BAUER BG 23

Drilling Rig

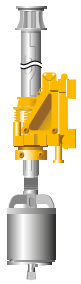
Base Carrier BT 65

BAUER

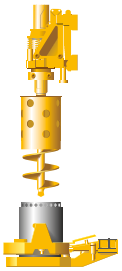
The Bauer Drilling Rigs

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



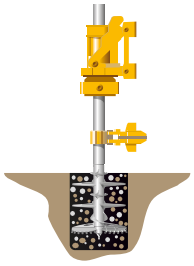
Kelly Drilling



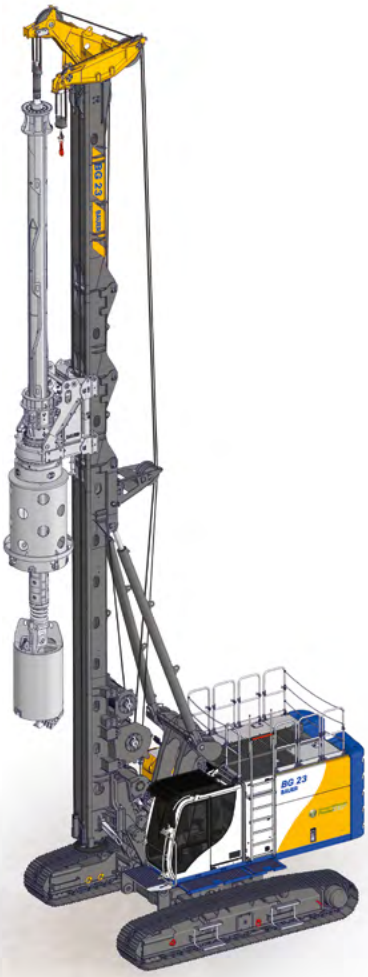
Cased Kelly Drilling
installation with oscillator

CFA
Continuous Flight Auger Drilling

FDP
Full Displacement Piling (Standard or Lost Bit)

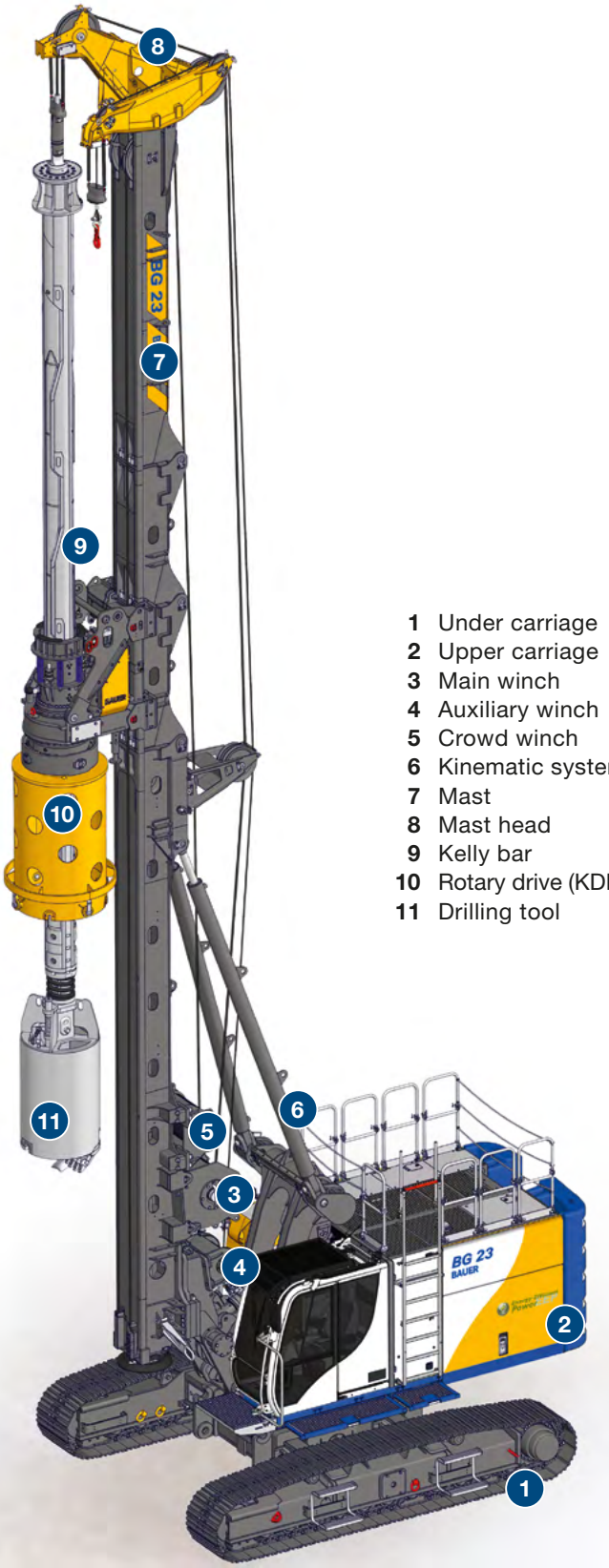


SCM
Single Column Mixing



The Drilling Rig
BG 23 BT 65

Max. drilling diameter:	**1,700 mm**
Max. drilling depth:	**51.4 m**
Max. torque:	**235 kNm**
Max. height:	**21.7 m**
Engine:	**CAT C 7.1 186 / 238 kW**



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

Spotlights

Modern, ergonomic operator cab
- FOPS compliant with additional protective roof guard
- Premium operator seat, air-sprung
- Joystick controls with high functionality

Powerful CAT engines
- C 7.1 186 kW (UN/ECE R96*) or C 7.1 238 kW (EU Stage V, EPA/CARB Tier 4 final)
- Diesel particulate filter in exhaust emission standard EU Stage V, EPA/CARB Tier 4 final
- Low noise emission
- Worldwide CAT service partners

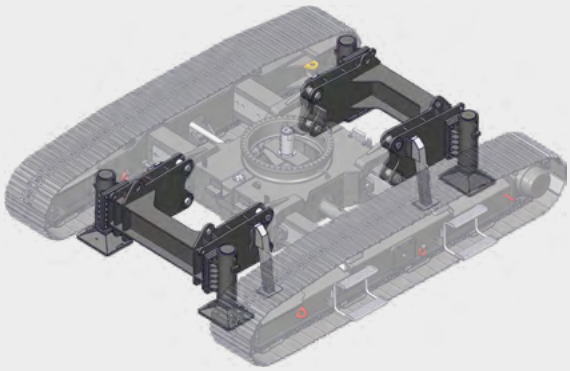
Safety equipment
- Integrated service platforms in the upper carriage for easy and safe maintenance work
- Retractable gratings beside the cab
- Guardrails on top of the upper carriage (foldable for transport)
- Rear view cameras

Energy-Efficient PowerEEP

- **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 EPA Tier 3 and EU Stage III A

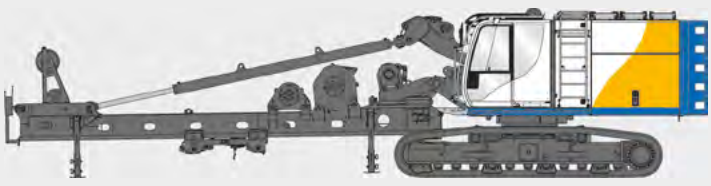
Safe and easy transport
- Mobilization kit with hydraulically operated pin connection
- Quick-release hydraulic couplers on upper carriage
- Hydaulic locking of support trestle
- Activated by remote control multi



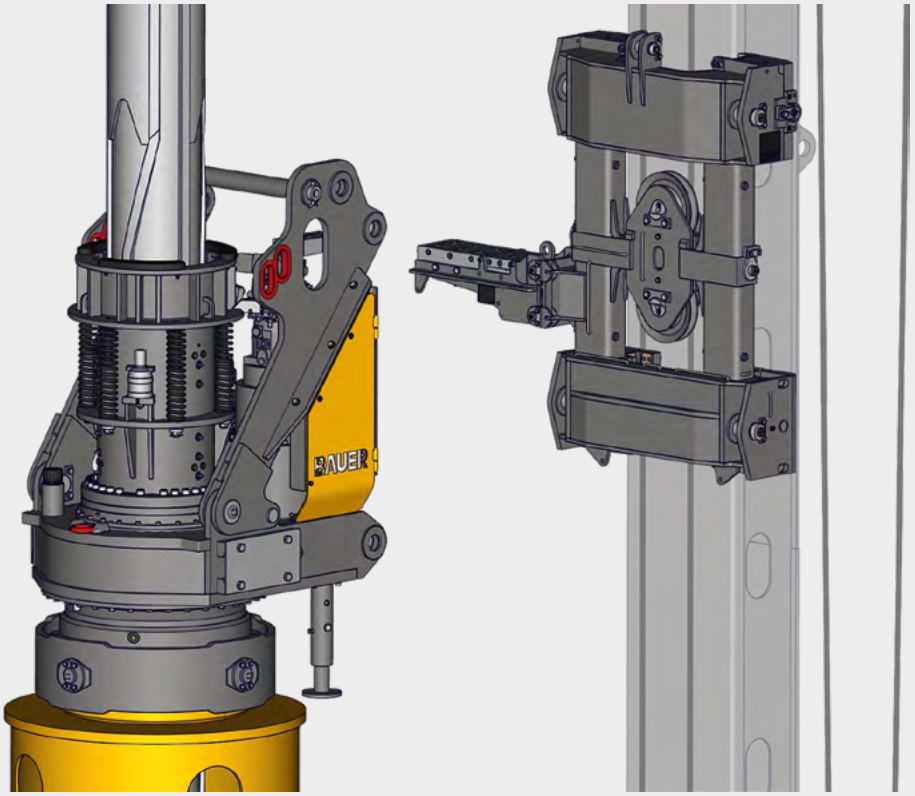
Jack-Up-System
- Enables lifting without additional equipment
- Quick and easy disassembly of the crawler
- Safe loading onto the low-loader

Flexible transport concept
- Easy disassembly of the device using V-kinematics
- Transport possible with or without lower mast section
- Transport without crawlers
- Transport units < 25 t achievable

< 25 t



Rotary Drive

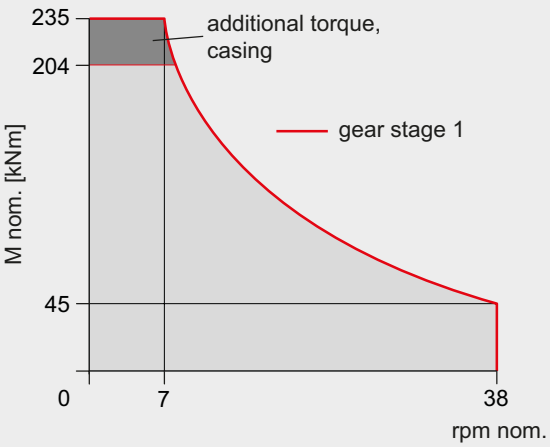


Kelly set-up
- Long Kelly guide
- Integrated shock absorbing spring system
- Kelly visualization (see page 11)
- Enhanced drilling performance
- High operation comfort
- Reduction of wear on Kelly bars and drive keys

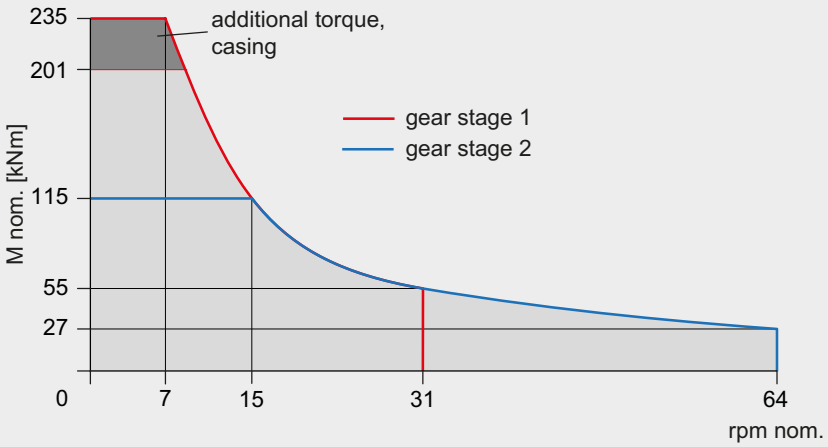
Rotary drive
- Optional single gear drive or multi gear drive
- Max. torque 235 kNm
- Max. speed 64 rpm
- Various modes of operation, partially selectable speed of rotation and torque

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 235 K



KDK 235 S



Technical Equipment (selection)

Base carrier BT 65

Standard
- Retractable gratings beside cab
- Cameras for rear area surveillance
- Integrated service platforms
- Guard rails on the upper level
- Hydraulic couplers on the upper level
- Remote control Multi

Optional
- Compressor 1,000 l/min
- Electric generator 13 kVA
- Weather protection
- Quick-release hydraulic couplers on the undercarriage
- Jack-Up-System
- Premium operator seat with air-condition
- Grating on side of cab with handrail and grating in front of cab

Drilling rig attachment

Standard
- Three-sectional mast
- Sturdy V-type mast kinematic system
- Main winch with hydraulic free-wheel control
- Hydraulic locking for support trestle

Optional
- Mast support unit
- Mobilization kit
- Hydraulic bolt connection on rotary sledge for easy mounting and demounting of rotary drive
- Extension package Super Low Head

Rotary drive

Standard
- Rotary drive KDK 235 K
- Selectable modes of operation
- Kelly drive adapter for outer Kelly tube 368 mm
- Quick-release hydraulic couplers

Optional
- Rotary drive KDK 235 S

Measuring and control system

Standard
- Automatic mast alignment with memory function
- Crowd stroke monitoring
- Kelly visualization
- Electronic mast limit control

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
- 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

Assistance Systems (selection)

Adaptive Kelly Speed Assistant

The Adaptive Kelly speed assistant takes over the extension and retraction of the Kelly bar almost automatically. It independently reduces the speed at the segment transitions, protects the equipment from damage, minimizes wear, and lowers noise emissions.

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.

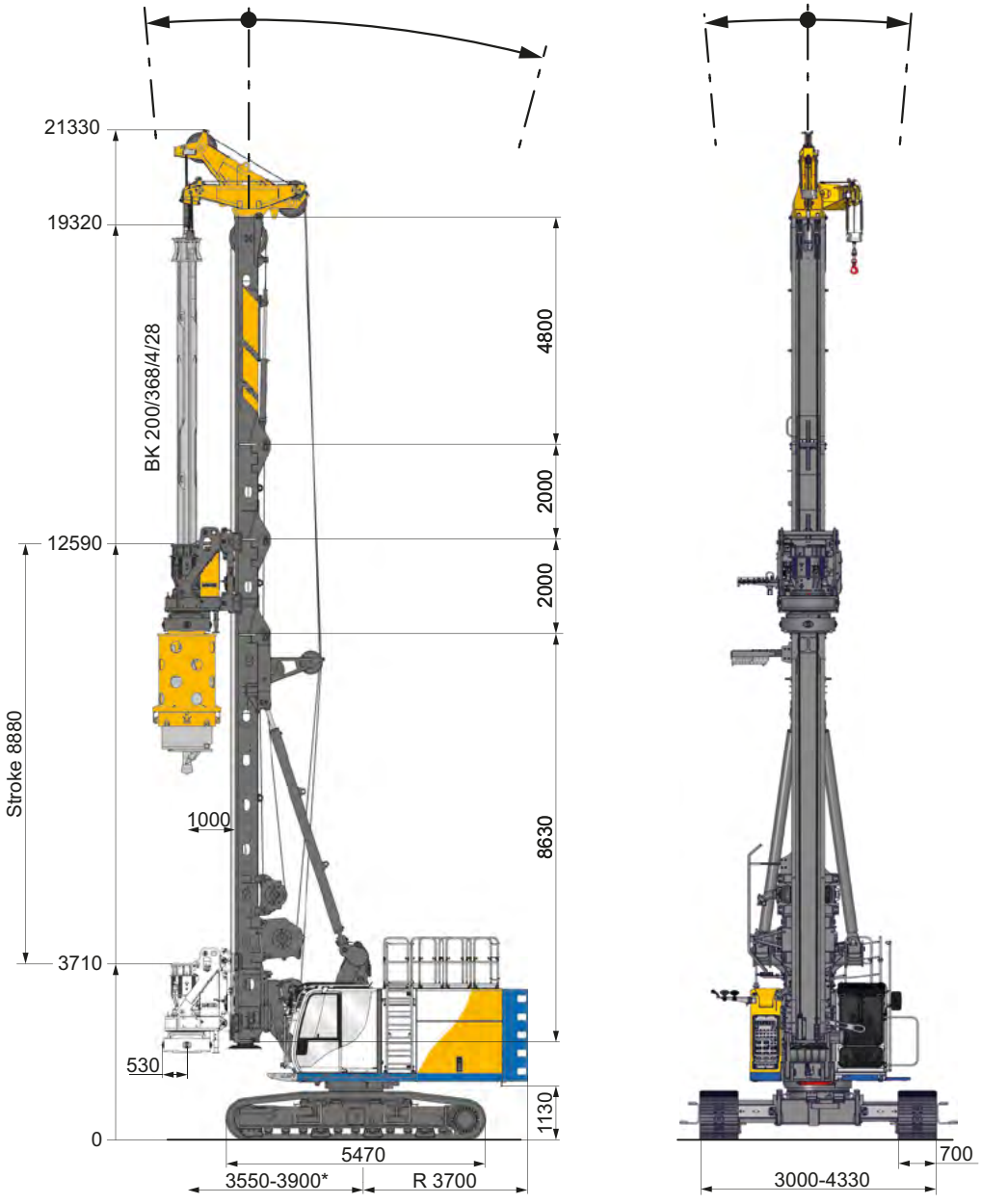
Automatic Torque Setting

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.

- Stability Plus
- 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!

Dimensions



Operating weight 73.3 t
(as shown)

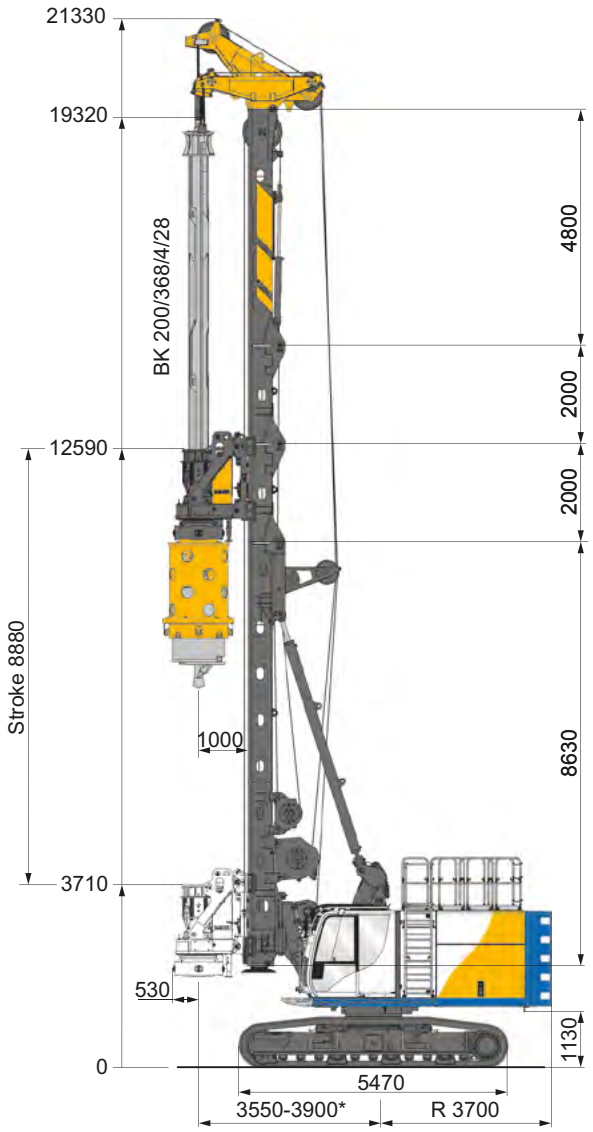
* depending on equipment

Technical Specifications

Rotary drive (selectable)	KDK 235 K	KDK 235 S
Torque (nominal) for casing operation at 350 bar	235 kNm	235 kNm
Torque (nominal) for drilling at 350 bar	204 kNm	201 kNm
Max. speed of rotation	38 rpm	64 rpm
Crowd winch		
Winch classification	M6 / L3 / T5	
Max. sledge stroke	15,075 mm	
Crowd force push effective / nominal	260 / 333 kN	
Crowd force pull effective / nominal	260 / 333 kN	
Extraction force Crowd Plus effective / nominal with mast support unit without mast support unit	 430 / 550 kN 360 / 460 kN	
Rope diameter	22 mm	
Speed (down / up)	10.5 m/min	
Fast speed (down / up)	30.5 m/min	
Main winch		
Winch classification	M6 / L3 / T5	
Line pull (1st layer) effective / nominal	170 kN	
Rope diameter	22 mm	
Max. line speed	86 m/min	
Auxiliary winch		
Line pull (1st layer) effective / nominal	55 kN	
Rope diameter	15 mm	
Max. line speed	55 m/min	
Base carrier (EEP)		
Engine	CAT C 7.1	CAT C 7.1
Rated output ISO 3046-1	186 kW @ 1.850 rpm	238 kW @ 1.850 rpm
Exhaust emission	UN/ECE R96*	EU Stage V EPA/CARB Tier 4 final
Diesel tank capacity / AdBlue Tank	540 / – l	540 / 34.5 l
Sound pressure level in the cabin (EN 16228, Annex B)	LP_A 80 dB (A)	
Sound power level (2000 / 14 / EC u. EN 16228, Annex B)	LW_A 108 dB (A)	
Hydraulic pressure	350 bar	
Hydraulic tank capacity	450 l	
Flow rates	2 x 220 + 1 x 280 + 1 x 135 l/min	
Under carriage		
Crawler type	B 60	
Traction force effective / nominal	450 / 530 kN	

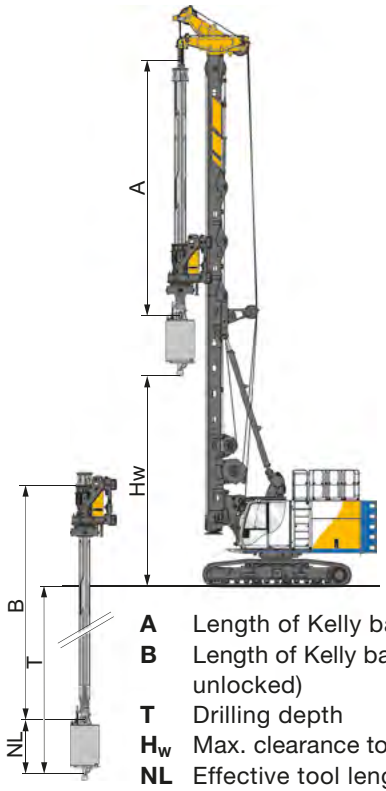
* Exhaust emission equivalent EPA Tier 3 and EU Stage III A

Application – Kelly Drilling



Kelly Drilling	
Max. drilling diameter	
uncased	1,700 mm
cased	1,400 mm
Operating weight approx.	73.3 t
with Kelly BK 200 / 368 / ...	4/21-S
with casing drive adapter	1,300 mm
with bucket	1,180 mm
with counterweight*	7.6 t

* depending on equipment



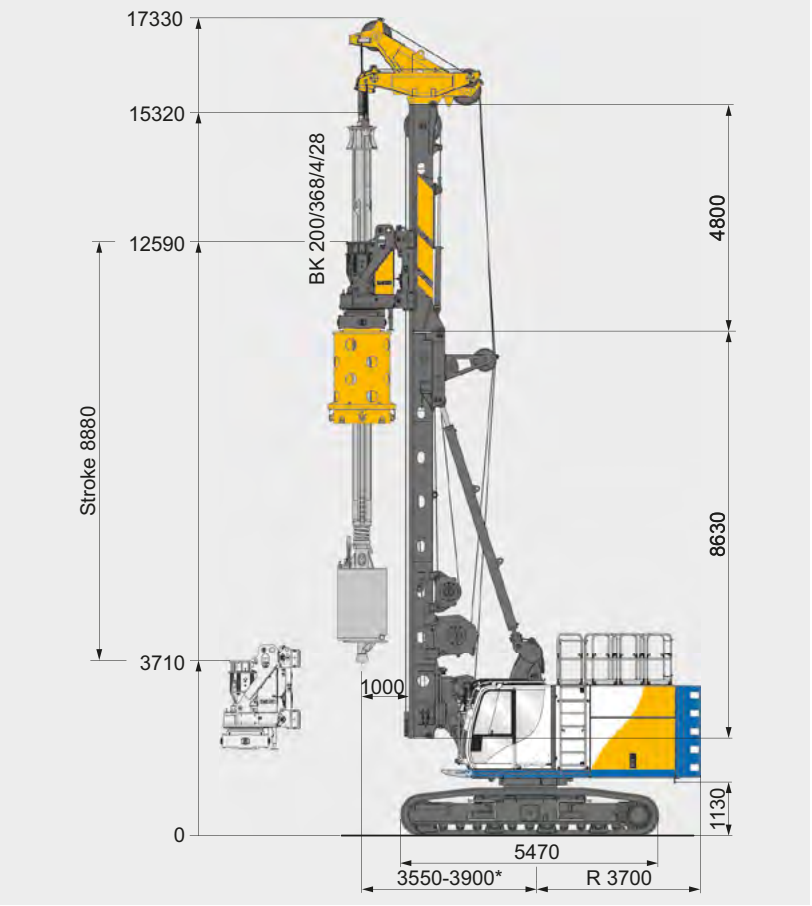
A Length of Kelly bar (retracted)
B Length of Kelly bar (extended, unlocked)
T Drilling depth
H_w Max. clearance to drilling tool
NL Effective tool length
G Weight of Kelly bar

Drilling depth – uncased Kelly drilling					
3-part Kelly	A (m)	B (m)	G (kg)	HW (m)	T (m)
BK200/368/3/18	8.4	20.4	3,400	8.7	18.7
BK200/368/3/21	9.4	23.4	3,750	7.7	21.7
BK200/368/3/24	10.4	26.4	4,100	6.7	24.7
BK200/368/3/30	12.4	32.4	4,750	4.7	31.0
BK200/368/3/36	14.4	38.4	5,400	2.7	36.7
4-part Kelly					
BK200/368/4/28	9.5	31.1	5,050	7.6	29.4
BK200/368/4/32	10.5	35.1	5,550	6.6	33.4
BK200/368/4/40	12.5	43.1	6,500	4.6	41.4
BK200/368/4/48	14.5	51.1	7,500	2.6	49.4
BK200/368/4/50	15.0	53.1	7,750	2.1	51.4

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 0.28 m when using maximum horizontal mast reach.

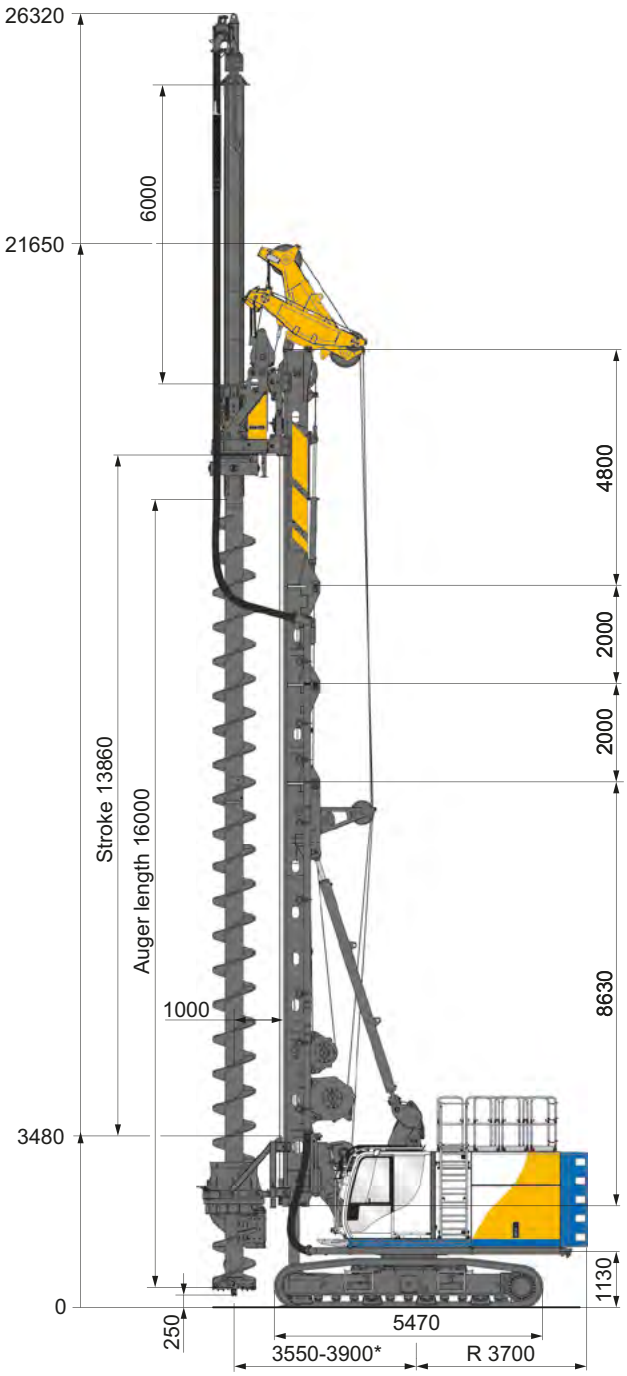
Further drilling depths, diameters and other Kelly types on request.

Reduced Headroom Variant



* depending on equipment

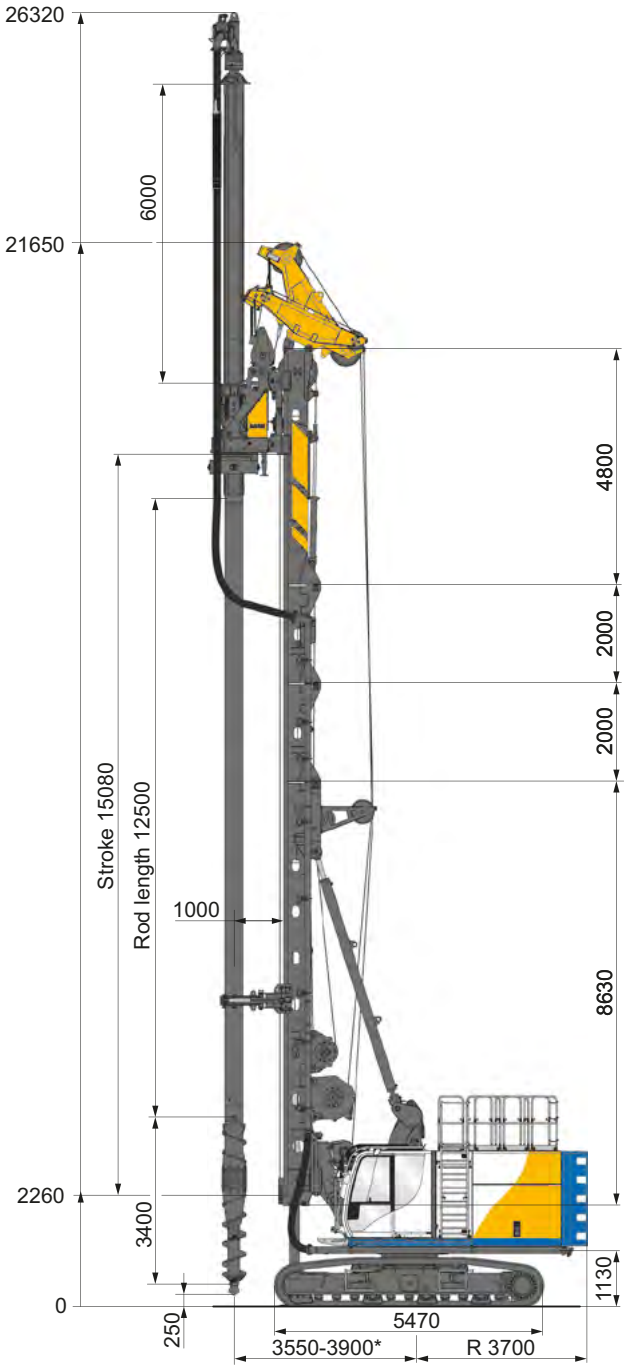
Application – CFA Drilling



CFA Drilling	
Kelly extension	6 m
Max. drilling diameter	900 mm
Max. drilling depth with auger cleaner	19.5 m
Max. extraction force with main and crowd winch (effective)*	600 kN
With counterweight*	7.6 t

* depending on equipment

Application – FDP Drilling



FDP Drilling	
Kelly extension	6 m
Max. drilling diameter	510 mm
Max. drilling depth	20.8 m
Max. extraction force with main and crowd winch (effective)*	600 kN
With counterweight*	7.6 t

* depending on equipment

Transport – Dimensions and Weights

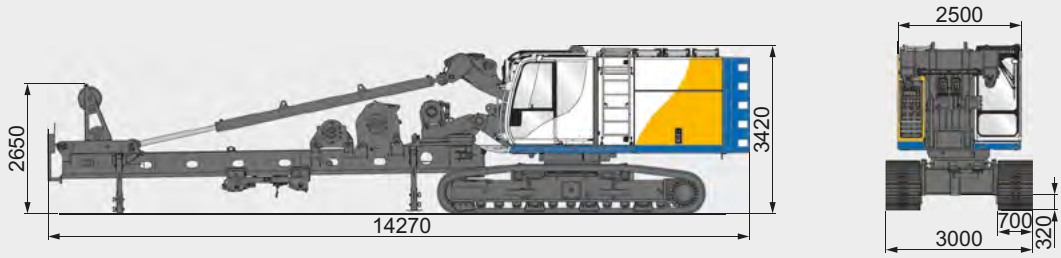
G = Weight
B = Width

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

Transport

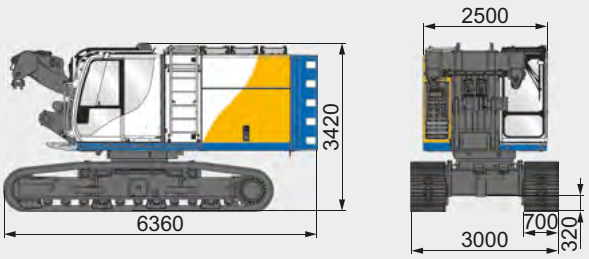
Base carrier with lower mast section

G = 55.6 t with 7.6 t counterweight



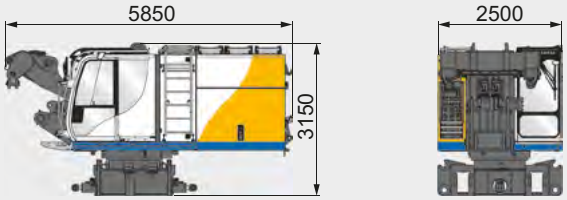
Base carrier without lower mast section

G = 41.6 t with 7.6 t counterweight



Base carrier without crawlers, without counterweight

G = 20.4 t

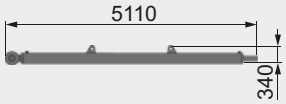


Crawlers

G = 2 x 6.8 t
B = 2,600 mm

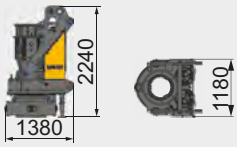
Backstay cylinders

G = 2 x 1.0 t
B = 200 mm



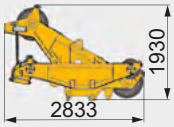
Rotary drive

G = 4.0 t KDK 235 K
G = 4.5 t KDK 235 S



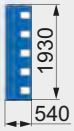
Mast head

G = 1.1 t
B = 1,800 mm



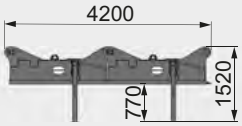
Counterweight

G = 7.6 t
B = 2,500 mm



2 x 2 m Mast extension

G = 1.8 t
B = 1,500 mm

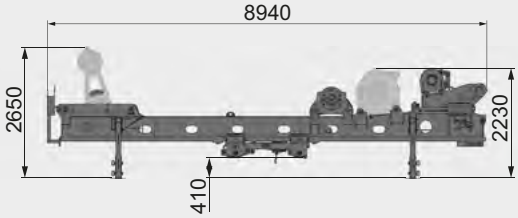


Upper mast section

G = 1.8 t
B = 1,500 mm

Lower mast section

G = 9.9 t with main winch, without deflection block
G = 12.0 t with main winch, with deflection block
B = 2,200 mm



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