

BAUER BG 33 H

Rotary Drilling Rig

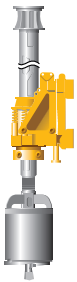
Base Carrier BT 85



The BAUER Drilling Rig 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 drilling rigs 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



Kelly Drilling



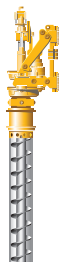
**Cased Kelly Drilling Casing
Installation with BTM**



**CFA
Continuous Flight Auger
Drilling**



**FDP
Full Displacement Piling
(Standard or Lost Bit)**



**FoW
Front of Wall**

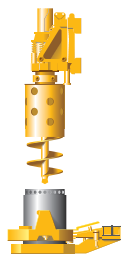


**TR
Vibrator**

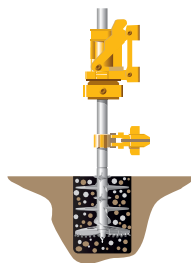


The Rotary Drilling Rig BG 33 H (BT 85)

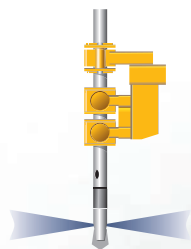
Max. drilling diameter:	2.500 mm
Max. drilling depth:	68,4 m
Max. torque:	342 kNm
Max. height:	27,4 m
Engine:	Volvo TAD 13 345/405 kW



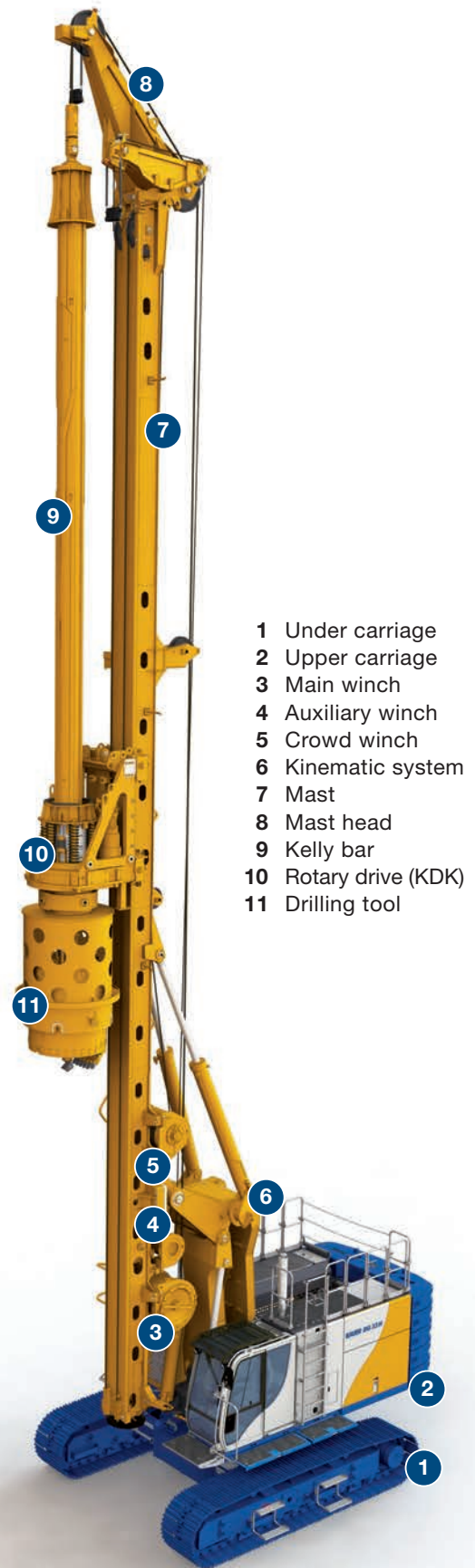
Cased Kelly Drilling
Casing Installation with
Casing Oscillator



SCM/SCM-DH
Single Column Mixing



HDI
Jet Grouting



- 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 ORA* 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



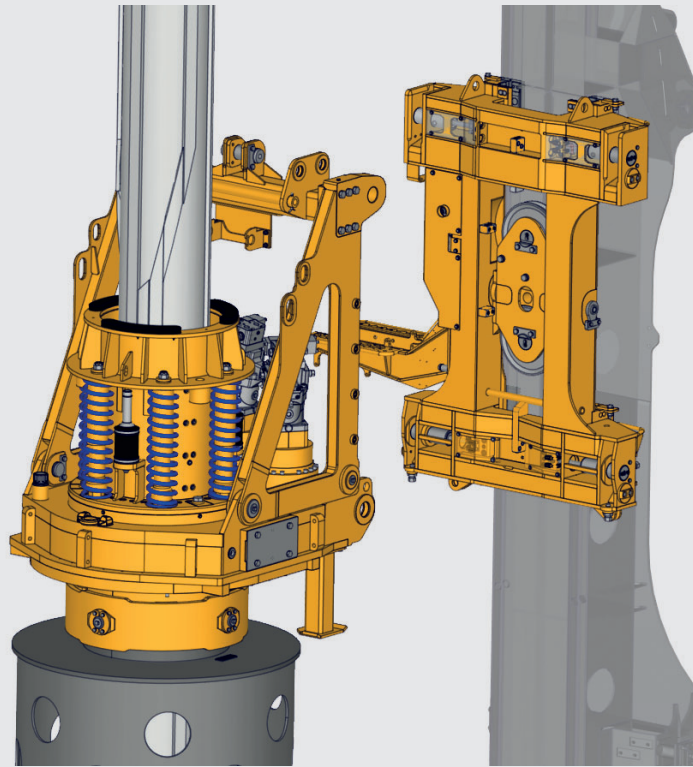
Flexible mast concept

- Upper mast extension 2 m (hydraulic foldable and lockable)
 - Simple and secure attachment
 - No working at heights unsecured
 - Reduced transport length
- Lattice mast extension
- Vario mast head
 - Masthead for drill axis 1,000 expandable to 1,400 mm
 - Increased stroke for Kelly bars when using an upper Kelly guide
 - Foldaway main winch boom for single-pass method and optimized 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





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

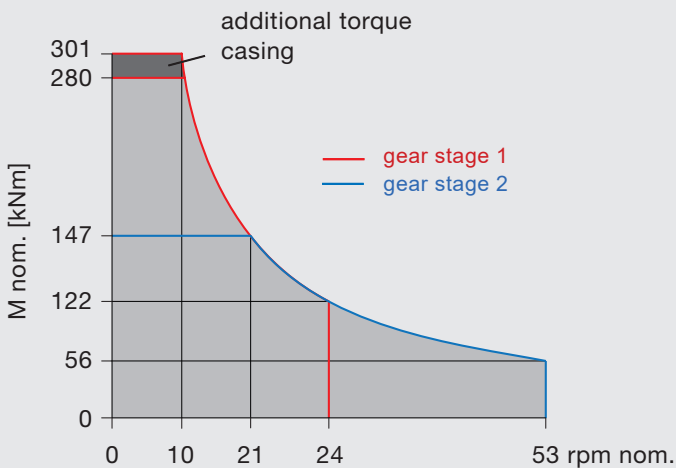
Rotary drive

- Optional single gear drive or multi gear drive
- Max. torque casing 342 kNm
- Max. speed of rotation 53 rpm
- Various modes of operation, partially selectable speed of rotation and torque

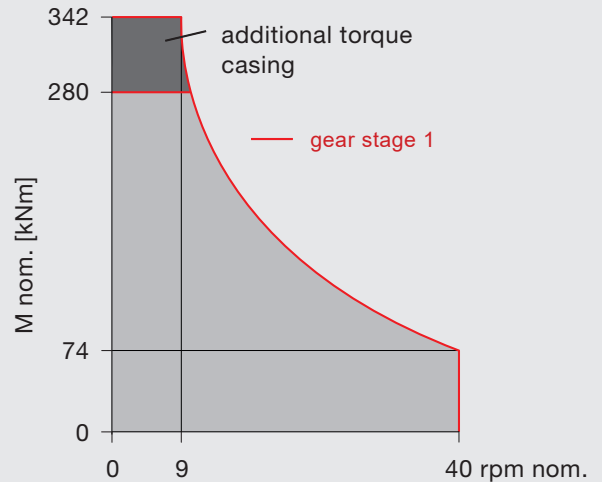
Hydraulically operated pin connection on the crowd sledge

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

KDK 300 S



KDK 340 K



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

Optional

- Counterweight, variably adjustable
- Foldable guardrails on the upper level
- Compressor 1,000 l/min
- Electric generator 13 kVA
- Arctic kit
- Cab space heater with automatic timer
- Rear support unit
- High-pressure cleaner with water tank
- Remote control Basic/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

Optional

- Vario-masthead
- Extension of drill axis to 1,400 mm
- Hydraulically operated pin connection on the crowd sledge for easy mounting and removal of the rotary drive
- Mast support unit
- Mast extension 2 m, hydraulically foldable and lockable
- Additional auxiliary winch 20 kN
- Attachment of casing oscillator up to BV 1500 with UW 80 or up to BV 2000 with UW 100
- Auger cleaner attachment for Kelly system
- Personnel hoist system with lift cage

Rotary drive

Standard

- Rotary drive KDK 300 K (single-gear drive)
- Kelly drive adapter for outer Kelly tube 419 mm
- Integrated Kelly damping system
- Cardanic joint

Optional

- Rotary drive KDK 300 S (multi-gear drive)
- Rotary drive KDK 340 K (single-gear drive)
- Torque multiplier BTM 720 K Kelly drilling
 - Torque 420 kNm (nominal)

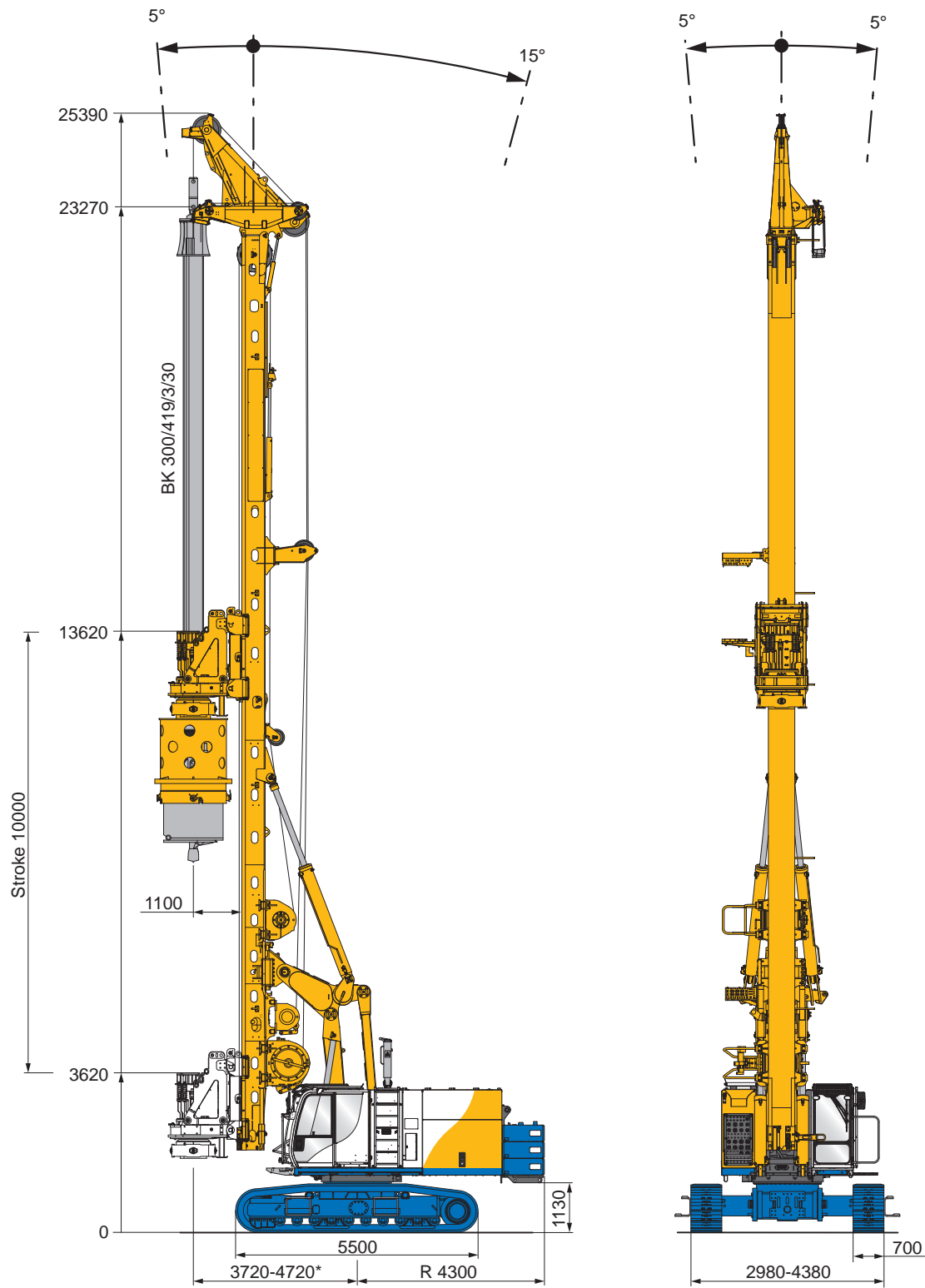
Measuring and control system

Standard

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

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)



Operating weight 98.0 t
(as shown)

* depending on equipment

Rotary drive	KDK 300 K	KDK 300 S	KDK 340 K
Torque casing (nominal) at 350 bar	294 kNm	301 kNm	342 kNm
Torque drilling (nominal) at 350 bar	281 kNm	280 kNm	280 kNm
Speed of rotation (max.)	30 rpm	53 rpm	40 rpm
Crowd winch system			
Max. sledge stroke with 2 m mast extension	20,400 mm		
Compressive force effektiv / nominal	330 / 423 kN		
Pulling force effektiv / nominal	330 / 423 kN		
Compressive force effektiv / nominal	580 / 740 kN with mast support unit 520 / 610 kN without mast support unit		
Rope diameter	24 mm		
Speed (down / up)	11.0 m/min		
Fast speed (down / up)	35 m/min		
Main winch	M6 / L3 / T5		
Line pull (1st layer) effective / nominal	250 / 317 kN		
Rope diameter	32 mm		
Line speed (max.)	80 m/min		
Auxiliary winch	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)	BT 85		
Engine	Volvo TAD 13		
Rated output ISO 3046-1	345 kW @ 1.850 rpm	405 kW @ 1.850 rpm	
Exhaust emission EU 2016/1628 EPA/CARB GB20891-2014	ORA* ORA* China Stage III	Stage V Tier 4 final -	
Diesel tank capacity / AdBlue Tank	730 / - l	730 / 70 l	
Sound pressure level in the cabin (EN 16228, Annex B)	L _{P,A} 80 dB (A)		
Sound power level (2000/14/EC u. EN 16228, Annex B)	L _{W,A} 110 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 80	UW 100	
Crawler type	B 7		
Traction force effective / nominal	520 / 630 kN	730 / 860 kN	

* Exhaust emission equivalent Tier 3 / Stage III A

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

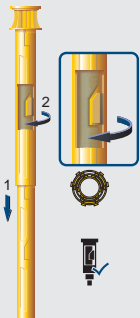


Adaptive Kelly speed assistant

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.

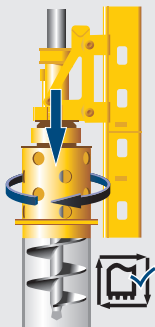
This provides maximum safety with minimum wear.

The permanent monitoring of the parameters prevents a locked Kelly bar from being raised or lowered accidentally and thus causing damage.



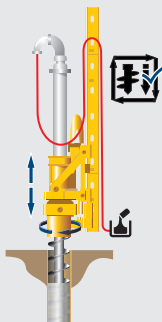
Kelly visualization

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.



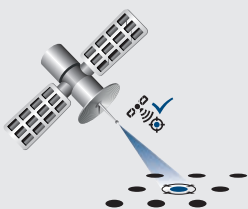
Kelly drilling assistant

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

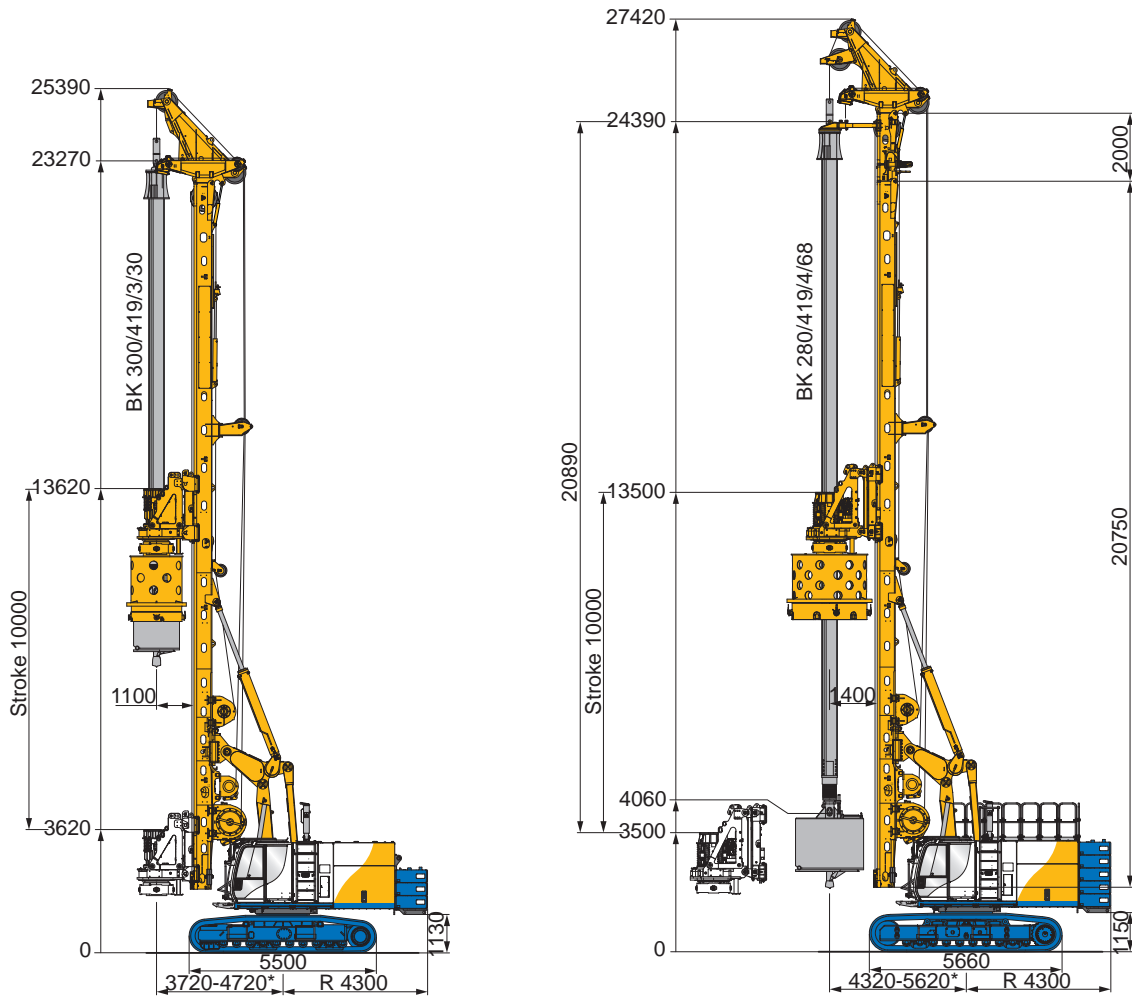
The system controls the drilling and/or extraction speed of the crowd system and enables hands-free operation. This ensures the production of a high-quality pile while simultaneously minimizing the amount of concrete.



Satellite-based positioning

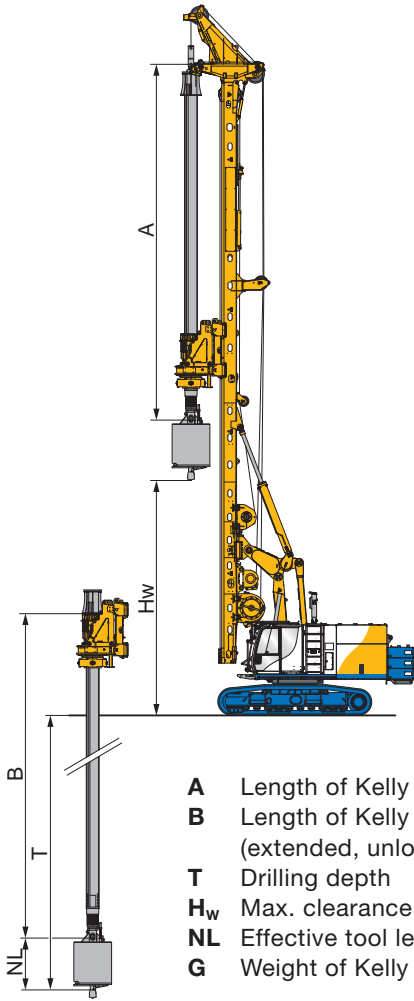
The BAUER Assistant Positioning System (B-APS) allows the position of a bored pile to be located extremely accurately. Documentation is provided for the nominal and actual coordinates, as well as the corresponding accuracy of each bored pile. Manual marking of the piles is no longer required.

Numerous other assistance systems are available in our portfolio.



	Basic version	Upgraded version
Under carriage	UW 80	UW 100
Rotary drive	KDK 300 K/S	KDK 340 K
Mast extension	without	2 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.	98.0 t	124.0 t
with Kelly	BK 300/419/3/30	BK 280/419/4/68
with casing drive adapter	1,500 mm	2,200 mm
with bucket	1,350 mm	2,000 mm
with counterweight *	14.7 t	24.5 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

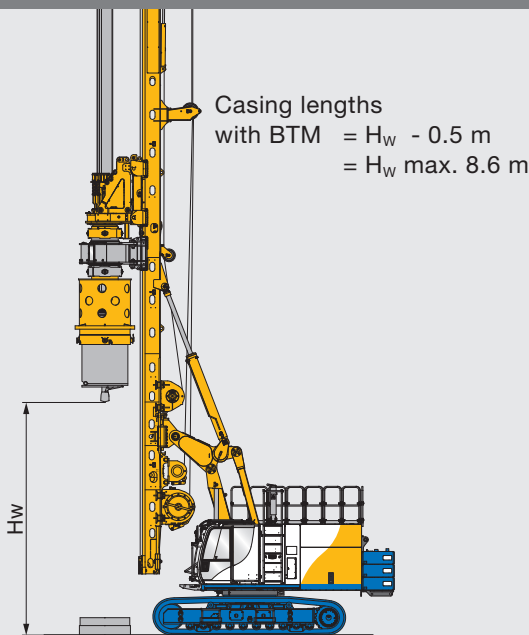
Drilling depth - uncased Kelly drilling 1,100 mm

3-part Kelly	A (m)	B (m)	G (kg)	without mast extension		2,0 m mast extension	
				H _w (m)	T (m)	H _w (m)	T (m)
BK300/419/3/24	10.7	26.4	5,450	8.9	24.6	8.9	24.6
BK300/419/3/27	11.7	29.4	5,850	8.9	27.6	8.9	27.6
BK300/419/3/30	12.7	32.4	6,300	8.3	30.6	8.9	30.6
BK300/419/3/33	13.7	35.4	6,700	7.3	33.6	8.9	33.6
BK300/419/3/36	14.7	38.4	7,100	6.3	36.6	8.3	36.6
BK300/419/3/39	15.7	41.4	7,550	5.3	39.6	7.3	39.6
4-part Kelly							
BK280/419/4/32	11.3	34.2	7,000	8.9	32.4	8.9	32.4
BK280/419/4/36	12.3	38.2	8,300	8.7	36.4	8.9	36.4
BK280/419/4/40	13.3	42.2	8,900	7.7	40.4	8.9	40.4
BK280/419/4/44	14.3	46.2	9,550	6.7	44.4	8.7	44.4
BK280/419/4/48	15.3	50.2	10,200	5.7	48.4	7.7	48.4
BK280/419/4/52	16.3	54.2	10,800	4.7	52.4	6.7	52.4
BK280/419/4/64	19.3	66.2	12,650	1.7	64.4	3.7	64.4
BK280/419/4/68	20.3	70.2	13,300	0.7	68.4	2.7	68.4

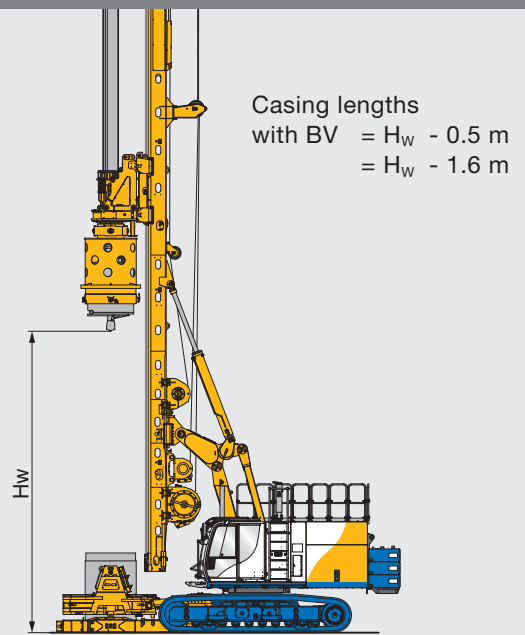
Drilling data as shown are based on tool length NL = 1.9 m, minimum horizontal mast reach and using Bauer attachment. Drilling depth is increased by 0.32 m when using maximum horizontal mast reach.

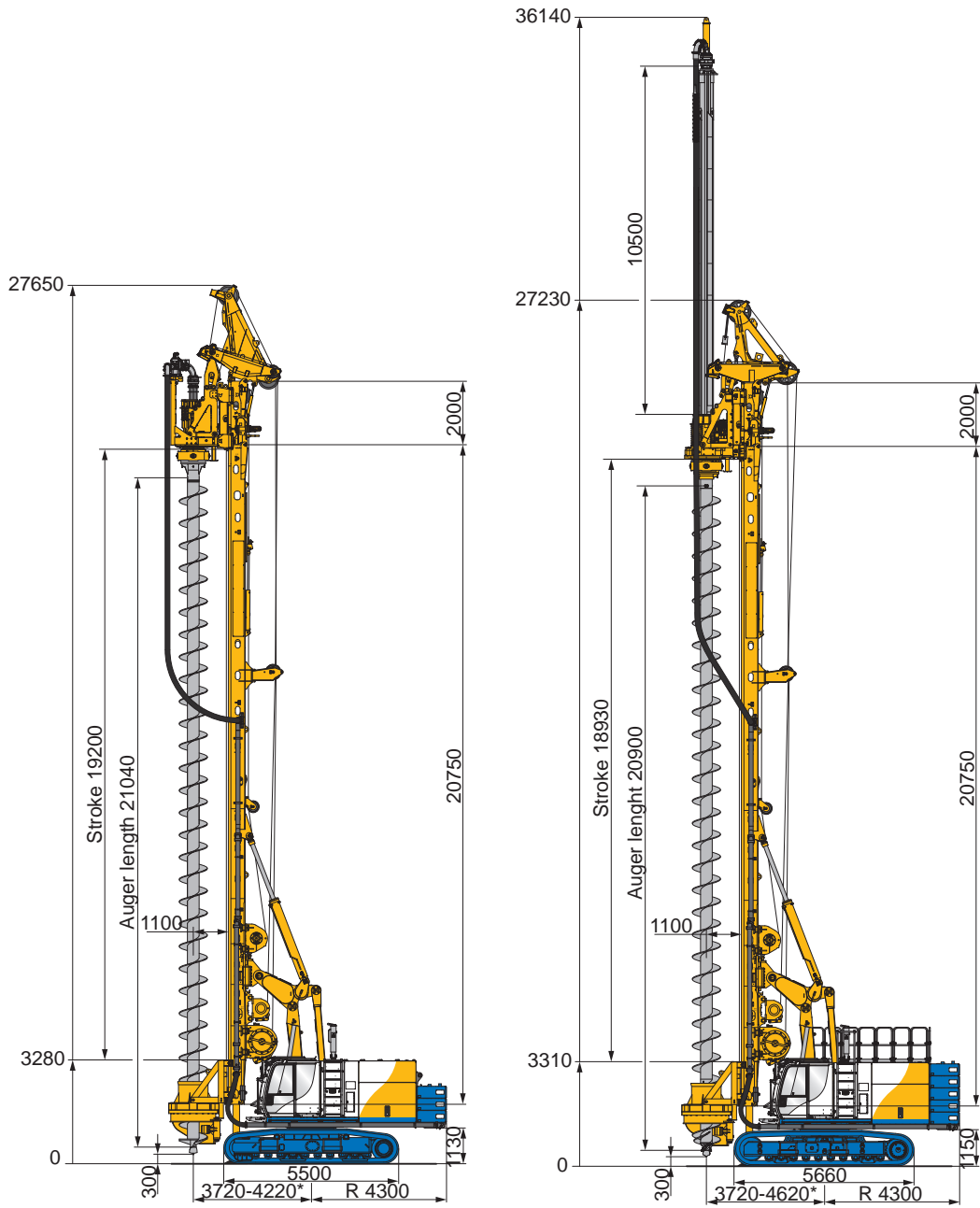
Further drilling depths, diameters and other Kelly types on request.

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



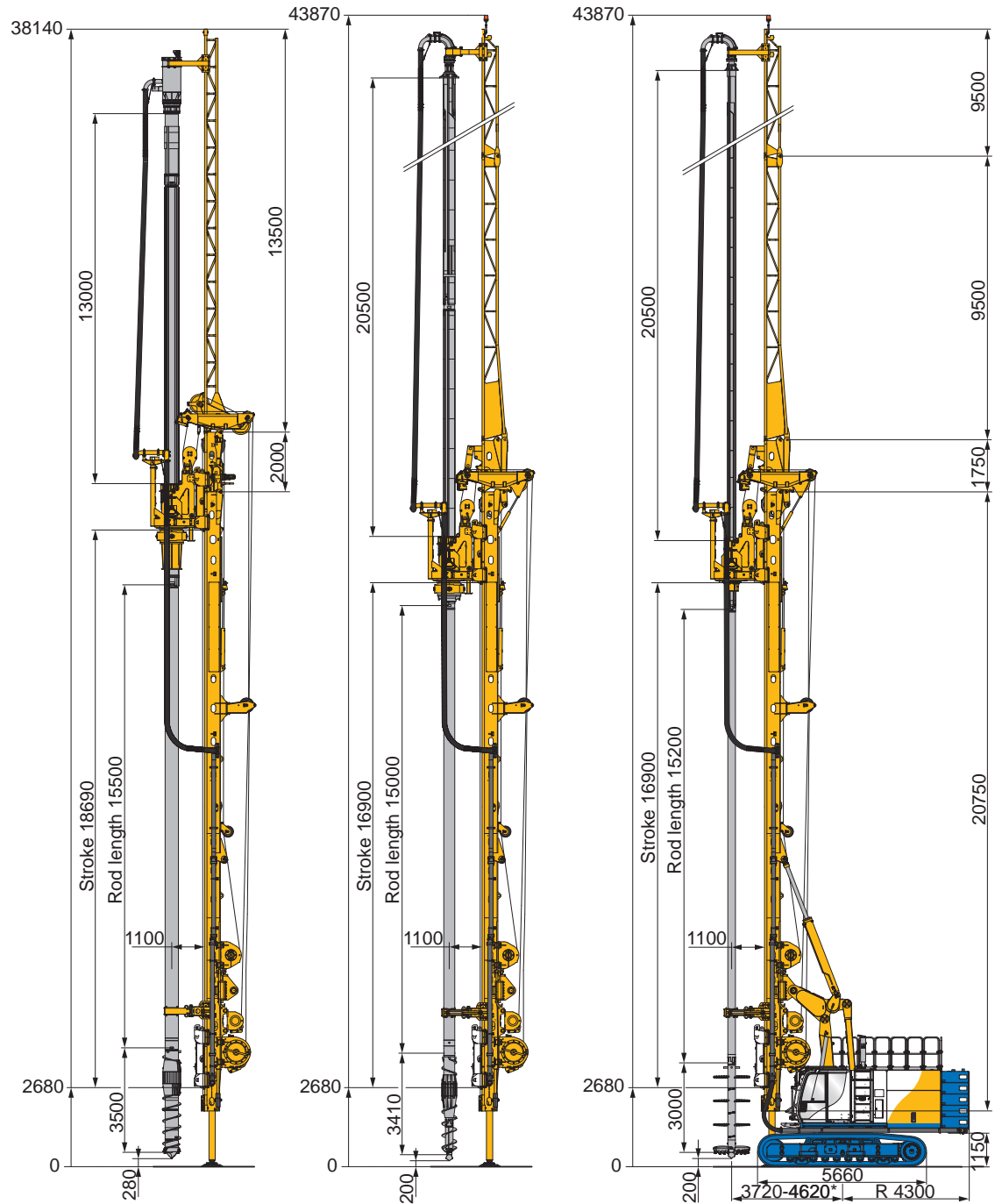
Kelly drilling with casing oscillator up to BV 1500 (UW 80) or BV 2000 (UW 100)





	Basic version	Upgraded version
Under carriage	UW 80	UW 100
Mast extension	2 m	2 m
Kelly extension	without	10.5 m
Max. drilling diameter	880 mm	1,200 mm
Max. drilling depth (with auger cleaner)	18.9 m	29.1 m
Max. extraction force with main and crowd winch (effective)	830 kN	830 kN
with counterweight *	14.7 t	22.1 t

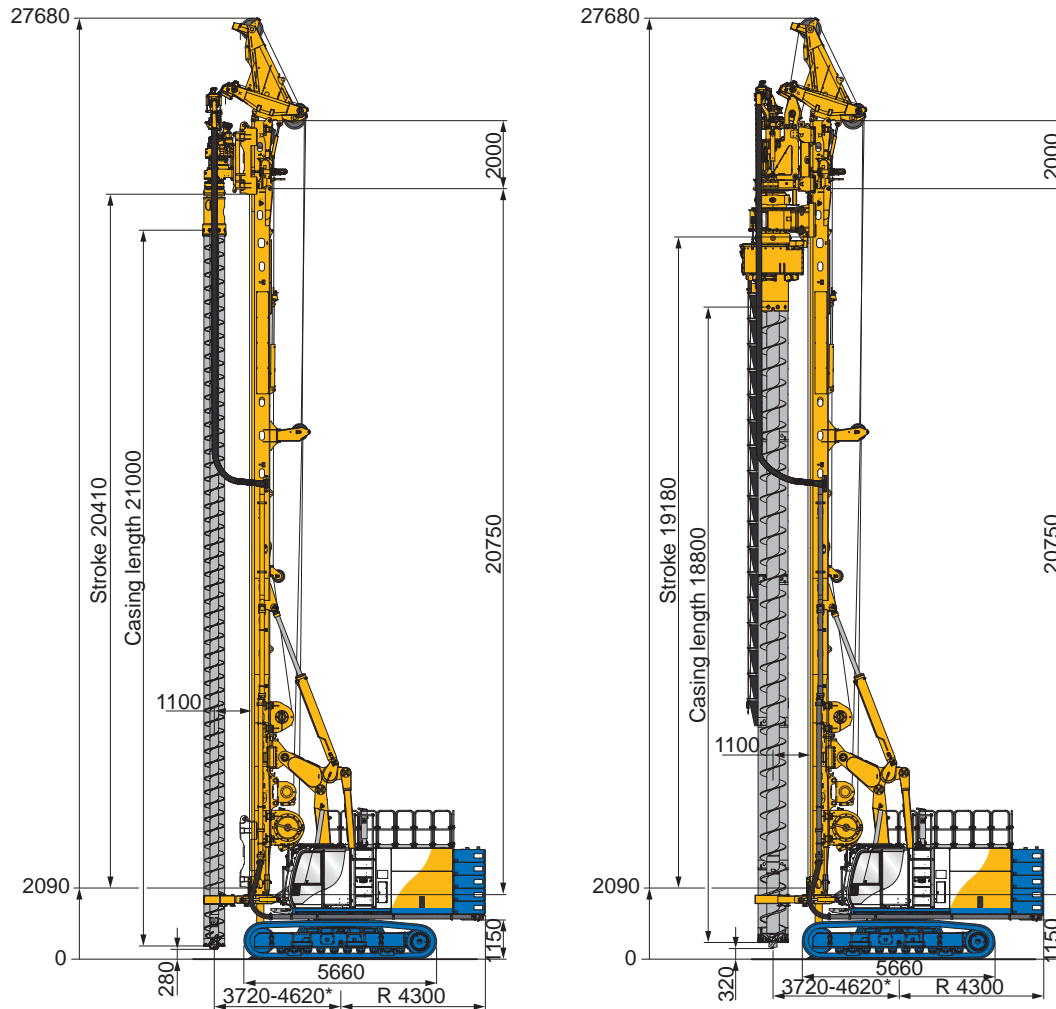
* depending on equipment



	FDP Lost Bit Drilling	FDP Drilling	SCM Mixing
Mast extension	2 m	-	-
Kelly extension	13.0 m	20.5 m	20.5 m
Max. drilling diameter FDP	620 mm	620 mm	-
Max. drilling diameter	-	-	1,900 mm / 2,500 mm **
Max. drilling depth	31.4 m	37.2 m	-
Mixing depth	-	-	37.2 m
Max. extraction force with main and crowd winch	830 kN	830 kN	830 kN
with counterweight *	14.7 t	14.7 t	14.9 t

* depending on equipment

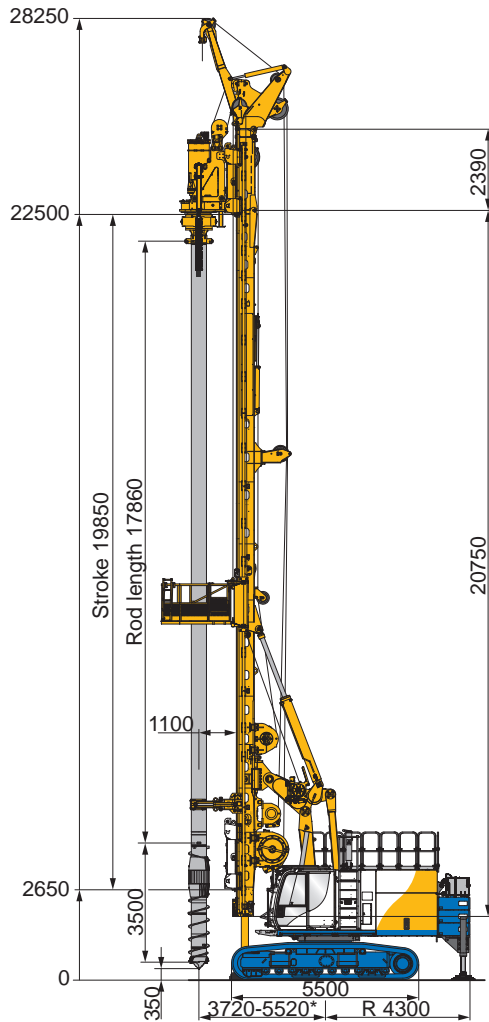
** operation only with special equipment



	FoW drilling		CCFA drilling
	DKS 50 / 140	DKS 100 / 200	with BTM 400
Torque auger	50 kNm	100 kNm	200 kNm
casing	140 kNm	200 kNm	400 kNm
Under carriage	UW 100	UW 100	UW 100
Mast extension	2 m	2 m	2 m
Max. drilling diameter	610 mm	750 mm	880 mm
Max. drilling depth	20.0 m	20.0 m	18.8 m
Max. extraction force with main and crowd winch (effective)	500 kN	730 kN	830 kN
with counterweight *	14.9 t	17.2 t	24.5 t
Erection system	without	option	basic

* depending on equipment

Highlights of Handling Package for FDP Lost-Bit:



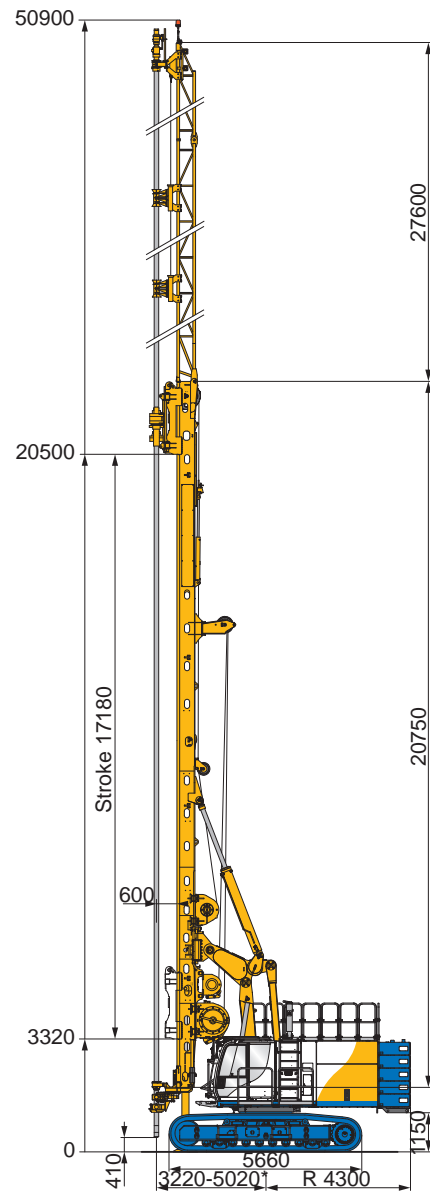
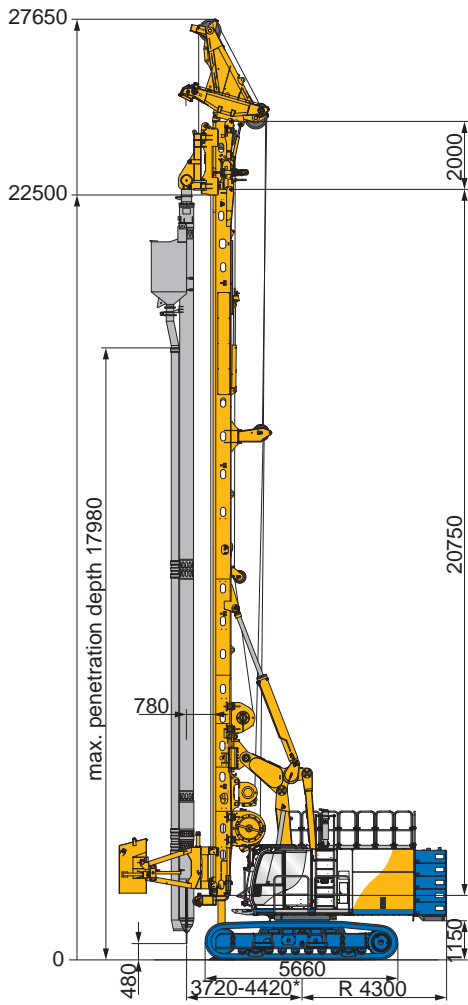
- Special mast head with auxiliary rope boom, which can be swivelled hydraulically in the drill axis
- Mast-guided passenger hoist system with swivelling transport platform
- Concrete funnel with camera system and cleaning system on the rotary drive for depressurized concreting in FDP mode
- High-pressure cleaner with water tank integrated in the base carrier
- Hydraulic upper carriage support for stabilizing and lifting the machine
- Extra wide flat track shoes on the under-carriage
- Advanced EEP hydraulic system for full parallel operation of drilling and auxiliary functions
- Large horizontal movement enables a smooth and trouble-free swivel motion

Operating weight 103.5 t
(as shown)

FDP Lost Bit Drilling Handling Package

Max. drilling diameter	620 mm
Max.drilling depth *	19.5 m
Max. extraction force with main- and crowd winch, effective	830 kN
with counterweight *	14.7 t

* depending on equipment



	Vibro Displacement (VD)		
	Vibrating	TR 17	TR 75
Max. pene		18.1 m	17.9 m
Pressure with crowd winch (effective)		110 kN	110 kN
Extraction force with crowd winch (effective)		330 kN	330 kN
with counterweight *		14.9 t	14.9 t

	Upgraded version Jet grouting
Length of lattice mast	27.6 m
Rod diameter	89 - 133 mm
Max. jetting depth	40.8 m
Rotary drive	KDK 10 S
Max. extraction force with crowd winch (effective)	330 kN
with counterweight *	14.9 t

* depending on equipment

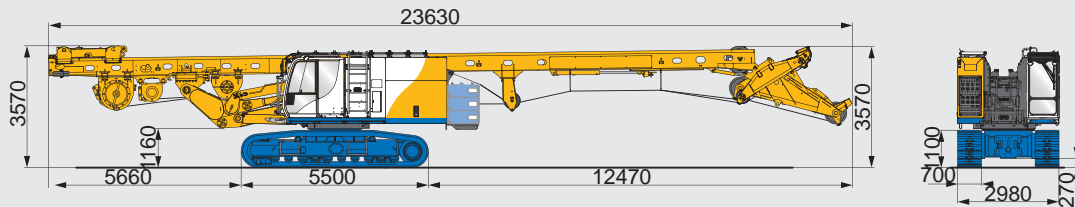
G = Weight
B = Width

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

Transport with base carrier UW 80

Without 2 m mast extension, without counterweight

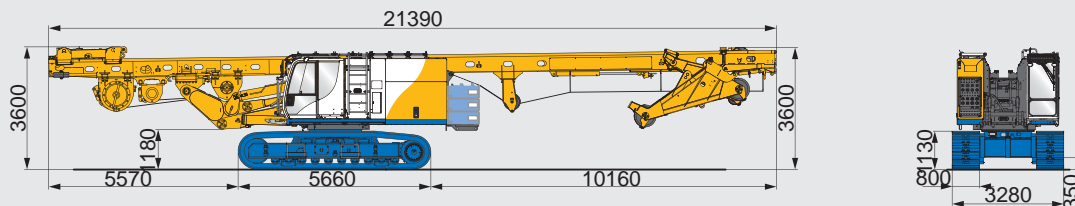
G = 67.2 t



Transport with base carrier UW 100

With 2 m mast extension and with 14.7 t counterweight

G = 84.8 t



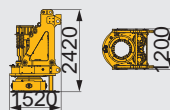
Counterweight *

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

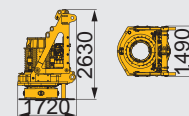


Rotary drive

G = 5.2 t (KDK 300 K),
5.5 t (KDK 300 S)



G = 6.7 t (KDK 340 K)



	UW 80	UW 100
Transport weight		
Standard mast without counterweight	67.8 t	68.2 t
Standard mast with 14.7 t counterweight	82.5 t	82.9 t
with 2 m mast extension without counterweight	68.9 t	69.3 t
with 2 m mast extension 14.7 t counterweight	83.6 t	84.0 t
Width of crawlers retracted / extended		
Track shoes 700 mm	3,000 – 4,400 mm	–
Track shoes 800 mm	3,300 – 4,500 mm	3,300 – 4,500 mm
Track shoes 900 mm	3,400 – 4,600 mm	3,400 – 4,600 mm

* depending on application

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Materials and specifications are subject to change without notice. Illustrations may include optional equipment and not show all possible configurations. These and the technical data are provided as indicative information only, with any errors and misprints reserved.