BAUER BG 36 H

Rotary Drilling Rig

Base Carrier BS 95

BAUER

The BAUER BG

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.

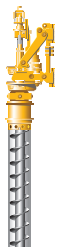
Specific highlights of the drilling rigs are:
- High safety standards
- Environmental sustainability, economic efficiency and performance
- Easy transport and short rigging time
- High quality standard
- Long lifetime and excellent resale value

Kelly Drilling

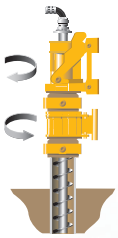
Cased Kelly Drilling
Installation with BTM

CFA
Continuous Flight Auger Drilling

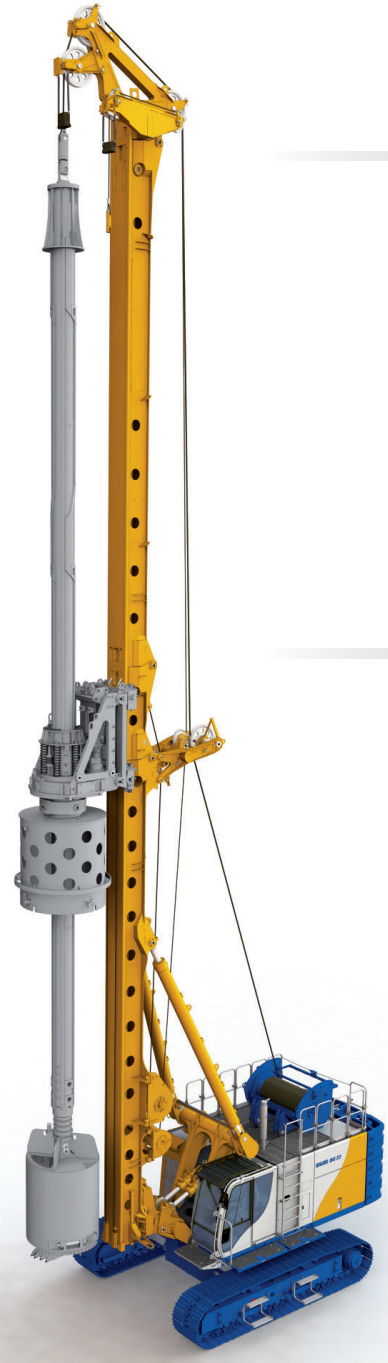
FDP
Full Displacement Piling (Standard or Lost Bit)



FoW
Front of Wall

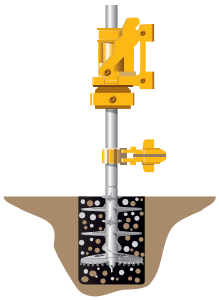


CCFA
Cased CFA system with KDK+ BTM / Double Rotary System

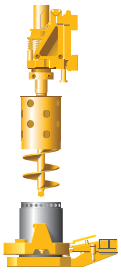


The Rotary drilling rig BG 36 H (BS 95)

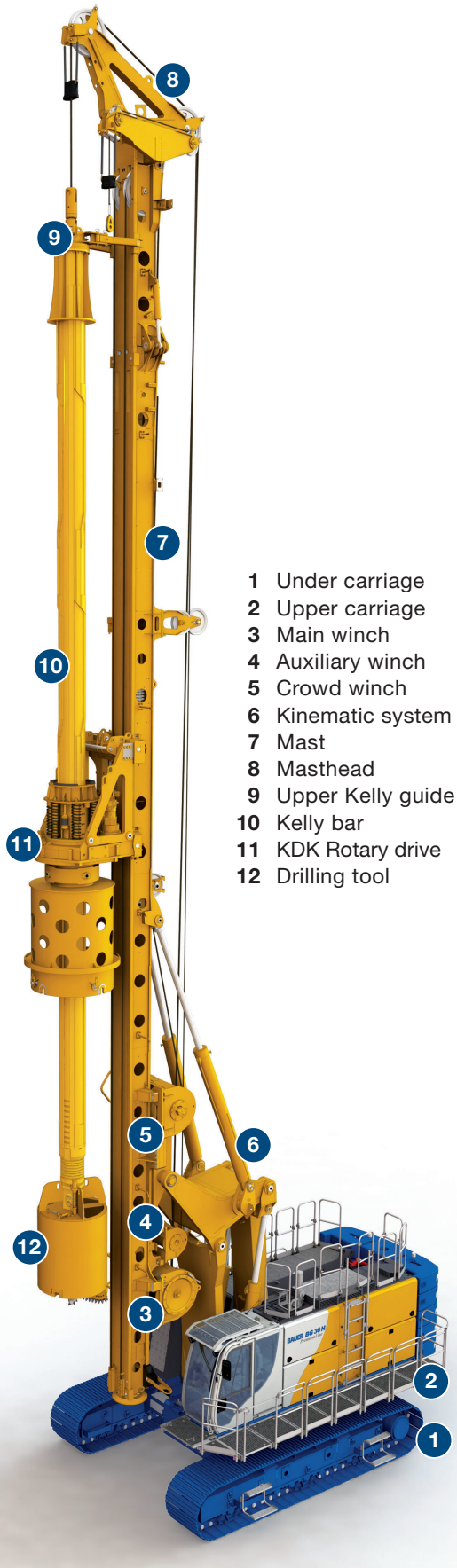
Max. drilling diameter:	**2,500 mm**
Max. drilling depth:	**68.0 m**
Max. torque (nominal):	**385 kNm**
Max. height:	**27.1 m**
Engine:	**CAT C 15 403/433 kW**



SCM/SCM-DH
Single Column Mixing



Cased Kelly Drilling
Installation with Oscillator

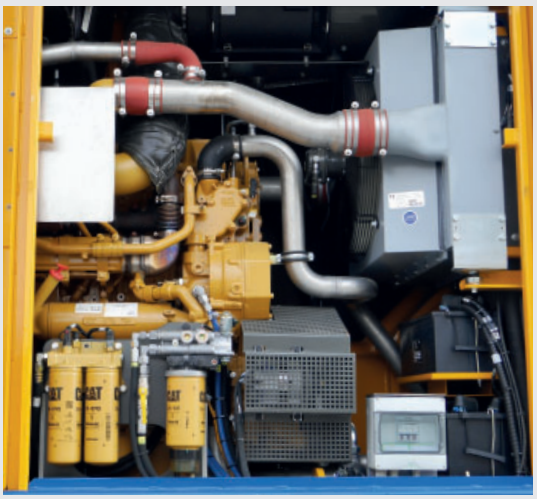


1 Under carriage
2 Upper carriage
3 Main winch
4 Auxiliary winch
5 Crowd winch
6 Kinematic system
7 Mast
8 Masthead
9 Upper Kelly guide
10 Kelly bar
11 KDK Rotary drive
12 Drilling tool

Spotlights

Modern, ergonomic operator cab
- FOPS compliant with additional protective roof guard
- Premium operator seat, air-sprung, heatable and air-conditioned
- Joystick controls with high functionality
- B-Drive adjustable potentiometer values on one display

Powerful CAT engines
- CAT C 15 with 403 kW or 433 kW (ORA*or Stage V/Tier 4 final)
- Diesel particulate filter in exhaust emission standard Stage V/ Tier 4 final
- Low noise emission
- Worldwide CAT service partners



Safety equipment
- Guardrails upper level (foldable for transport)
- Upward folding service doors
- Walking platform with handrail (foldable for transport)
- Rear view cameras

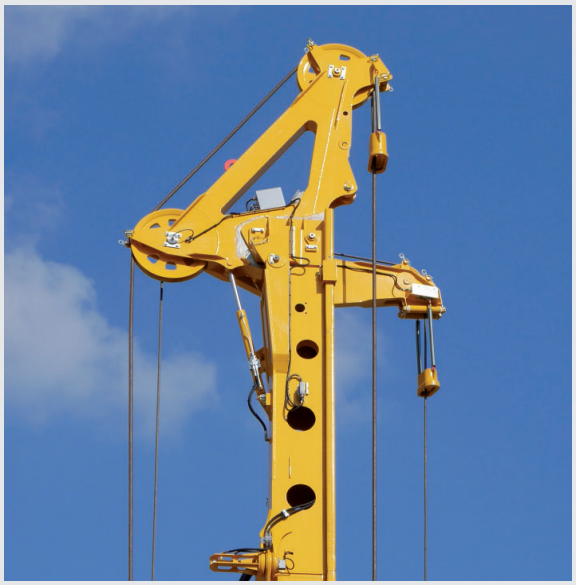
Energy-Efficient PowerEEP

- **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 Tier 3/Stage III A emission standard

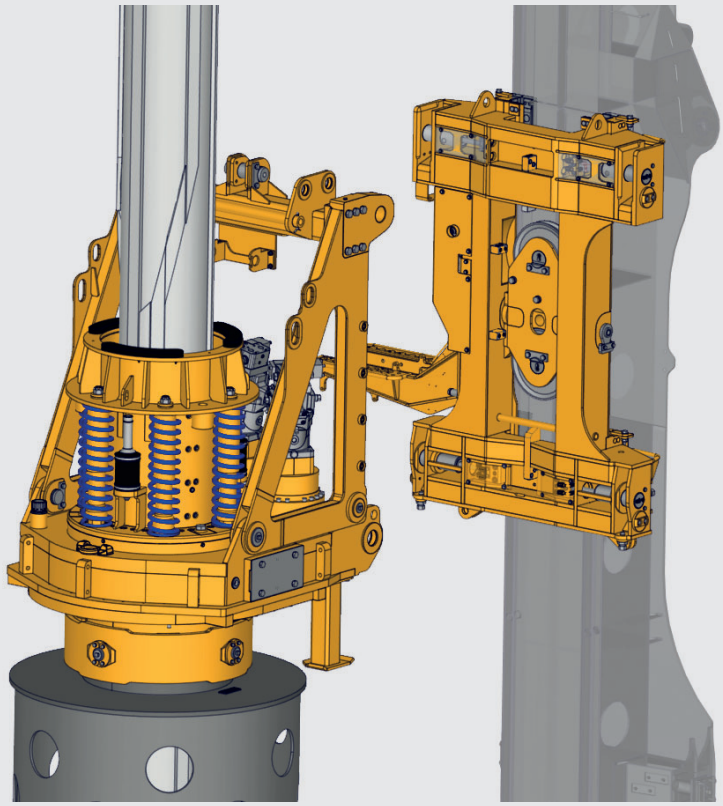
Variably stackable counterweight elements
- Constant tail radius
- Low weight of individual elements (4.9 t or 2.5 t)
- Flexible arrangement for various applications
- Mounting and demounting with rig

Flexible mast concept
- Vario-masthead
  - Masthead for drill axis distance 1,100 and 1,400 mm
  - Increased stroke for Kelly bars when using an upper Kelly guide
  - Tiltable main jib for Kelly drilling, single-pass processes an optimized transport
  - Auxiliary winch is always fully usable
- Extended mast configurations
  - Mast extension 3 m, hydraulically foldable and lockable
  - Mast extension 3 m, hydraulically foldable and lockable + mast extension 2 m (only Single-Pass)
  - Increased stroke for Single Pass Systems
  - Minimized transport length



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

Rotary Drive

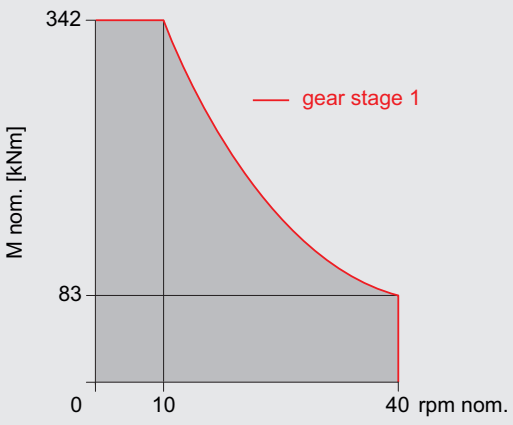


Kelly set-up
- Long Kelly guide
- Integrated shock absorbing spring system
- Kelly visualization (see page 11)
- Enhanced drilling performance
- High operation comfort
- Reduction of wear on Kelly bars and drive keys

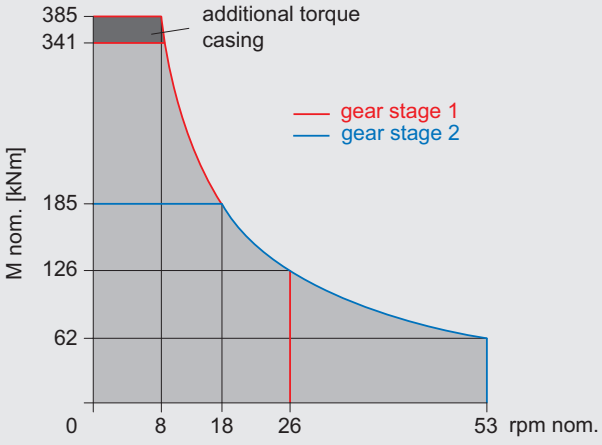
Rotary drive
- Optional single gear drive or multi gear drive
- Max. torque 385 kNm
- Max. speed 53 rpm
- Various modes of operation, partially selectable speed of rotation and torque

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 340 K



KDK 385 S



Multi-functional Equipment

Rotary drive

Standard
- Removable counterweight elements
- Platforms with railings (on both sides and on the operators cab)
- Foldable fall protection on the upper carriage
- Cameras for rear area and main winch surveillance

Optional
- Counterweight, variably adjustable
- Platforms with handrail (on both sides of cabin level)
- Compressor 1,000 l/min
- Generator 13 kVA
- Artic kit/Artic kit plus
- Hydraulic system with standard cuppling (under carriage)
- Remote control Basic/Multi
- Premium operator seat with air-condition

Drilling rig attachment

Standard
- Main winch with hydraulic free-wheel control
- Swivel for main rope
- Mast extension 1,5 m
- Masthead foldable

Optional
- Upper Kelly guide
- Extension of drill axis to 1,400 mm
- Mast support unit
  - Mast extension 3 m, hydraulically foldable and lockable
  - Mast extension 2 m + 3 m, hydraulically foldable and lockable
- Attachment of casing oscillator up to BV 2000
- Hydraulically operated pinn connection on the crowd sledge

Rotary drive

Standard
- Rotary drive KDK 340 K (single gear drive)
- Kelly drive adapter for outer Kelly tube 470 mm
- Integrated Kelly damping system
- Quick-release hydraulic couplers

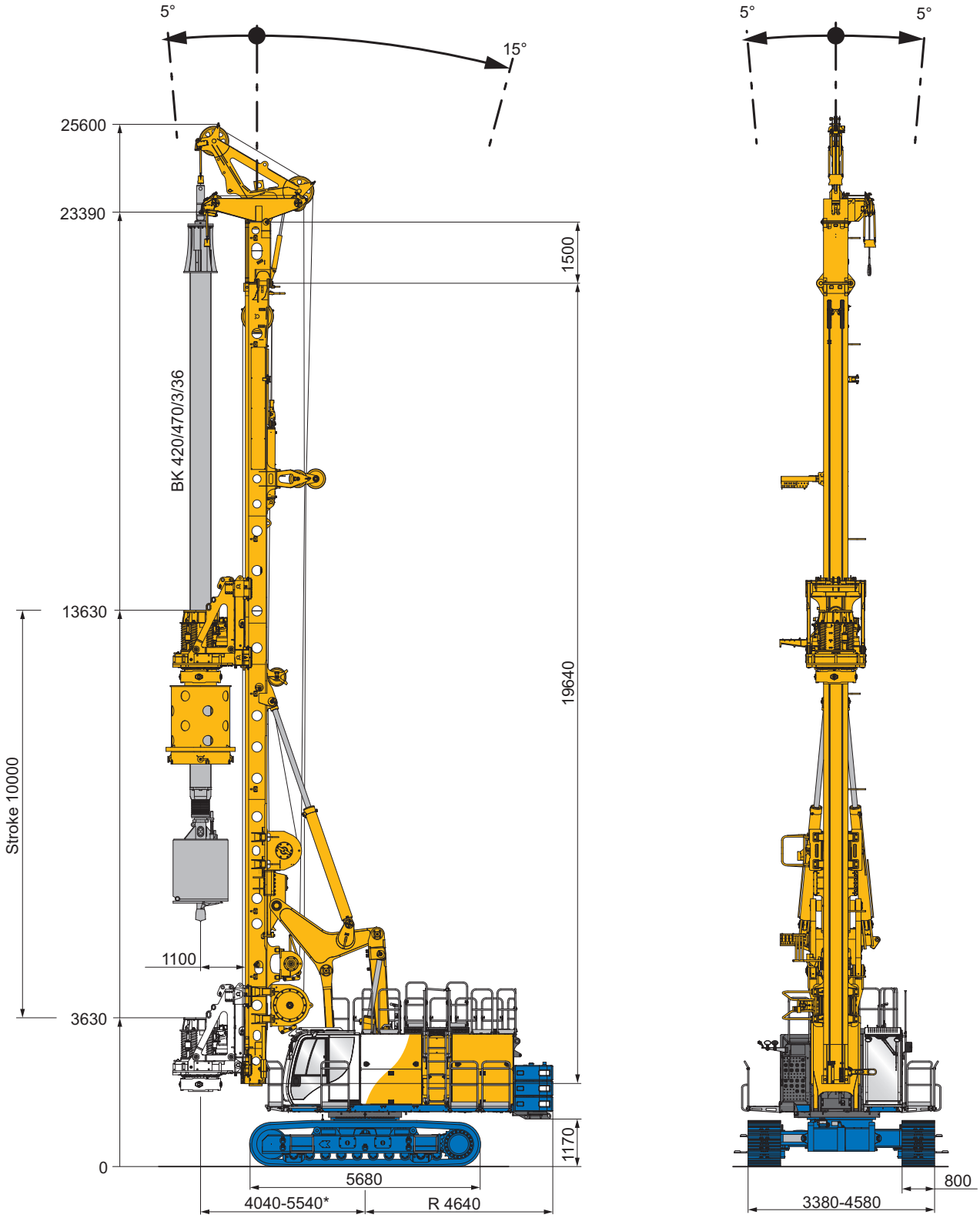
Optional
- Rotary drive KDK 385 S (multi gear drive)
- Torque multiplier BTM 720 K for Kelly drilling
  - Torque 470 kNm (nominal)
- Torque multiplier BTM 400 for CCFA

Measuring and control system

Standard
- Automatic mast alignment with memory-recall
- Crowd stroke monitoring
- Kelly visualization

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

Dimensions – UW 110 Standard



Operating weight 115.6 t
(as shown)

* depending on configuration

Technical Specifications

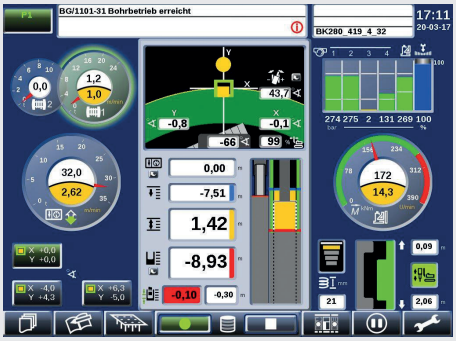
Rotary drive (selectable)		**KDK 340 K**	**KDK 385 S**
Torque (nominal) for casing operation at 350 bar		342 kNm	385 kNm
Torque (nominal) for drilling operation at 350 bar		342 kNm	341 kNm
Speed of rotation (max.)		40 rpm	53 rpm
Crowd winch system			
Max. sledge stroke with 3 m mast extension		22,090 mm	
Crowd force push and pull, effektive/nominal		400/513 kN	
Rope diameter		28 mm	
Speed (down/up)		12.0 m/min	
Fast speed (down/up)		30 m/min	
Main winch		M6/L3/T5	
Line pull (1st layer) effective/nominal		290/367 kN	
Rope diameter		32 mm	
Line speed (max.)		75 m/min	
Auxiliary winch (selectable)		M6/L3/T5	
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)		BS 95	
Engine		CAT C 15	
Rated output ISO 3046-1 (with/without power package)		403/433 kW 1,850 U/min	
Exhaust Emission Standard acc. to	EU 2016/1628	ORA*	Stage V
	EPA/CARB	ORA*	Tier 4 final
	GB20891-2014	China Stage III	-
Diesel tank capacity/AdBlue tank		1,000/– l	840/34,5 l
Sound pressure level in cabin (EN 16228, Annex B)		LP_A 80 dB (A)	
Sound power level (2000/14/EC and EN 16228, Annex B)		LW_A 110 dB (A)	
Hydraulic pressure		350 bar	
Hydraulic oil tank capacity		1,000 l	
Flow rates		2 x 440 + 1 x 565 + 1 x 215 l/min	

Under carriage (selectable)	UW 110 Standard	UW 110 Upgraded	UW 110 Transport optimized
Crawler type	B 7	B 7	B 7
Traction force effective/nominal	771/907 kN	771/907 kN	771/907 kN

* Exhaust emission equivalent Tier 3/Stage III A emission standard

B-Tronic System

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´s 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

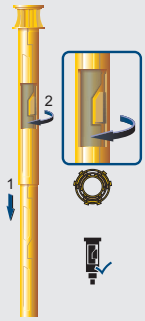
Device networking
DTR module
- The DTR module allows equipment and production data to be made available to a wide variety of users

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

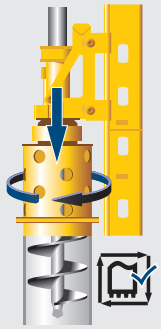
Report of production data
- Standardized reports for the documentation of drilling progress and verification of performance and quality

Assistance Systems (selection)

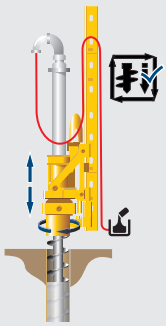
Adaptive Kelly speed assistant
The assistant raises and lowers the Kelly bar safely and quickly and allows an easy operation. The automatic control of the speed of the main winch reduces the speed at the transition points of the Kelly sections.
This provides maximum safety with minimum wear. The permanent monitoring of the parameters prevents a locked Kelly bar from being raised or lowered accidentally and thus causing damage.



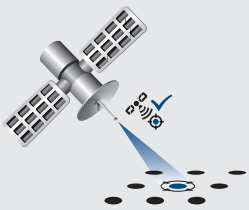
Kelly visualization
Display of the locking recesses, as well as representation of the controlled extension and retraction of the Kelly bar on the B-Tronic system. The rapid approach of the locking position results in a considerably enhanced drilling performance. In addition, the level of wear that the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



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.



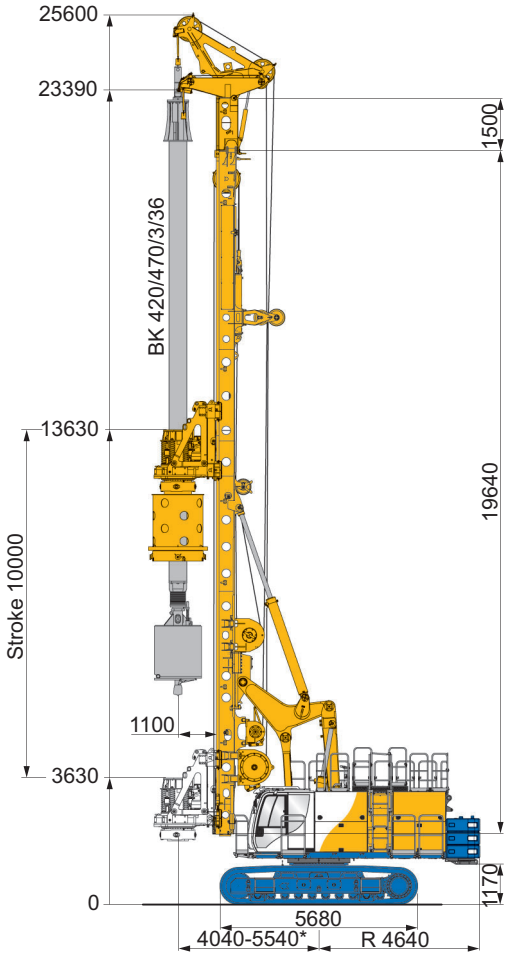
Automatic drilling and extraction control for Single-Pass processes
The system controls the drilling and/or extraction speed of the crowd system and enables hands-free operation. This ensures the production of a high-quality pile while simultaneously minimizing the amount of concrete.

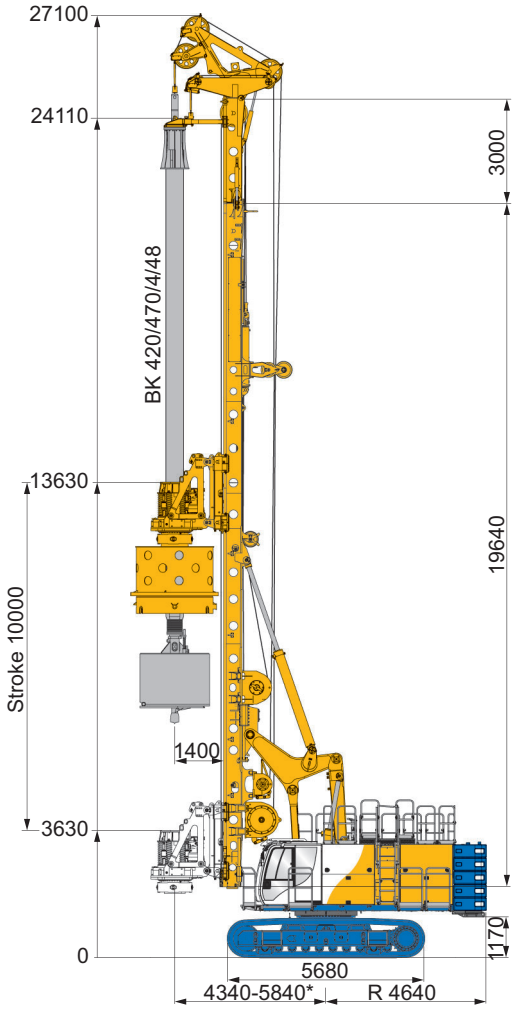


Satellite-based positioning
The BAUER Assistant Positioning System (B-APS) allows the position of a bored pile to be located extremely accurately. Documentation is provided for the nominal and actual coordinates, as well as the corresponding accuracy of each bored pile. Manual marking of the piles is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

Numerous other assistance systems are available in our portfolio.

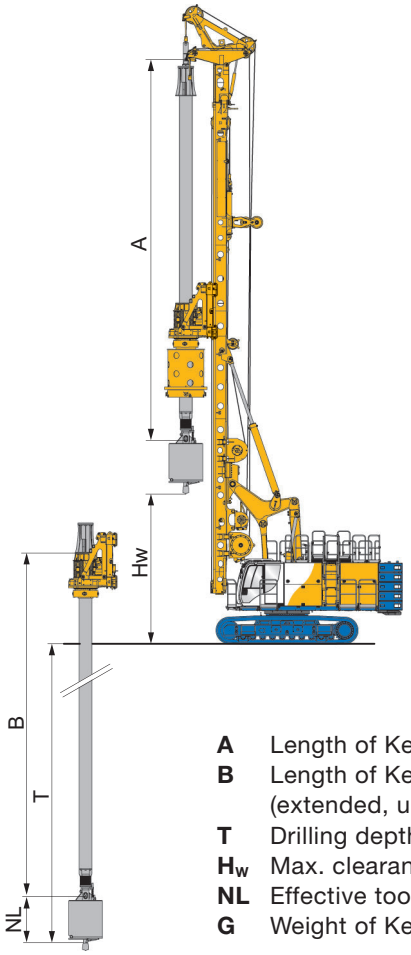
Application – Kelly Drilling





Under carriage	UW 110 standard	UW 110 standard
Mast extension	1.5 m	3 m
Upper Kelly guide	without	with
Drilling axis	1,100 mm	1,400 mm
Max. drilling diameter		
uncased	1,900 mm	2,500 mm
cased	1,600 mm	2,200 mm
Operating weight approx. with Kelly BK 300/419/... with bucket with counterweight	115.6 t ... 3/36 KB 1350 14.7 t	136.8 t ... 4/48 KB 2000 24.5 t

* depending on configuration



Drilling depth – uncased Kelly drilling

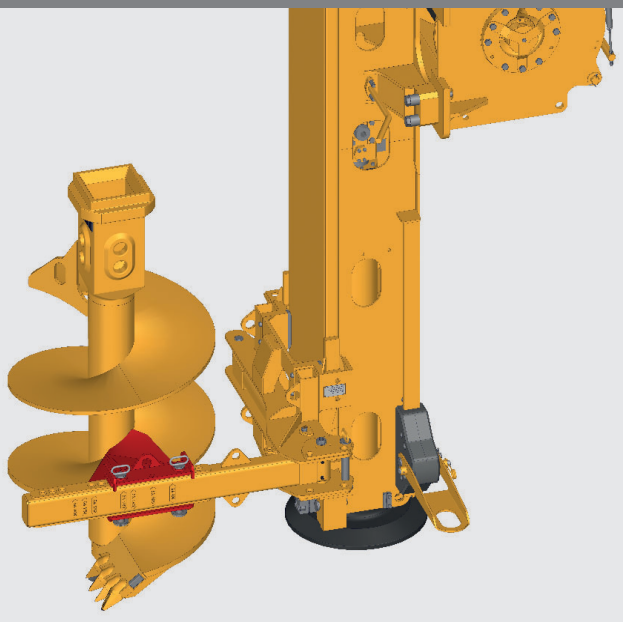
				1.5 m mast extension		3 m mast extension	
3-part Kelly bar	A (m)	B (m)	G (kg)	H_W (m)	T (m)	H_W (m)	T (m)
BK420/470/3/27	12.3	29.2	7,700	9.0	27.5	9.0	27.5
BK420/470/3/30	13.3	32.2	8,150	8.0	30.5	9.0	30.5
BK420/470/3/33	14.3	35.2	8,730	7.0	33.5	8.5	33.5
BK420/470/3/36	15.3	38.2	9,300	6.0	36.5	7.5	36.5
BK420/470/3/39	16.3	41.2	9,830	5.0	39.5	6.5	39.5
4-part Kelly bar							
BK420/470/4/36	12.3	37.8	10,250	9.0	36.0	9.0	36.0
BK420/470/4/40	13.3	41.8	11,000	8.0	40.0	9.0	40.0
BK420/470/4/44	14.3	45.8	11,800	7.0	44.0	8.5	44.0
BK420/470/4/48	15.3	49.8	12,600	6.0	48.0	7.5	48.0
BK420/470/4/52	16.3	53.8	13,500	5.0	52.0	6.5	52.0
BK420/470/4/64	19.3	65.8	15,700	2.0	64.0	3.5	64.0
BK420/470/4/68	20.3	69.8	16,480	–	–	2.5	68.0

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 data as shown are based on tool length NL = 1.9 m, minimum horizontal mast reach and using Bauer attachment.

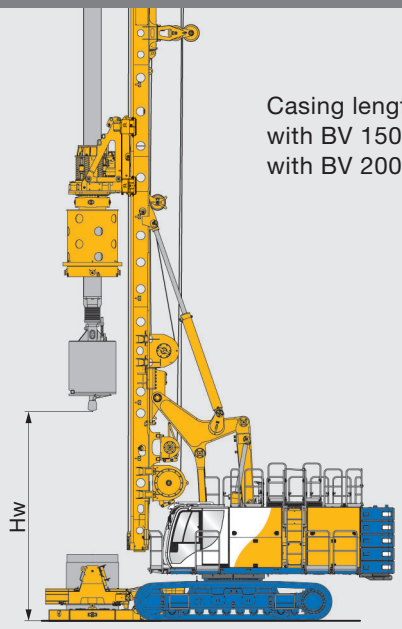
Further drilling depth, diameter and other Kelly types on request.

Auger cleaner for Kelly-drilling application Drilling diameter 520 to 1,060 mm



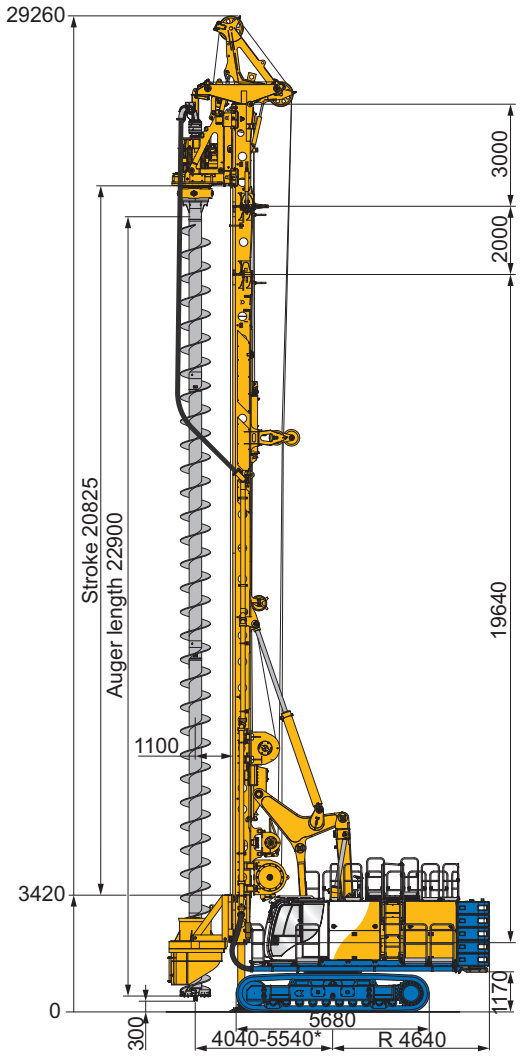
Further drilling diameters and drilling axes on request.

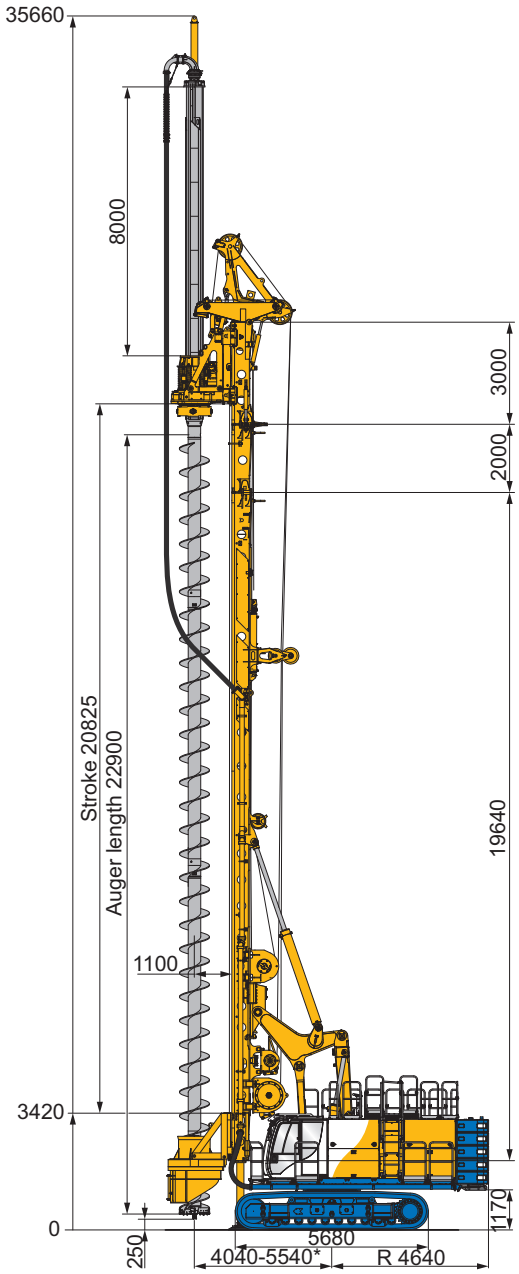
Cased Kelly drilling up to Casing oscillator BV 2000



Casing length
with BV 1500 = H_W -1.6 m
with BV 2000 = H_W -2.0 m

Application – CFA Drilling

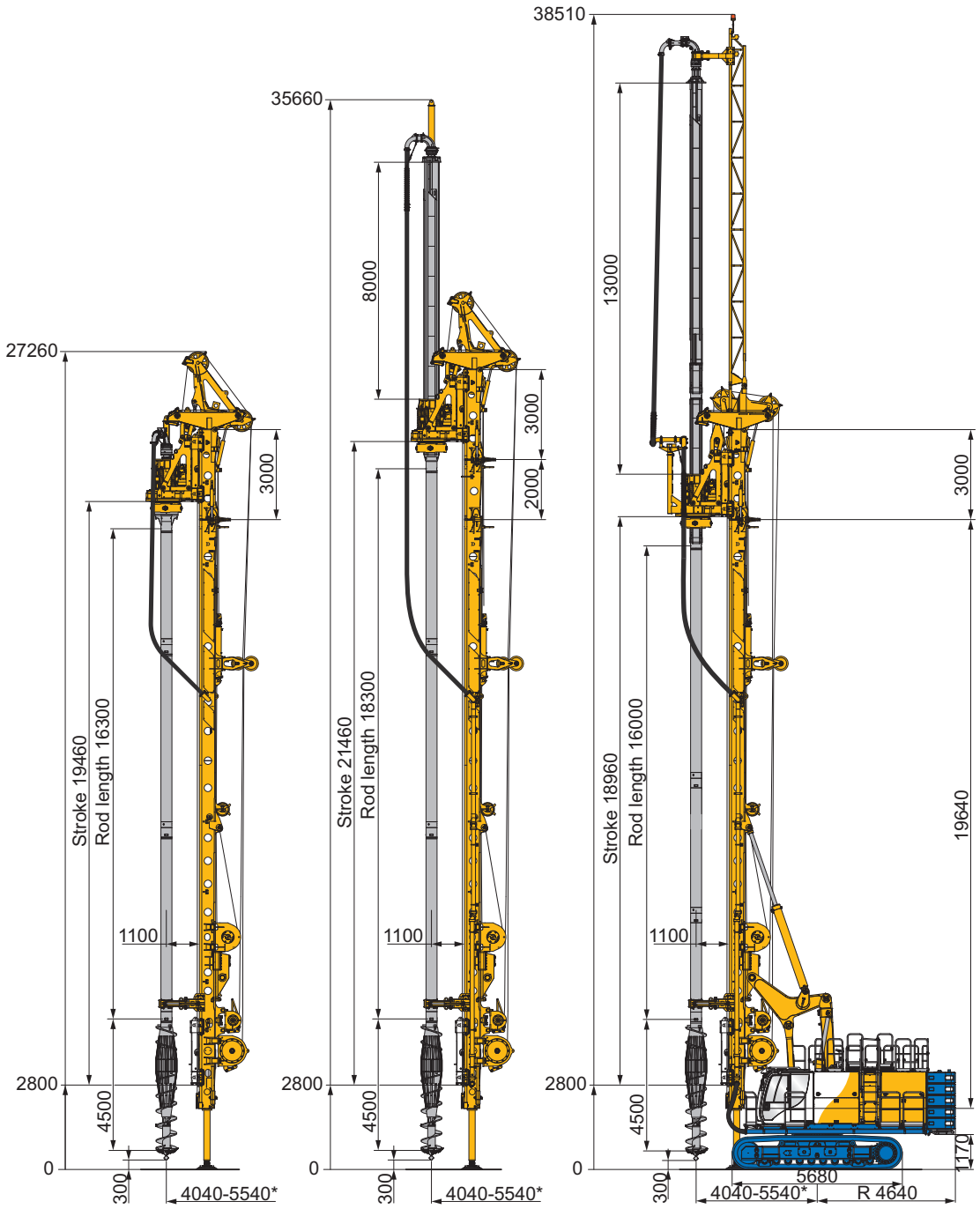




Under carriage	UW 110 standard	UW 110 standard	UW 110 standard
Mast extension	2 m + 3 m	2 m + 3 m	3 m
Kelly extension	without	8 m	10.5 m
Max. drilling diameter	1,200 mm	1,200 mm	1,200 mm
Max. drilling depth with auger cleaner	20.4 m	28.4 m	28.9 m
Max. extraction force with main- and crowd winch (effective)	950 kN	950 kN	950 kN
with counterweight *	19.7 t	19.7 t	19.7 t

* depending on equipment

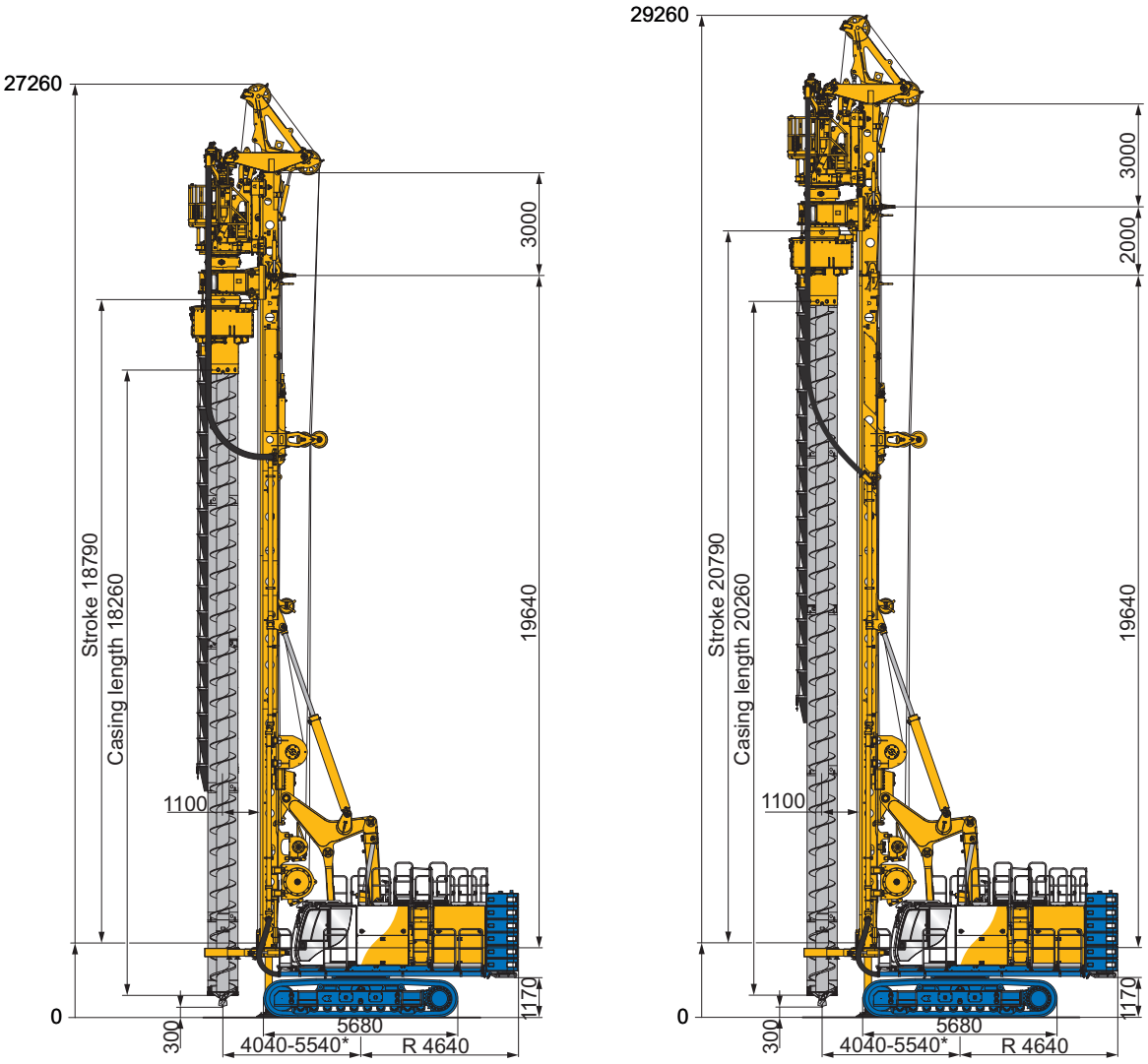
Application – FDP Drilling



Under carriage	UW 110 standard	UW 110 standard	UW 110 standard
Mast extension	3 m	2 m + 3 m	3 m
Kelly extension	without	8 m	13.0 m
Max. drilling diameter	710 mm	710 mm	710 mm
Max. drilling depth	18.9 m	28.9 m	31.5 m
Max. extraction force with main- and crowd winch (effective)	950 kN	950 kN	950 kN
with counterweight*	19.7 t	19.7 t	24.5 t

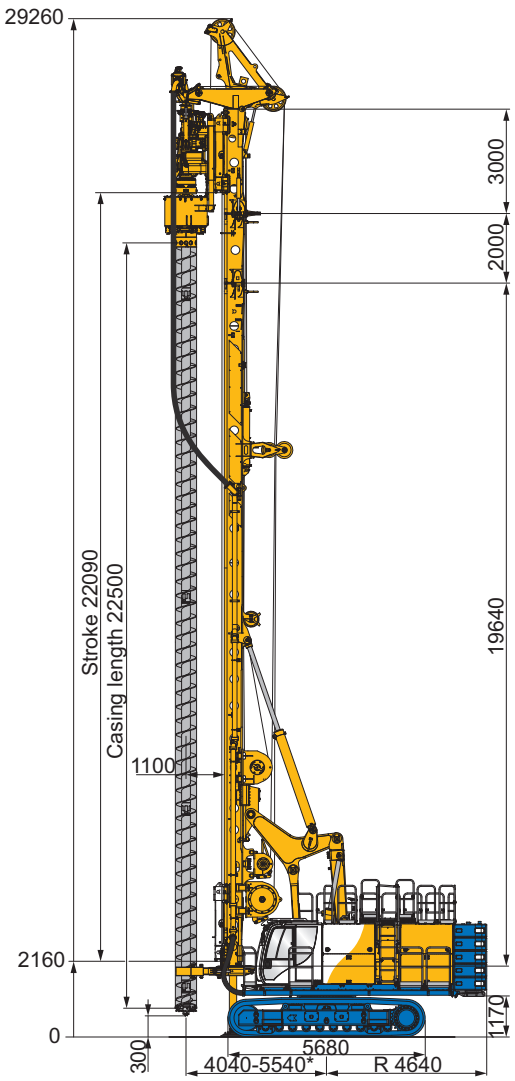
* depending on equipment

Application – CCFA Drilling



		CCFA drilling with KDK/BTM 400	
Under carriage	UW 110 standard	UW 110 standard	UW 110 standard
Mast extension	3 m	3 m	2 m + 3 m
Max. drilling diameter	1,000 mm	880 mm	880 mm
Max. drilling depth	17.2 m	18.3 m	20.3 m
Max. extraction force with main- and crowd winch (effective)	950 kN	950 kN	950 kN
Max. torque: Auger (right-hand rotation) Casing (left-hand rotation)	 200 kNm 400 kNm	 200 kNm 400 kNm	 200 kNm 400 kNm
Ejection system	standard	standard	standard
With counterweight	29.4 t	29.4 t	29.4 t

Application – FoW Drilling



	FoW drilling with DKS 100/200
Mast extension	2 m + 3 m
Max. drilling diameter	750 mm
Max. drilling depth	21.8 m
Max. extraction force with main- and crowd winch (effective)	690 kN
Max. torque: Auger (right-hand rotation) Casing (left-hand rotation)	 100 kNm 200 kNm
Ejection system	optional
with counterweight	29.4 t

Transport – Dimensions and Weights

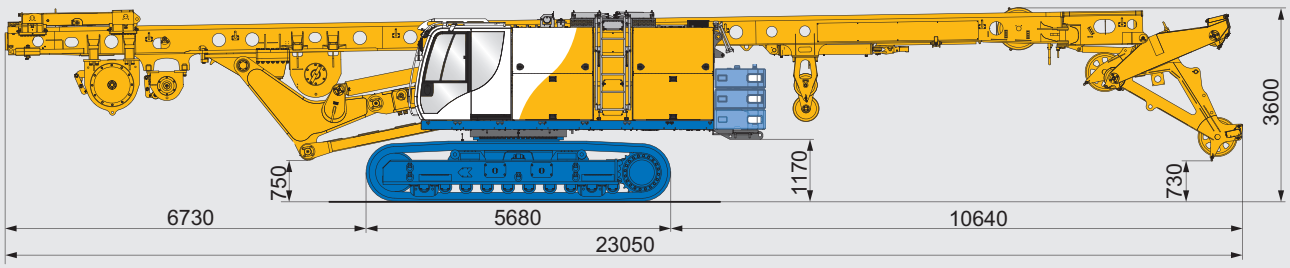
G = Weight
B = Width, overall

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

Transport with UW 110 Standard Version

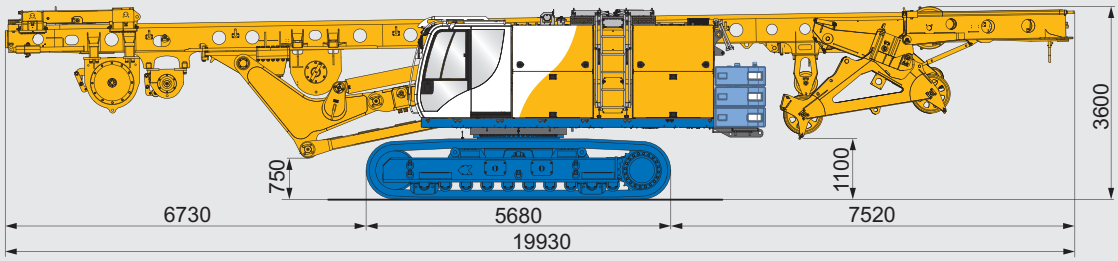
With 1.5 m mast extension

G = 78.4 t*
B = 3,400 mm



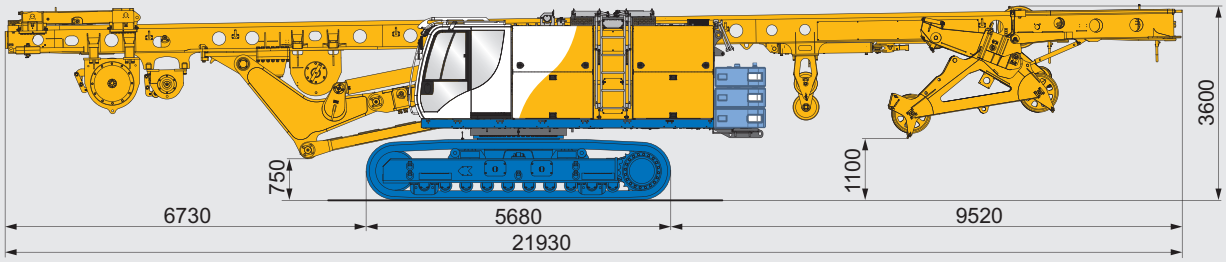
With 3 m foldable mast extension

G = 78.9 t*
B = 3,400 mm



With 2 m and 3 m foldable mast extension

G = 79.8 t*
B = 3,400 mm

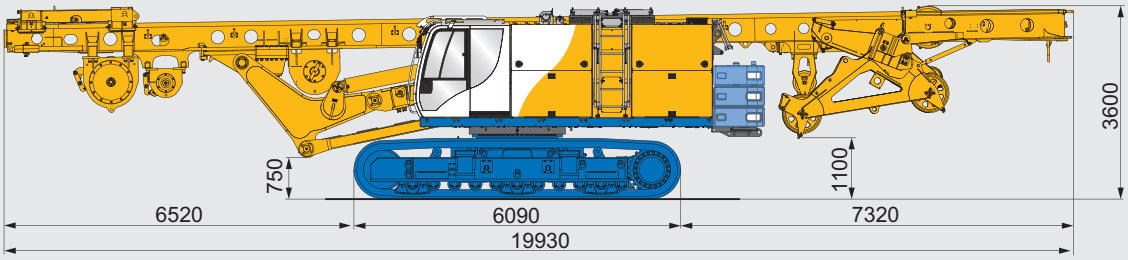


* Weigths w/o counter weigths

Transport with UW 110 Transport Optimized Version

With 3 m foldable mast extension

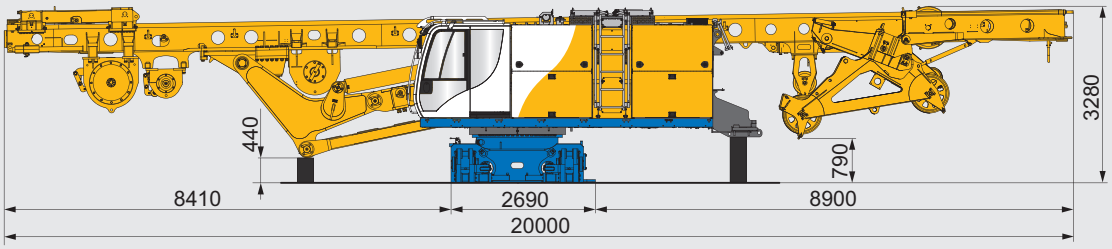
G = 81,9 t*
B = 3,500 mm



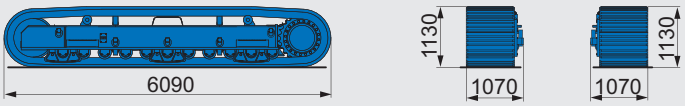
Transport with UW 110 Transport Optimized Version

with 3 m foldable mast extension

G = 64.4 t
B = 3,000 mm



G = 2 x 9,8 t

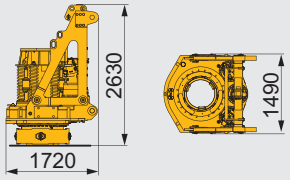


Counterweight*

G = 1 x 4,9 t + 4 x 2,5 t
B = 3,000 mm

Rotary drive

KDK 340 K: G = 6.7 t
KDK 385 S: G = 7.2 t



Width of crawlers retracted/extended	UW 110 Standard	UW 110 Upgraded version	UW 110 Transport optimized version
Track shoes 800 mm	3,400 – 4,600 mm	–	–
Track shoes 900 mm	3,500 – 4,700 mm	3,500 – 4,700 mm	4,000 – 4,800 mm

* depending on application

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