control system

Standard

- Automatic mast alignment with memory-recall
- Crowd stroke monitoring
- Electronic mast reach limiter
- Kelly visualization
- Slewing Angle Warner

Optional

- Electronic load sensing for auxiliary winch
- Recording of concrete pressure and volume for Single-Pass processes
- Software modules for further applications
- Adaptive Kelly speed assistant
- Automatic drilling and extraction control for Single-Pass processes
- BAUER Enhanced CAN Interface (BECI)
- Crowd Plus
- Slewing Angle Limiter (SDL)
- Stability Plus

B-TRONIC 5

Designed for you and ready for action.



Dynamic

- Information that adapts to the respective process step
- Dynamic, situation adjusted screen layout
- Visualized position changes of drilling equipment for a clear process understanding

Intuitive

- Intuitive menu navigation
- Help options on every page
- Focus on process-related information

Click now and learn **more about the powerful B-Tronic 5.**



Personalized

- User-specific login available
- Use of existing set values
- Personalization of widgets

Connected

- Interface to data recording
- Interface for service



Stability Plus

Stability Plus enables the permitted outreach to be extended, thereby enlarging the working range. To maintain the highest possible level of stability, the assistant automatically reduces the slewing speed of the uppercarriage within the extended outreach. In addition, the operator always has a perfect overview thanks to the visualization of the maximum permissible winch loads.



Crowd Plus

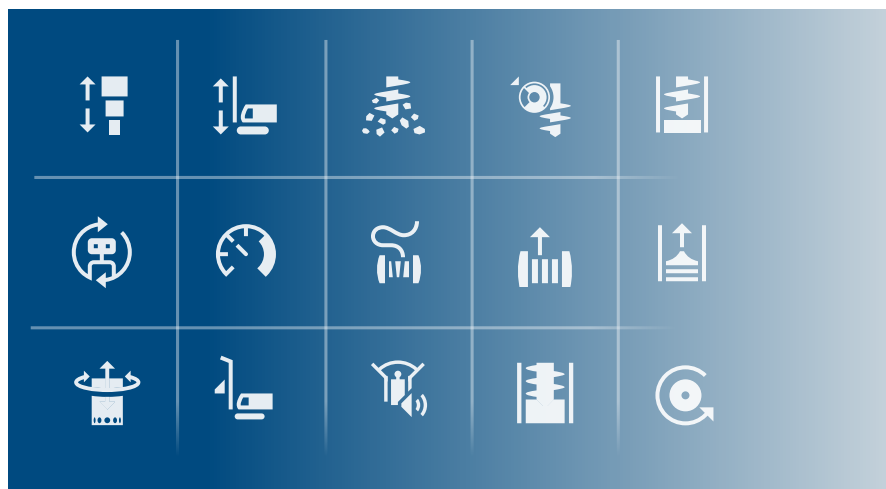
Crowd Plus supports the pulling and lifting of casings. Using the pulling plate between the drilling tool and the Kelly bar, the pulling force of the main winch is transferred to the crowd system. Through monitored and safely synchronized operation of the main winch and the crowd winch, even large diameters and heavy drilling equipment can be moved reliably.



Automatic Drilling and Extraction Control for Single Pass Processes

The automatic system controls the drilling and extraction speed of the crowd system and enables hands-free operations. This ensures the installation of a high-quality pile while simultaneously keeping the concrete consumption at an optimum. Both automatic functions provide a stable, precise, and consistently uniform single-pass working process.

Further Assistance Systems





Kelly Visualization

Kelly visualization makes working with the Kelly bar intuitive and transparent. It displays the locking recesses, the Kelly sections, the distance to the next section, and the spring travel – all in real time. The rapid approach of the locking position results in a significantly enhanced drilling performance. In addition, the wear on the Kelly bar and the drive keys is considerably reduced.



Fill Level Assistant and Threshold Assistant

The fill level assistant monitors the fill level of the drilling tool and prevents over-drilling or overfilling. Color-coded indicators show the status; once the target value is reached, crowd and rotary drive stop automatically. The lead assistant monitors the lead between tool and casing and prevents advance drilling. When the threshold is reached, both drives stop. Both assistants can be combined.



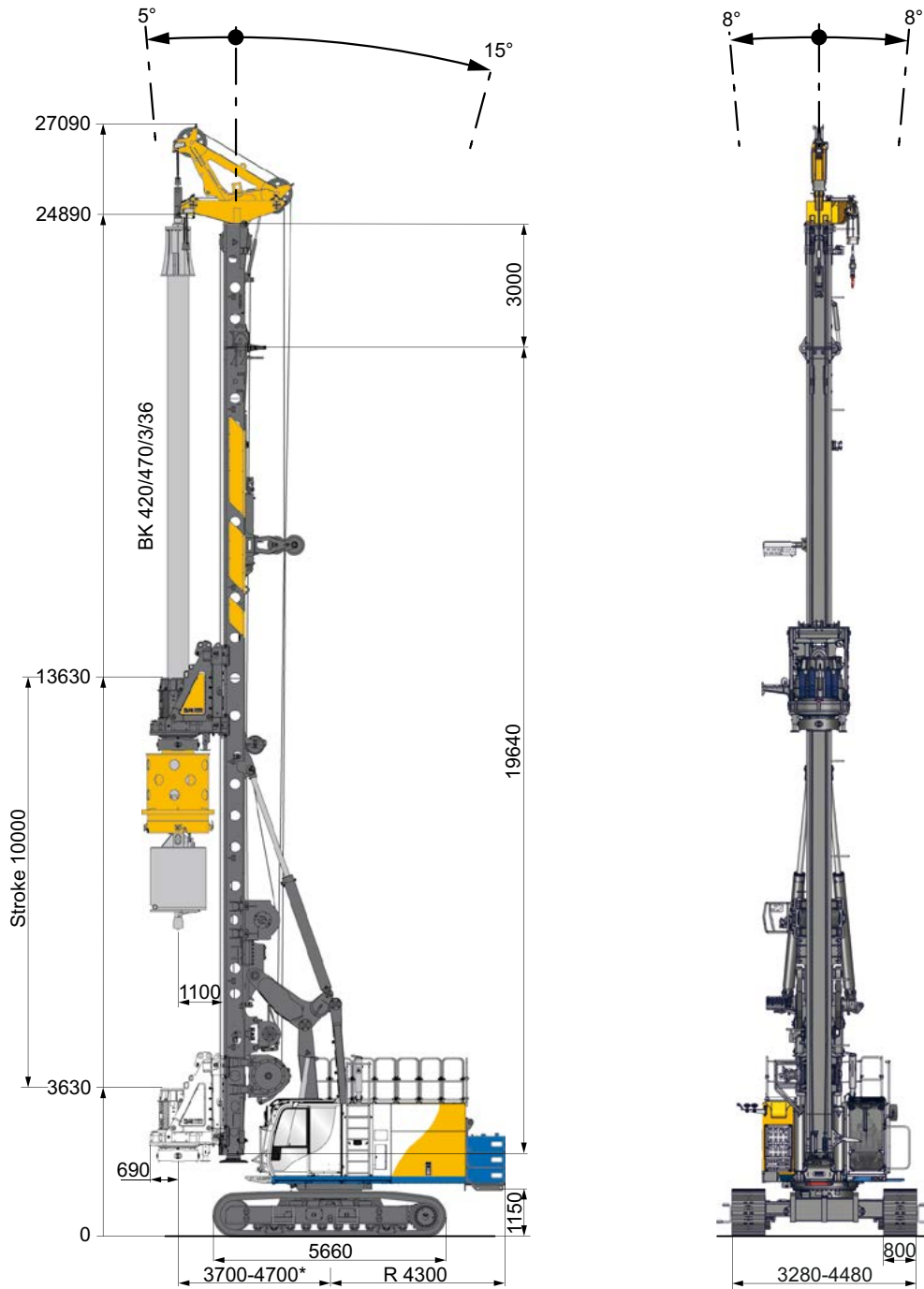
Automatic Torque Setting

The automatic torque setting limits the maximum torque to prevent excessive loading and any resulting damage to the drilling equipment. The operating limits of the installed tooling are taken over via the machine menu, and the system ensures that operation is carried out strictly within these limits.

- Kelly Drilling Assistant
- One-directional Spoil Discharge Assistant
- Bi-directional Spoil Discharge Assistant
- Slewing Angle Warner and Limiter
- Casing Assistant
- Auto Mast Alignment with Memory Function
- Slack Rope with Automatic Swivel Alignment
- etc.

Discover more innovative assistance systems – click now!



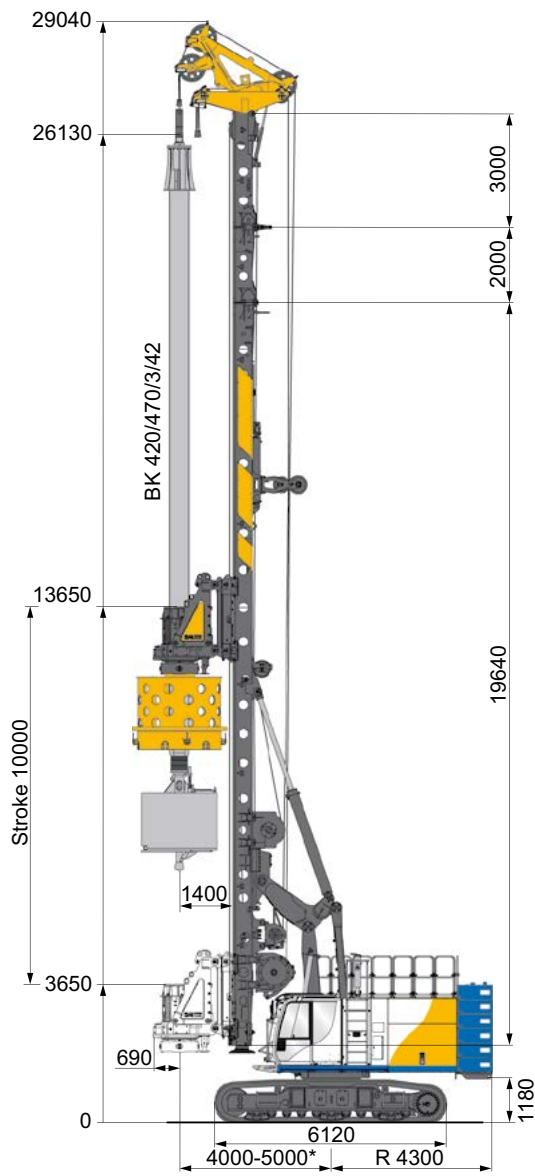
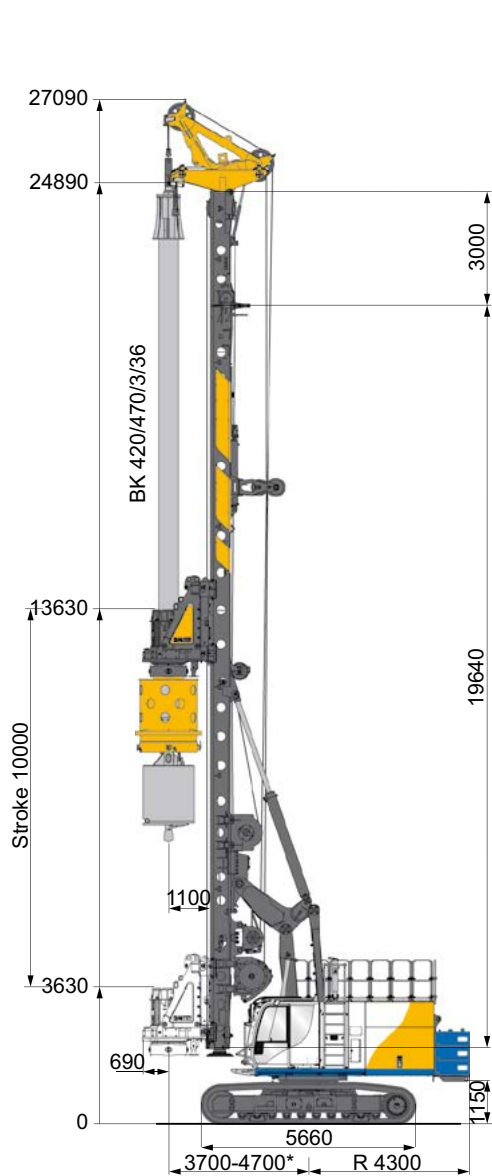


Operating weight 110.8 t
(as shown)

* depending on equipment

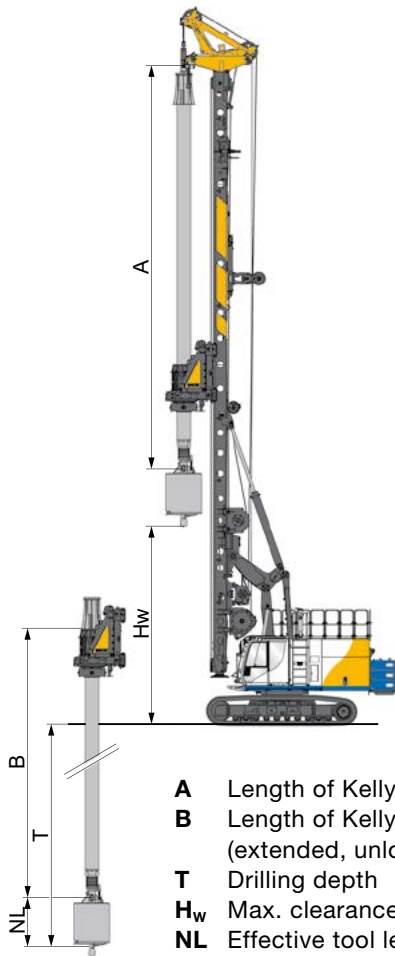
Rotary drive	KDK 385 S	
Torque casing (nominal) at 350 bar	385 kNm	
Torque drilling (nominal) at 350 bar	340 kNm	
Speed of rotation (max.)	54 rpm	
Crowd winch system		
Max. sledge stroke	20,090 mm	
Compressive force effective / nominal	400 / 513 kN	
Pulling force effective / nominal	400 / 513 kN	
Extraction force Crowd Plus effective / nominal with mast support unit	690 / 740 kN	
without mast support unit	630 / 610 kN	
Rope diameter	28 mm	
Speed (down / up)	10.5 m/min	
Fast speed (down / up)	28 m/min	
Main winch	M6 / L3 / T5	
Line pull (1st layer) effective / nominal	287 / 367 kN	
Rope diameter	32 mm	
Line speed (max.)	75 m/min	
Auxiliary winch (selectable)		
Line pull (1st layer) effective / nominal	80 / 100 kN	100 / 125 kN
Rope diameter	20 mm	
Line speed (max.)	55 m/min	
Base carrier (EEP)	BT 85	
Engine	Volvo TAD 13	
Rated output ISO 3046-1	345 kW 1.700 rpm	405 kW @1.700 rpm
Exhaust emission	UN/ECE R96*	EU Stage V EPA/CARB Tier 4 final
Diesel tank capacity / AdBlue Tank	730 / - l	730 / 70 l
Sound pressure level in the cabin (EN 16228, Annex B)	LPA 80 dB (A)	
Sound power level (2000/14/EC u. EN 16228, Annex B)	LWA 108 dB (A)	
Hydraulic pressure	350 bar	
Hydraulic oil tank capacity	650 l	
Flow rates	2 x 320 + 1 x 565 + 1 x 215 l/min	
Under carriage	UW 100	UW 115
Crawler type	B 7	
Traction force effective / nominal	730 / 860 kN	

* Exhaust emission equivalent Tier 3 / Stage III A



	Basic version	Upgraded version	Upgraded version
Mast extension	no	yes	no
Drilling axis	1,100 mm	1,400 mm	1,700 mm
Max. drilling diameter			
uncased	1,900 mm	2,500 mm	2,800 mm
cased	1,600 mm	2,200 mm	-
Operating weight approx.	110.8 t	131.2 t	132.0 t
with Kelly	BK 420/470/3/36	BK 420/470/4/48	BK 420/470/4/48
with casing drive adapter	1,500 mm	2,200 mm	2,500 mm
with bucket	1,350 mm	2,000 mm	-
with counterweight*	17.2 t	27.0 t	27.0 t

* depending on equipment



- A** Length of Kelly bar (retracted)
- B** Length of Kelly bar (extended, unlocked)
- T** Drilling depth
- H_w** Max. clearance to drilling tool
- NL** Effective tool length
- G** Weight of Kelly bar

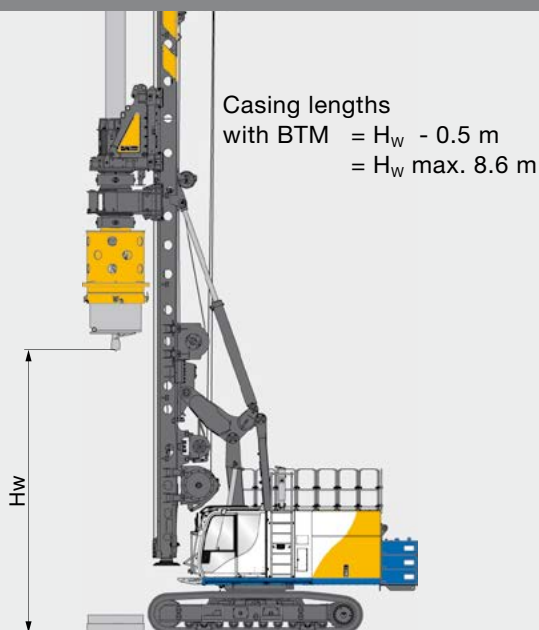
Drilling depth - uncased Kelly drilling

				Basic Version BA 1,100 mm		Upgraded Version BA 1,400 mm	
3-part Kelly	A (m)	B (m)	G (kg)	H _w (m)	T (m)	H _w (m)	T (m)
BK420/470/3/27	12.3	29.2	7,700	9.0	27.5	9.0	27.5
BK420/470/3/30	13.3	32.2	8,150	9.0	30.5	9.0	30.5
BK420/470/3/33	14.3	35.2	8,730	8.5	33.5	9.0	33.5
BK420/470/3/36	15.3	38.2	9,300	7.5	36.5	9.0	36.5
BK420/470/3/39	16.3	41.2	9,830	6.5	39.5	8.5	39.5
4-part Kelly							
BK420/470/4/36	12.3	37.8	10,250	9.0	36.0	9.0	9.0
BK420/470/4/40	13.3	41.8	11,000	9.0	40.0	9.0	9.0
BK420/470/4/44	14.3	45.8	11,800	8.5	44.0	9.0	9.0
BK420/470/4/48	15.3	49.8	12,600	7.5	48.0	9.0	9.0
BK420/470/4/52	16.3	53.8	13,350	6.5	52.0	8.5	8.5
BK420/470/4/64	19.3	65.8	15,700	3.5	64.0	5.5	5.5
BK420/470/4/68	20.3	69.8	16,480	2.5	68.0	4.5	4.5

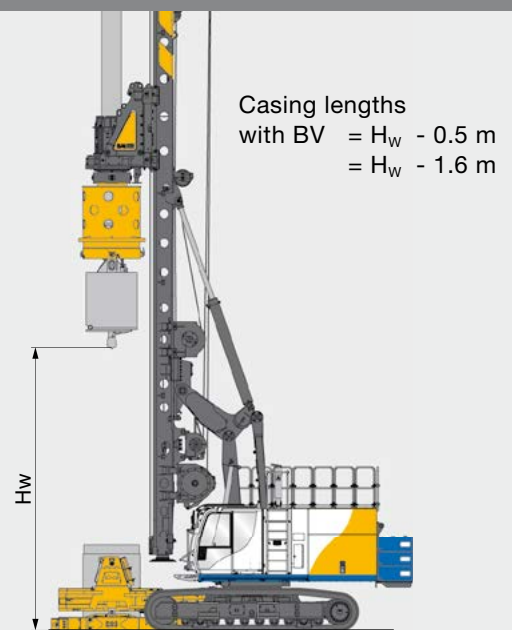
Drilling data as shown are based on tool length NL = 1.9 m, minimum horizontal mast reach and using Bauer attachment. Drilling depth is increased by 0.32 m when using maximum horizontal mast reach.

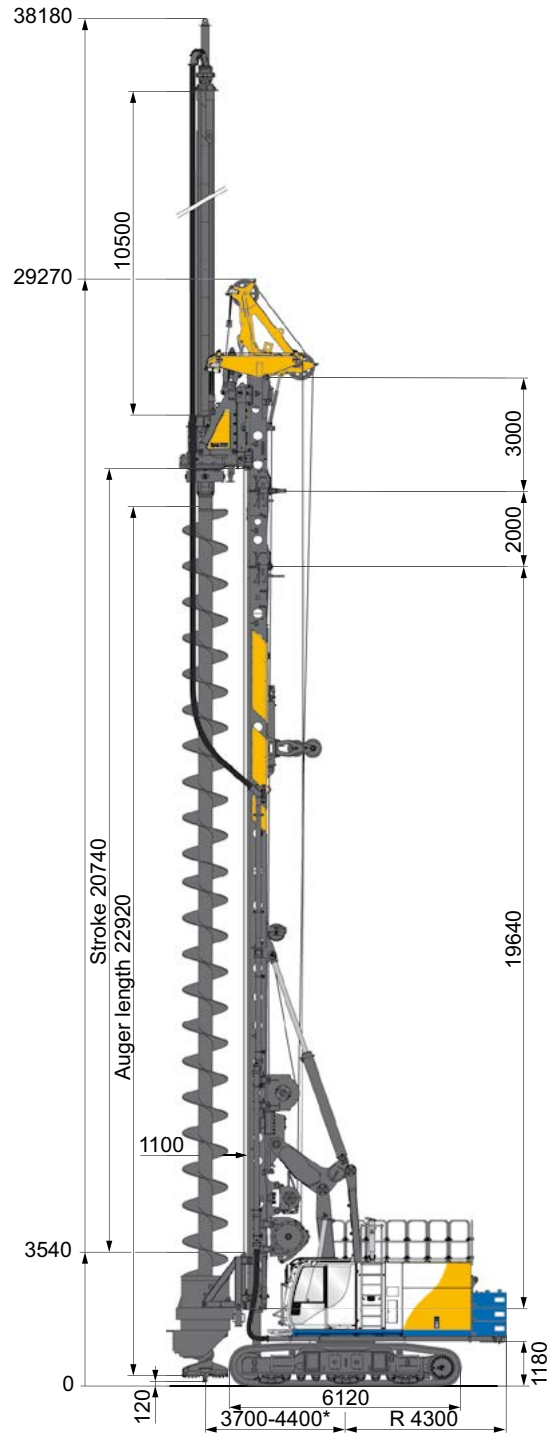
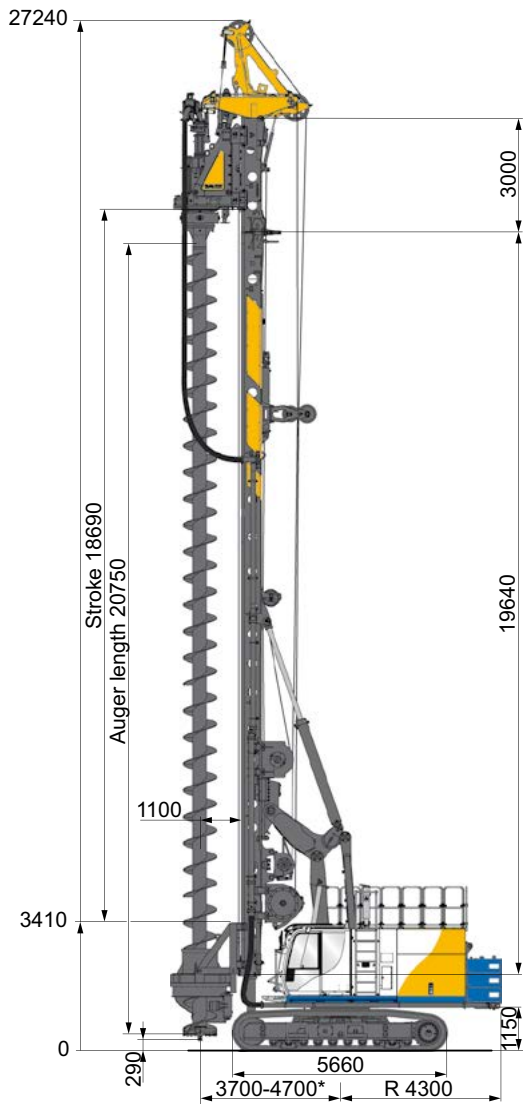
Further drilling depths, diameters and other Kelly types on request.

Torque multiplier BTM 720 for a torque while casing of 420 kNm



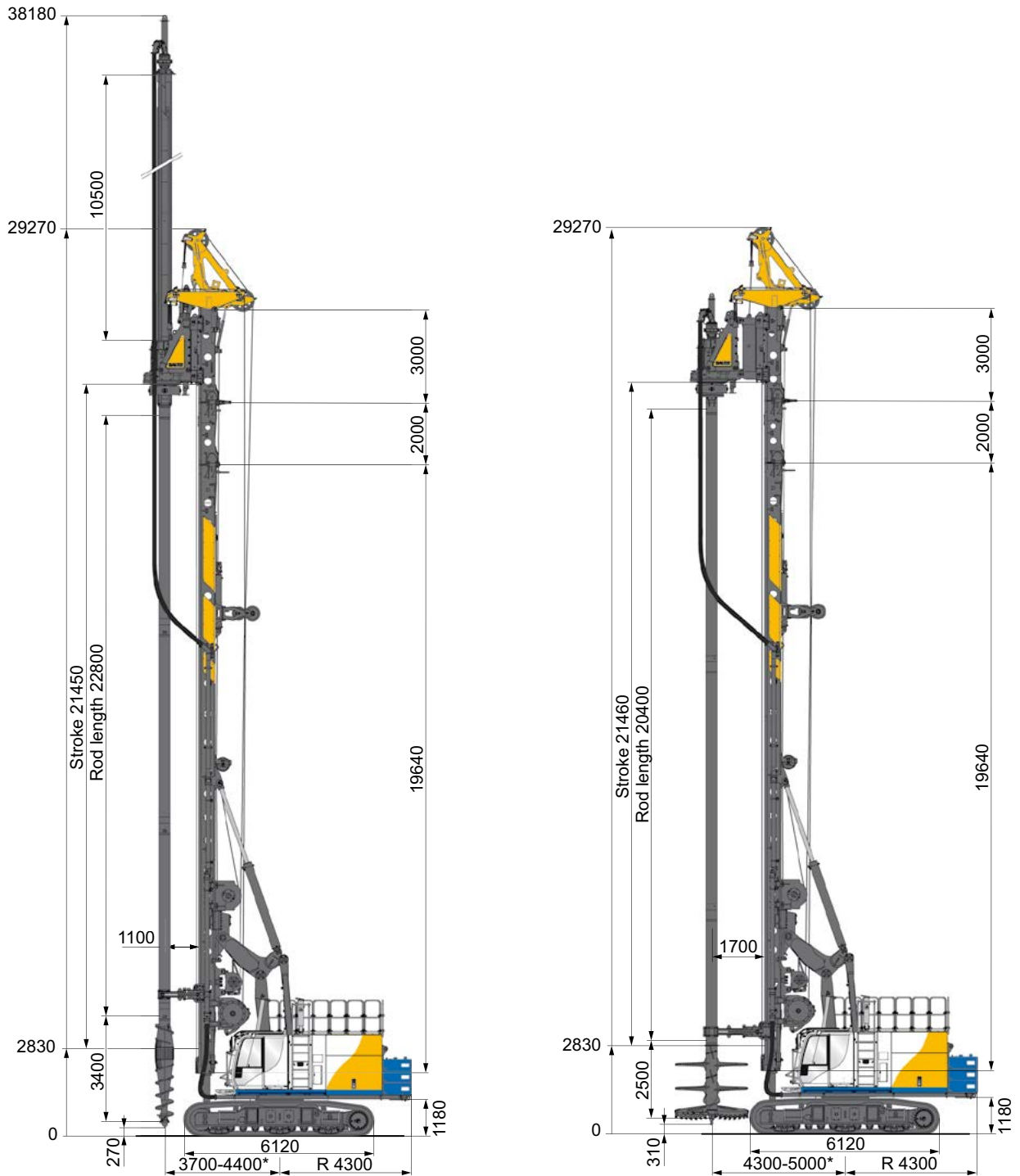
Kelly drilling with casing oscillator up to BV 2000





	Basic version	Upgraded version
Kelly extension	without	10.5 m
Max. drilling diameter	1,200 mm	1,200 mm
Drilling depth with Bauer rotary auger cleaner	18.2 m	30.7 m
Drilling depth with Bauer brush auger cleaner	19.4 m	31.9 m
Max. extraction force with main and crowd winch (effective)	850 kN	850 kN
with counterweight*	17.2 t	22.1 t

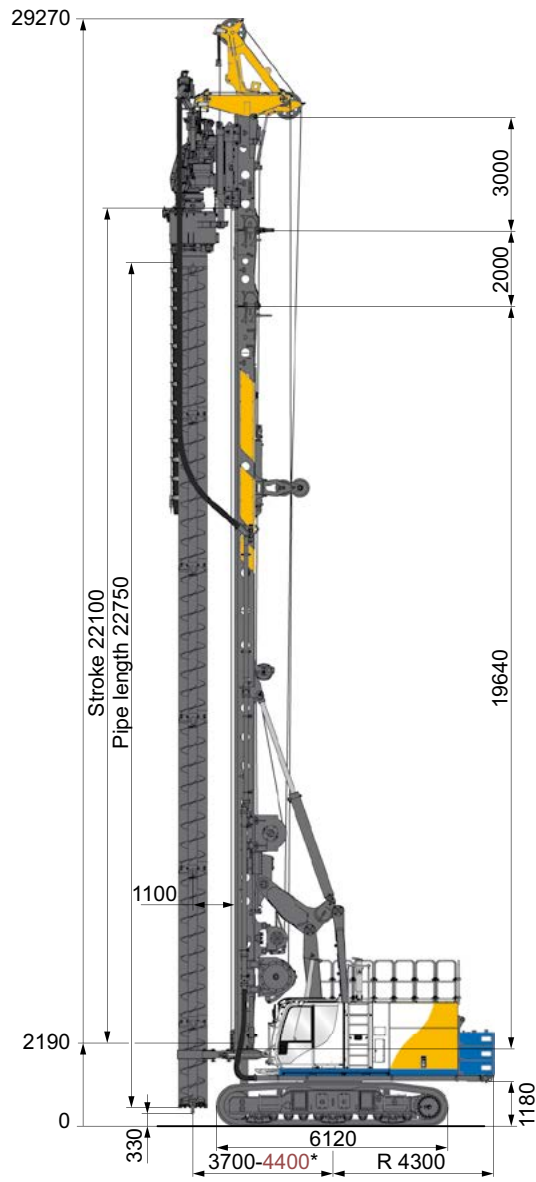
* depending on equipment



	FDP Drilling	SCM Mixing
Kelly extension	10.5 m	without
Max. drilling diameter	710 mm	2,500 mm**
Max. mixing depth with casing guidance	31.2 m	21.0 m
Max. extraction force with main and crowd winch	850 kN	850 kN
with counterweight*	22.1 t	19.6 t

* depending on equipment

** operation only with special equipment



FoW drilling	
DKS 110 / 240	
Torque auger	110 kNm
casing	240 kNm
Max. drilling diameter	750 mm
Max. drilling depth	21.4 m
Max. extraction force with main and crowd winch (effective)	690 kN
with counterweight*	22.1 t
Erection system	option

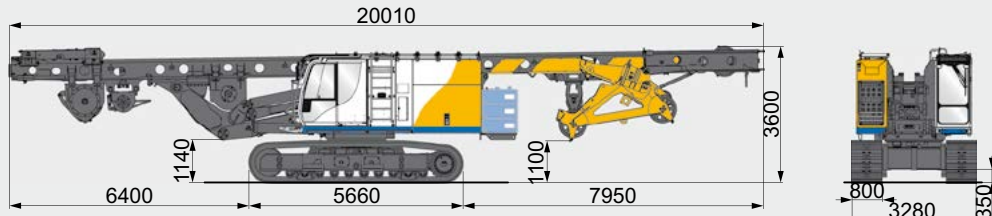
* depending on equipment

G = Weight
B = Width

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

Transport with base carrier UW 100

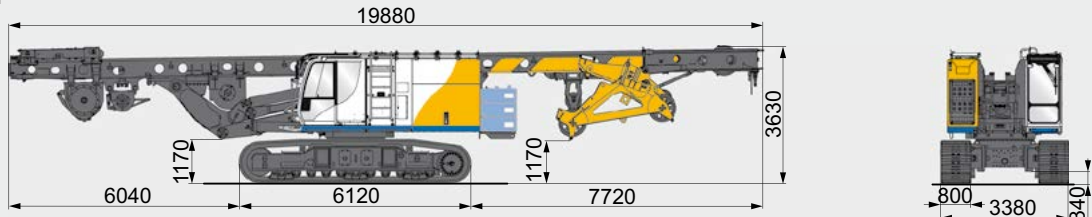
G = 73.3 t without Counterweight
B = 3.300 mm



Transport with base carrier UW 115

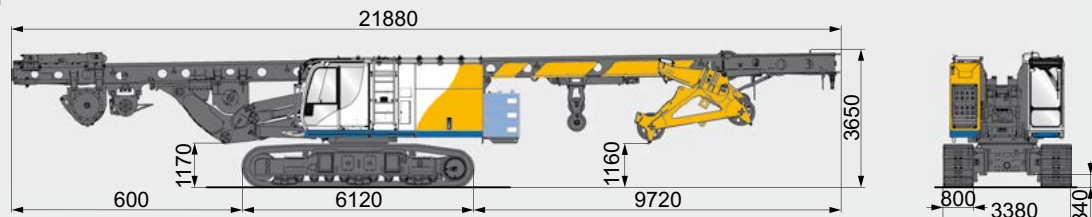
UW 115 without mast extension

G = 76.5 t without counterweight
B = 3,400 mm



UW 115 with mast extension

G = 77.4 t without counterweight
B = 3,400 mm



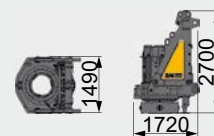
Counterweight*

G = 2.5 / 4.9 t
B = 3,000 mm



Rotary drive

G = 7.2 t (KDK 385 S)



Width of crawlers retracted / extended

	UW 100	UW 115
Track shoes 800 mm	3,300 – 4,500 mm	3,400 – 4,800 mm
Track shoes 900 mm	3,400 – 4,600 mm	3,500 – 4,900 mm

* depending on application

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24/7



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