BAUER BG 30

Drilling Rig

Base Carrier BT 80

KellyLine

BAUER

Bauer Drilling Rigs KellyLine

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 drilling rig KellyLine is our solution. The machines of the KellyLine 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.

BG 15 H
BT 50

BG 20 H
BT 50

BG 26
BT 70

BG 30
BT 80

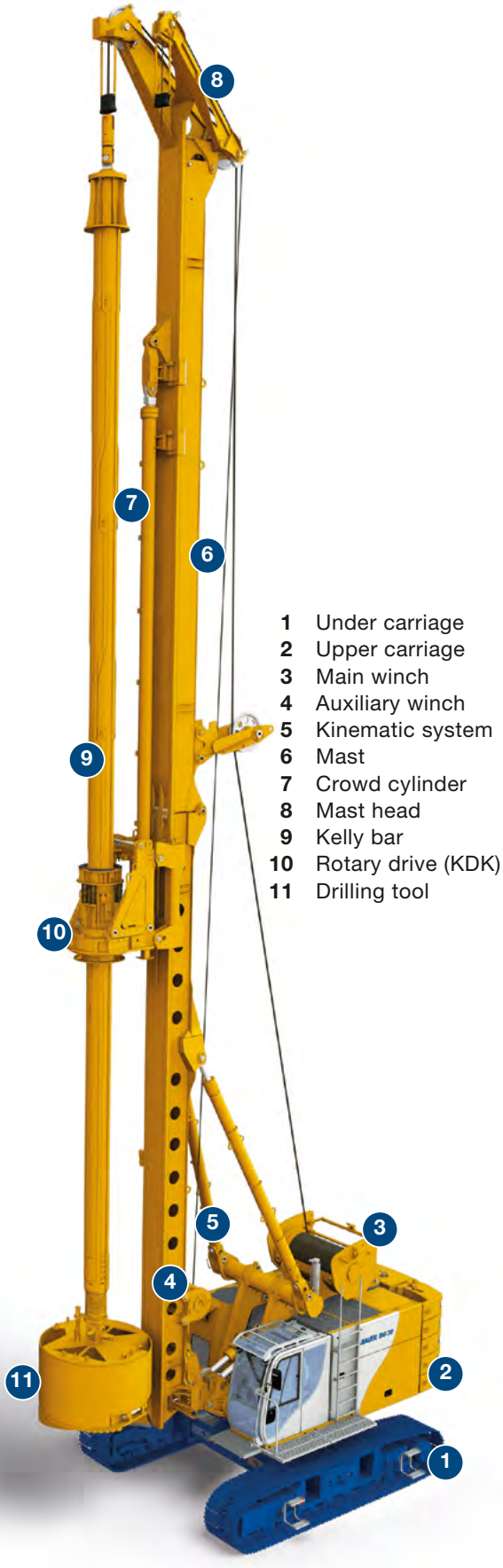
- **Long mast for more drilling depth**
- **Large drill axis for big diameters**
- **Well balanced concept for high productivity and economic operation**
- **Hydraulic system for high dynamic performance**
- **Easy handling, easy maintenance**
- **Variable transport concept**

The Drilling Rig
BG 30 KellyLine (BT 80)

Maximal rig configuration

Drilling diameter:	**2,500 mm**
Drilling depth:	**87.0 m**
Torque:	**300 kNm**
Engine:	**CAT C 9.3**
	310 kW @ 1,800 U/min
Height:	**26.9 m**

BG 38
BS 80



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

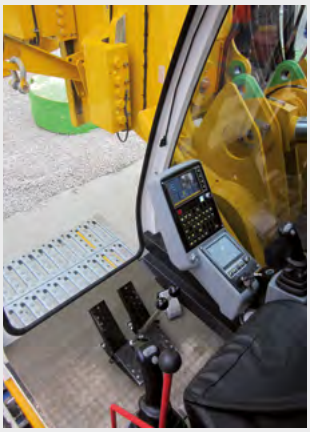
Spotlights

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 graduated pins

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
- User-friendly 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

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



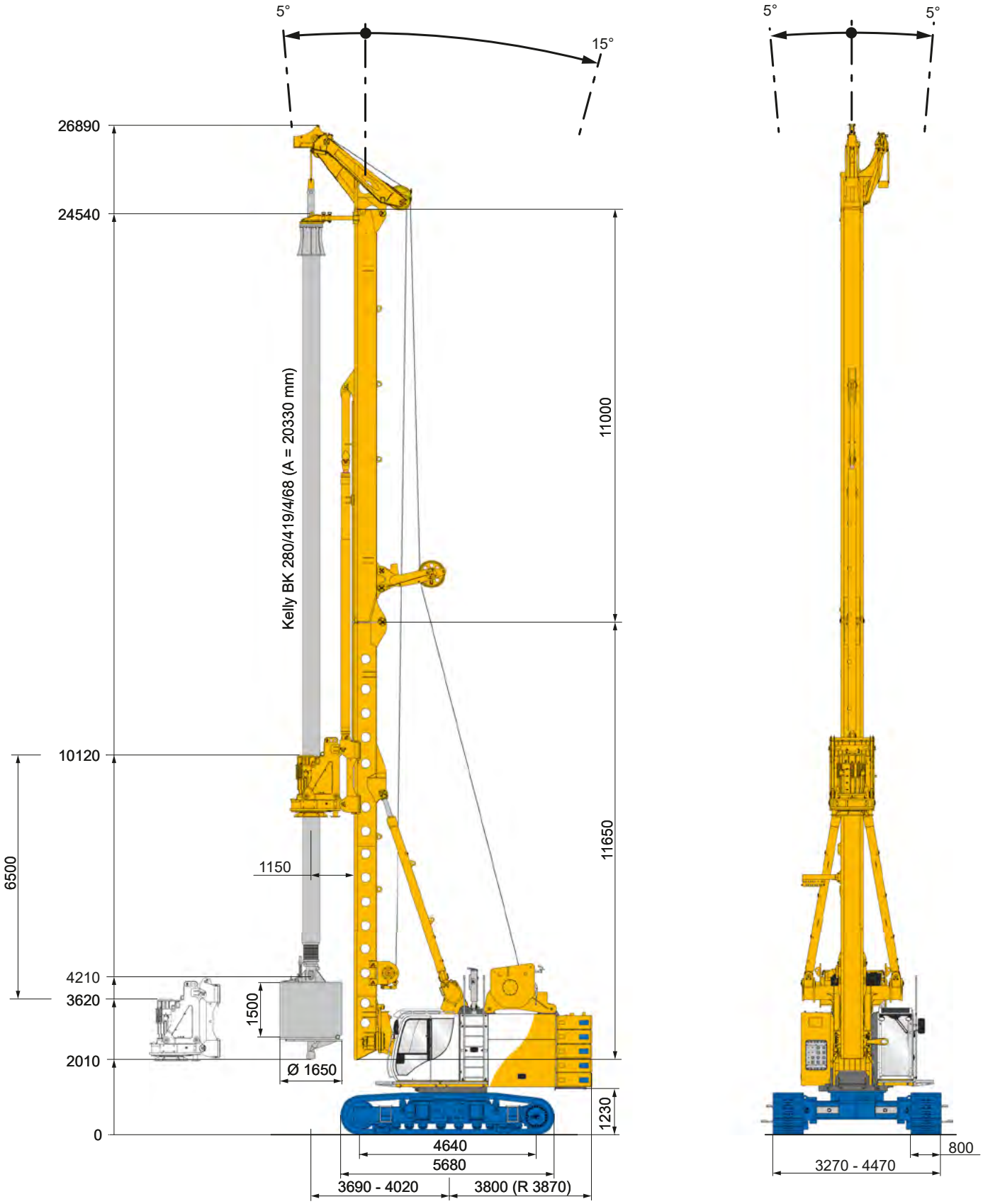
Modern, ergonomic cabin
- FOPS compliant
- Bauer comfort cabin meets highest comfort standards
- High-resolution 7” color screen
- Clear layout of instruments and display screens
- Excellent view of drilling position
- Easy operation

High-performance CAT engine
- Conforming to exhaust emission standards Stage III A / Tier 3, China Stage III or Stage V / Tier 4 final
- Low fuel consumption due to optimized design of the hydraulic system
- Low noise emissions due to clever sound protection installation
- Worldwide CAT service partner network
- Entire exhaust gas treatment enclosed in upper carriage

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 mounted from ground level
- Variably stackable counterweight elements
- Patented inclination monitoring system
- Continuous control of mast inclination for operator and banksman

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

Dimensions

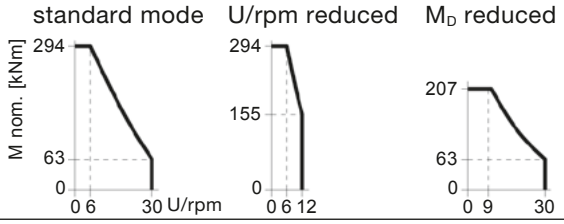


Operating weight: approx. 102 t
(as shown)

Technical specifications

Rotary drive	KDK 300 K	KDK 300 S
Torque (nominal) at 350 bar	294	300 kNm
Max. speed	30	49 U/rpm

KDK 300 K



Not to scale

KDK 300 S

Not to scale

Crowd cylinder	Standard	Optional
Crowd force push / pull (effective)	200 / 350	200 / 490 kN
Crowd force / line pull (measured at the casing drive adapter KDK)	260 / 290	260 / 430 kN
Speed (down / up)	4.5 / 7.0	6.5 / 3.2 m/rpm
Fast speed (down / up)	20 / 20	27 / 23 m/rpm
Stroke	6,500	8,500 mm
Main winch – single layer		M6 / L3 / T5
Line pull effective / nominal		265 / 340 kN
Rope diameter		32 mm
Line speed (max.)		80 m/rpm
Auxiliary winch		M6 / L3 / T5
Line pull (1st layer) effective / nominal		80 / 100 kN
Rope diameter		20 mm
Line speed (max.)		55 m/rpm
Base carrier		BT 80
Engine	CAT C 9.3	CAT C 9.3
Rated output ISO 3046-1	310	310 kW
	1,800	1,800 U/rpm
Engine conforms to EU 2016/1628	ORA *	Stage V
EPA/CARB		Tier 4 final
GB20891-2014	China Stage III	
Diesel tank capacity / Ad Blue	730 l / -	730 l / 34.5 l
Sound power level (2000/14/EG and EN 16228, Annex B)	LWA 109	LWA 112 dB (A)
Sound pressure level in cabin (EN 16228, Annex B)		LPA 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
Undercarriage (selectable)	UW 95	UW 100
Crawler type	B 7	B 7
Traction force effective / nominal	730 / 860	730 / 860 kN

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

Technical equipment

Base carrier

Standard
- Removable counterweights 14.9 t, **Fig. A**
- Engine diagnostic system
- Gratings on side and in front of operator's cabin
- Integrated service platform
- Camera system for rear area surveillance
- Multigrade hydraulic oil
- Bauer comfort operator's cabin (FOPS Standard), **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 unit
- On-board tool kit

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

BG attachment

Standard
- Bauer V-type kinematic system
- Mast head, for optional use with drill axis 1,150 oder 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
- Centering device for rapid pin handling
- Graduated pins used on all mast joints
- Hydraulically controlled freewheeling

Optional
- Swivel for auxiliary rope
- Upper Kelly guide
- Drill axis 1,350 mm
- Attachment of casing oscillator up to BV 1500 HD-07 (with UW 80), **Fig. D**
- Thrust rods 1,300 or 2,000 mm

A

B

C

D

Rotary drive (KDK)

Standard
- Integrated Kelly damping system
- Exchangeable Kelly drive adapter assembly KA 500/419
- Exchangeable Kelly drive keys
- Quick-release couplings 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 (Torque: 400 kNm), **Fig. F**

Measuring and control equipment

Standard
- Bauer extended monitor incl. Integrated diagnostic capability, **Fig. G**
- Display of faulty messages as plain text
- Digital display of pump pressures
- Mast inclination measurement on x/y (digital/analogous 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
- Bi-directional spoil discharge assistant
- Casing extraction assistant
- Automatic swivel alignment
- Elektronic load sensing

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

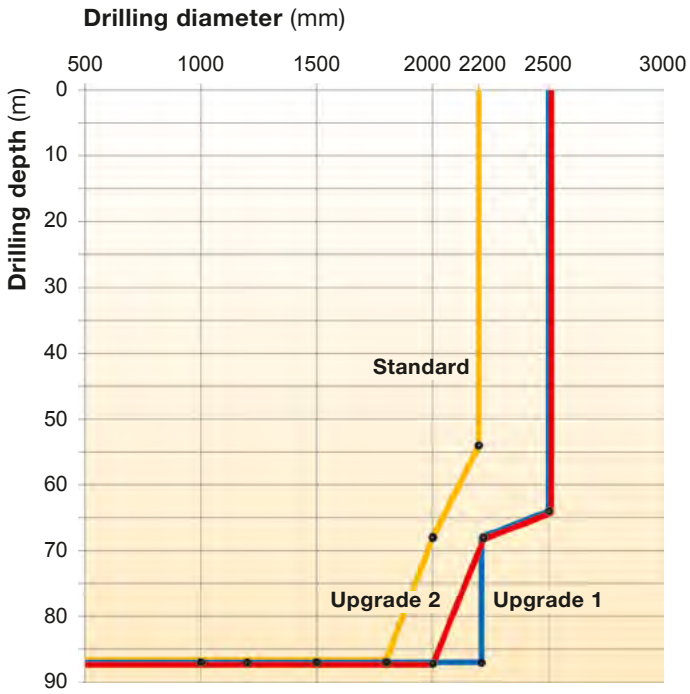
E

F

G

Overview – Kelly drilling

Overview drilling capabilities (uncase)



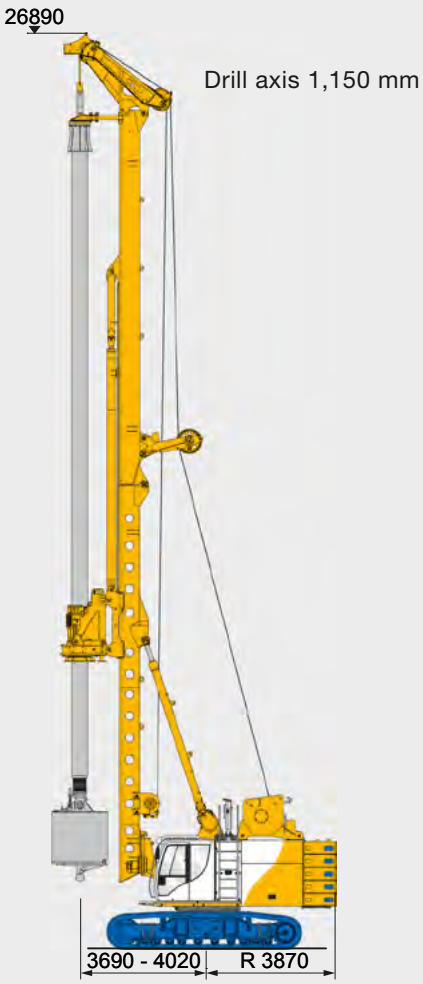
Rig configurations

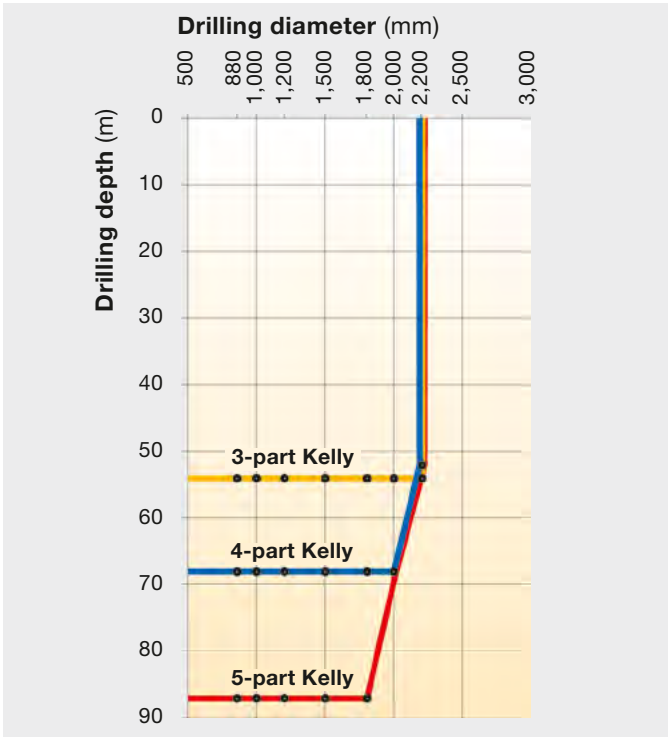
	Standard	Upgrade 1	Upgrade 2
Drill axis	1,150 mm	1,350 mm	1,350 mm
Counterweight	14.9 t	17.3 t	19.7 t
Undercarriage	UW 95	UW 95	UW 100
Stroke	6,500 mm	6,500 mm	8,500 mm
	Basic model for all-round use	for fluid-supported deep Kelly drilling	for cased Kelly drilling (also with casing oscillator)

Data shown are valid for minimum horizontal mast reach and using BAUER attachment.
Other configurations possible on request.

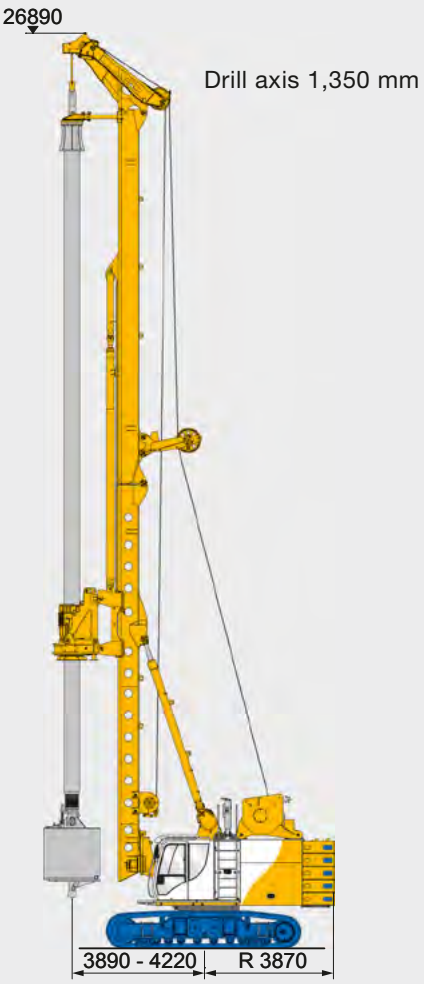
Uncased Kelly drilling

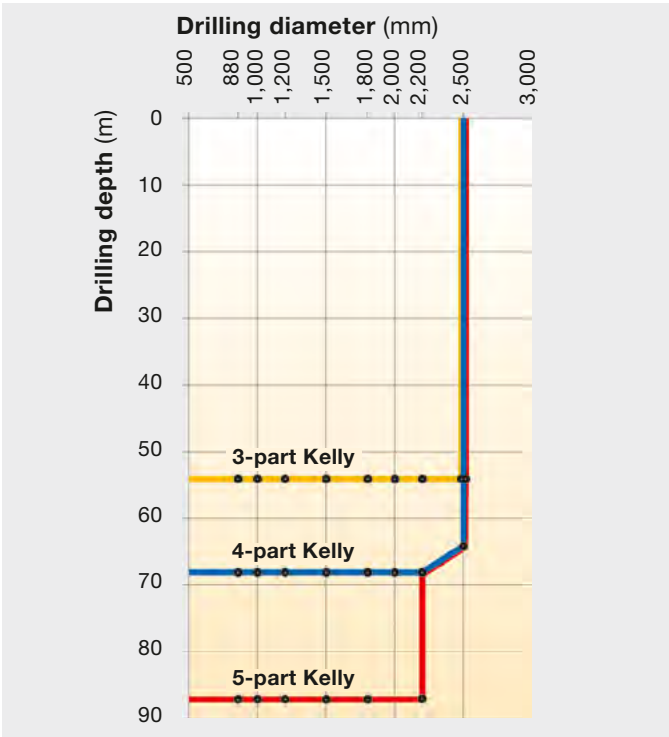
Standard configuration





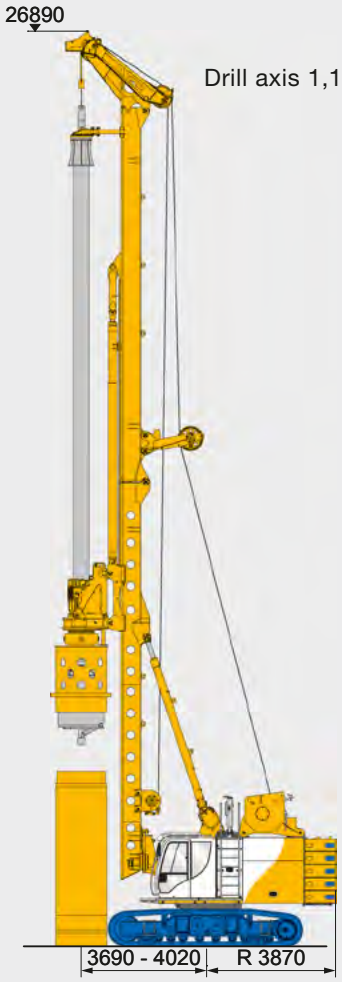
Upgrade 1

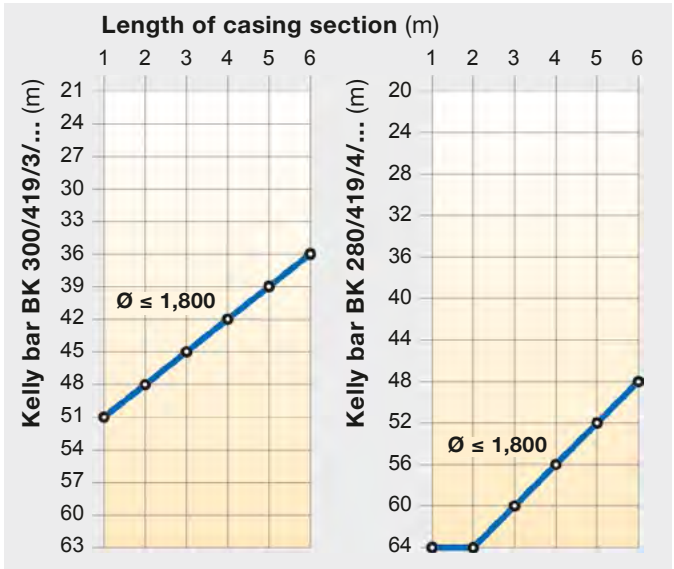




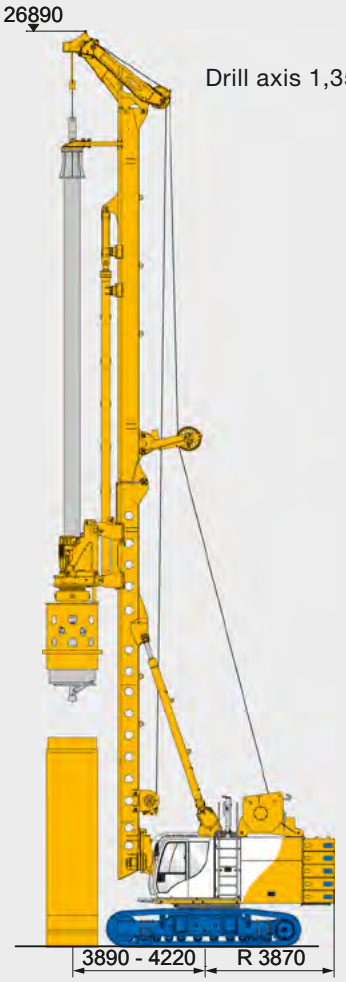
Cased Kelly drilling

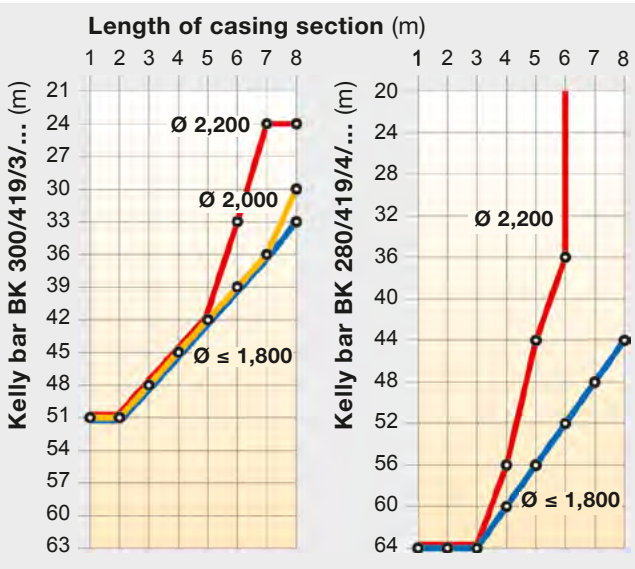
Standard configuration with rotary drive KDK



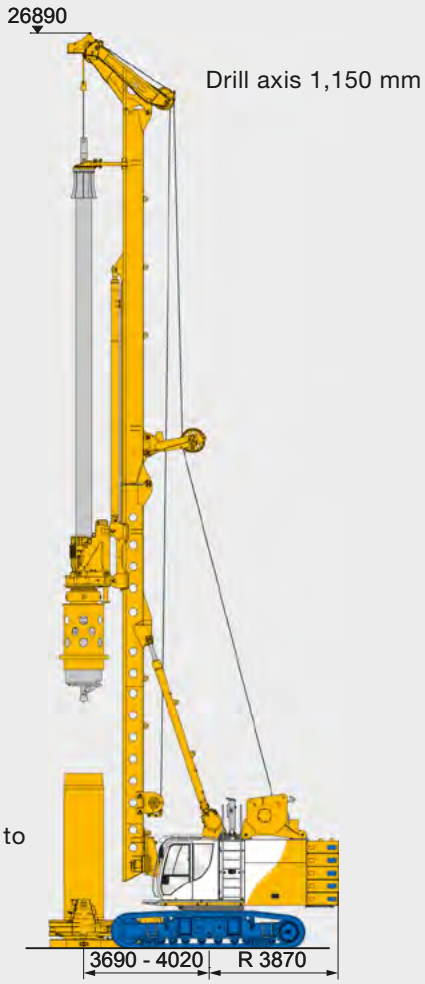


Upgrade 2 with rotary drive KDK

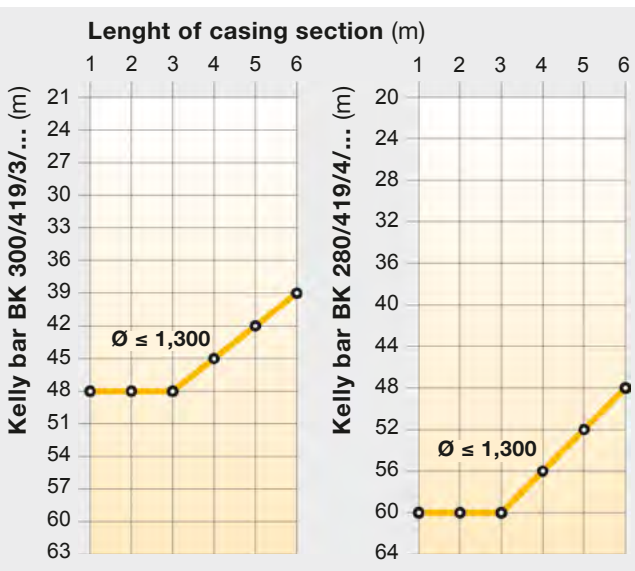




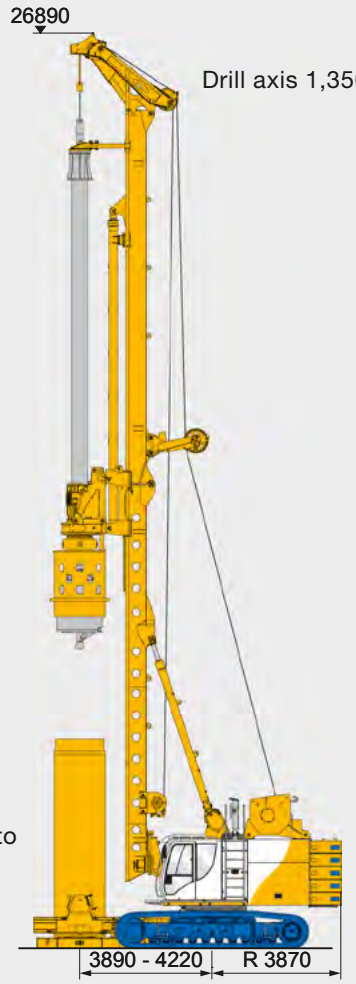
Standard configuration with casing oscillator



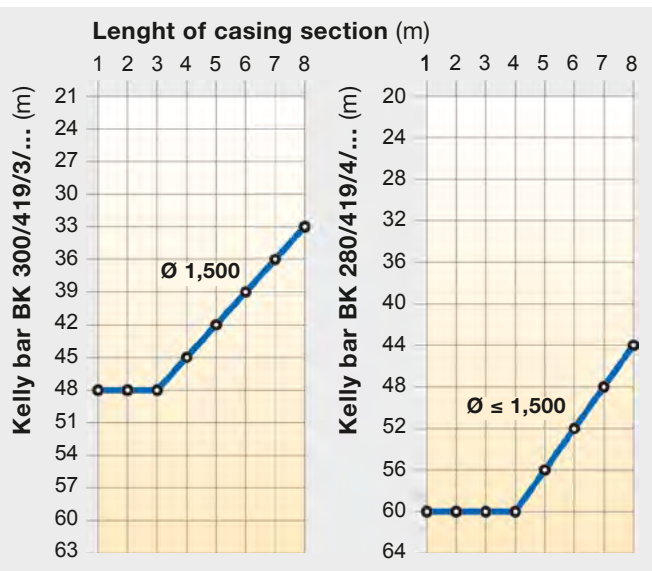
Applicability up to
BV 1300 L 03



Upgrade 2 with casing oscillator



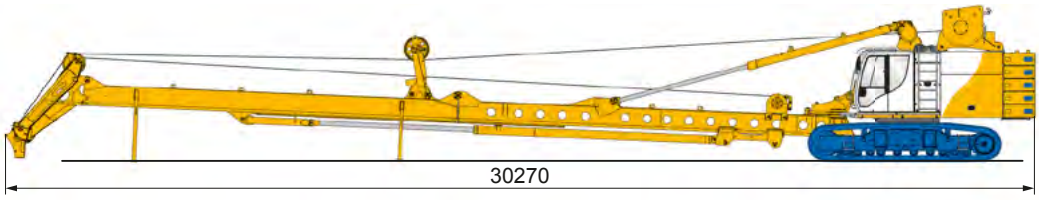
Applicability up to
BV 1500 HD-07



Rigging – Derigging

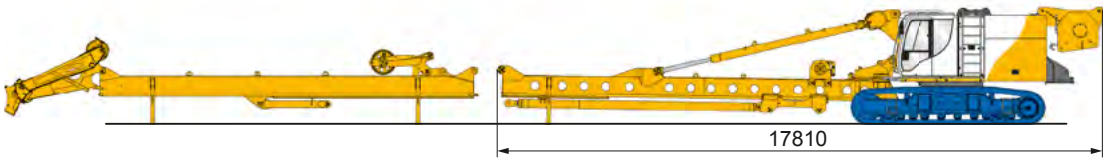
Rigging position for connecting hydraulic hoses

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



Transport weight (without upper mast section)

G = 61.5 t



Safe and simple disassembly of inverted crowd cylinder system
- Easy disassembly by removing one pin only
- No disconnection of hydraulic lines
- No hydraulic line in upper mast section
- Hydraulic hoses remain connected (minimized risk of leakages developing at couplings)

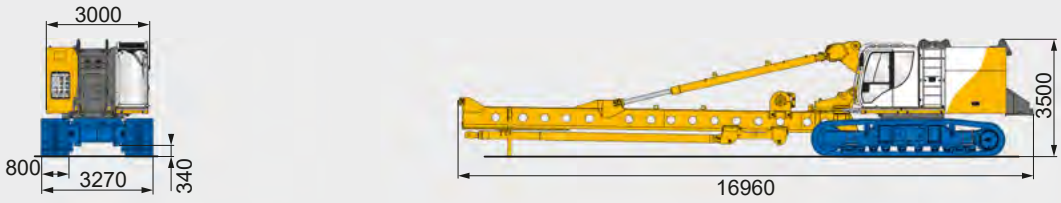
Transport – dimensions and weights

G = weight
B = width

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

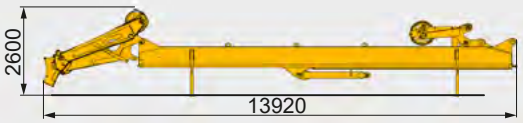
Base carrier with lower mast section

G = 57.8 t



Upper mast section

G = 4.8 t **B = 1,560 mm**



Mast head tilted

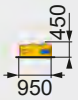
Telescopic transport supports

Rotary drive

G = 5.6 t

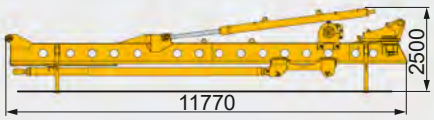
Counterweight

G = 1 x 4.9 + 4 x 2.5 t
B = 3,000 mm



Lower mast section

G = 13.3 t **B = 2,450 mm**

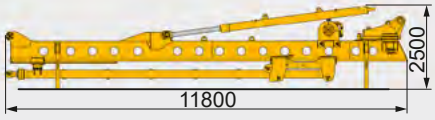


Base carrier with main winch, w/o counterweight

G = 48.2 t

Optional

G = 14.2 t **B = 2,450 mm**



Base carrier without counterweight

G = 44.5 t

BAUER Maschinen GmbH
BAUER-Strasse 1
86529 Schrobenhausen
Germany
Phone: +49 8252 97-0
bma@bauer.de
www.bauer.de

905.723.2 03/2025