

BAUER BG 28

Rotary Drilling Rig

Base Carrier BT 70

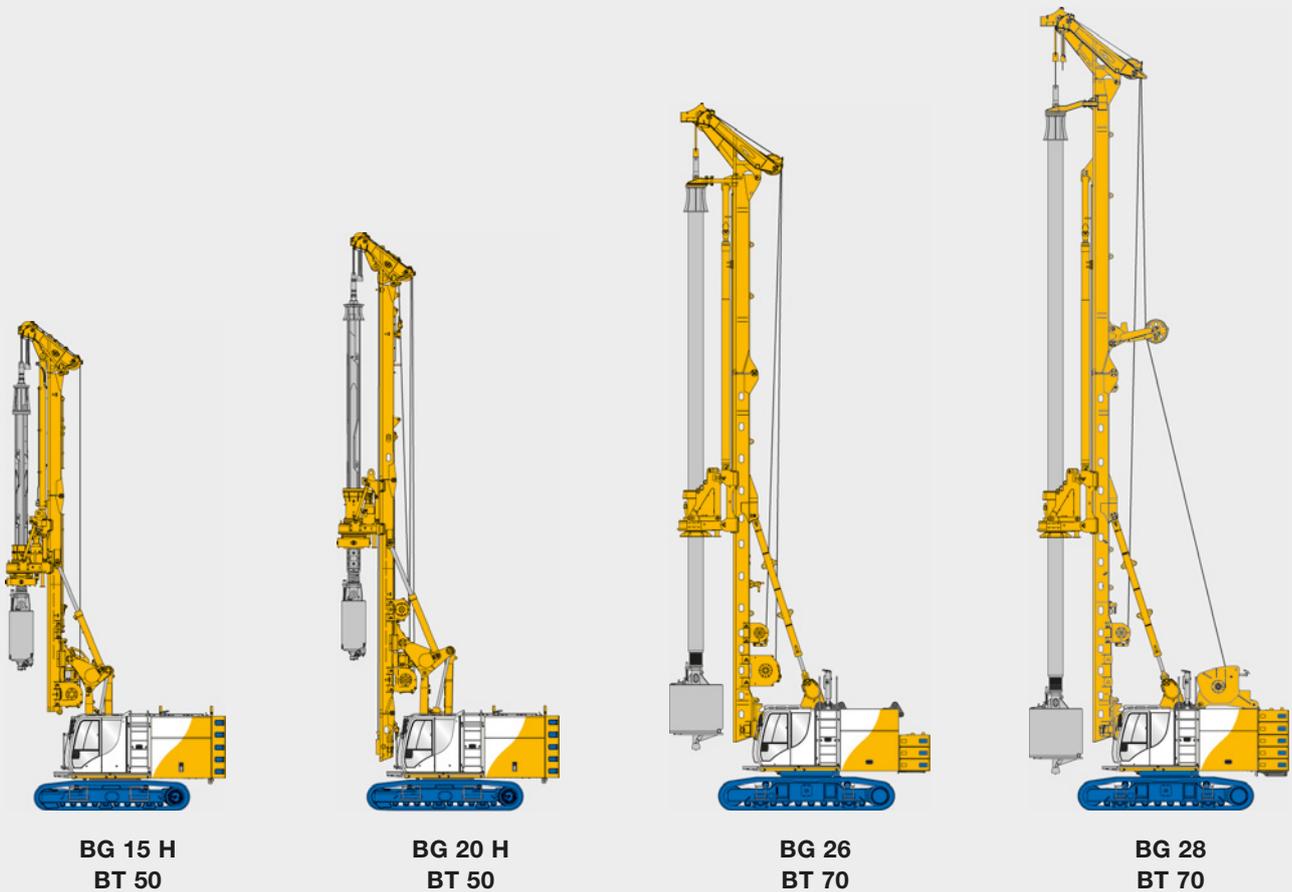
ValueLine



The BG ValueLine

*Perfection is achieved
when there is nothing left to take away.*

You are drilling uncased deep boreholes stabilized by drilling fluid, or cased boreholes either with installing casings by the rotary drive or by a hydraulic casing oscillator? If Kelly drilling is your task, then the BG ValueLine is your solution. The machines of the ValueLine are specifically adapted to no other purpose than Kelly drilling – and that perfectly.

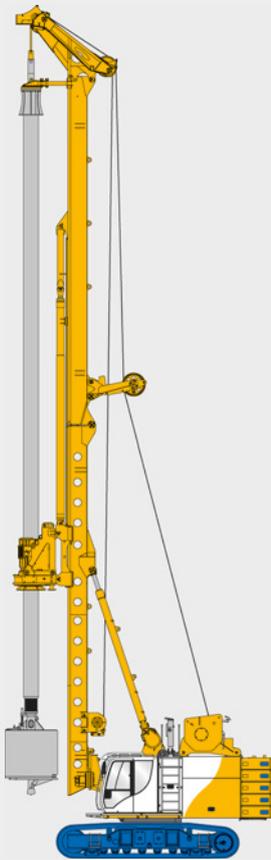


- Long mast for more drilling depth
- Large drill axis for big diameters
- Well balanced concept for high productivity and economic operation
- Hydraulic system for high dynamic performance
- Easy handling, easy maintenance
- Variable transport concept

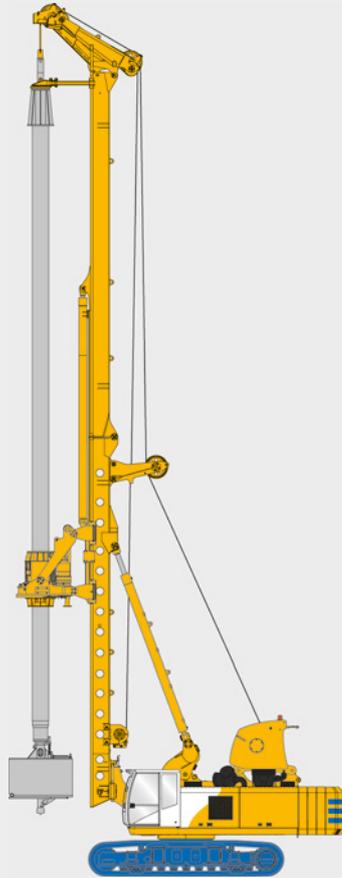
The rotary drilling rig BG 28 ValueLine (BT 70)

Maximal rig configuration

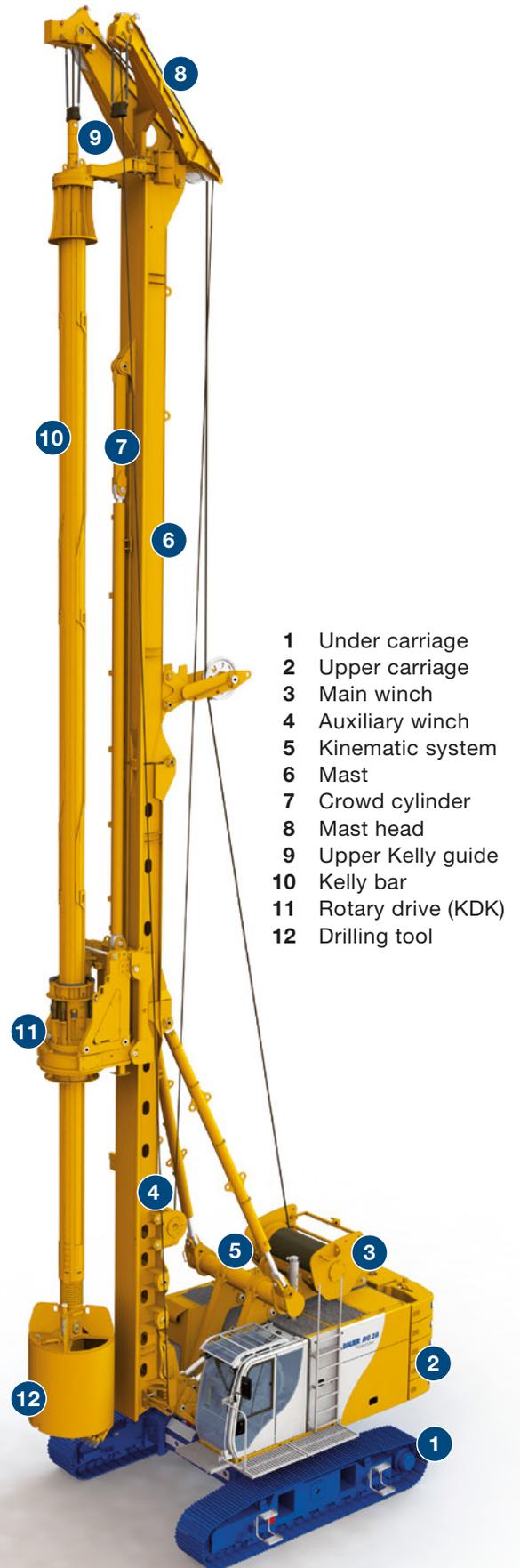
Drilling diameter:	2,500 mm
Drilling depth:	77.0 m
Torque:	280 kNm
Engine:	CAT C9.3
	280 kW @ 1,800 U/min
Height:	25.1 m



BG 30
BT 80



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 Upper Kelly guide
- 10 Kelly bar
- 11 Rotary drive (KDK)
- 12 Drilling tool

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
- Inverted backstay cylinders for fast rigging and derigging
- Graduated pins simplify rigging operations



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
- Single-layer winch operation
- A special grooving system on the drum and a rope pressure roller reduce wear on the wire rope



Under carriage

- Solid Bauer design for 360° working radius
- Hydraulically extendable tracks
- Large footprint to resist high overturning moments
- High traction forces

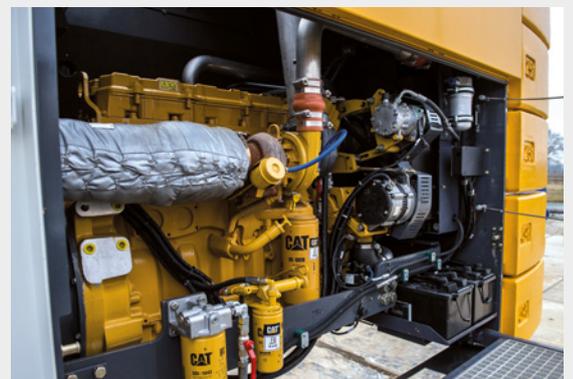


Modern, ergonomic cabin

- FOPS compliant
- Bauer comfort cab 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



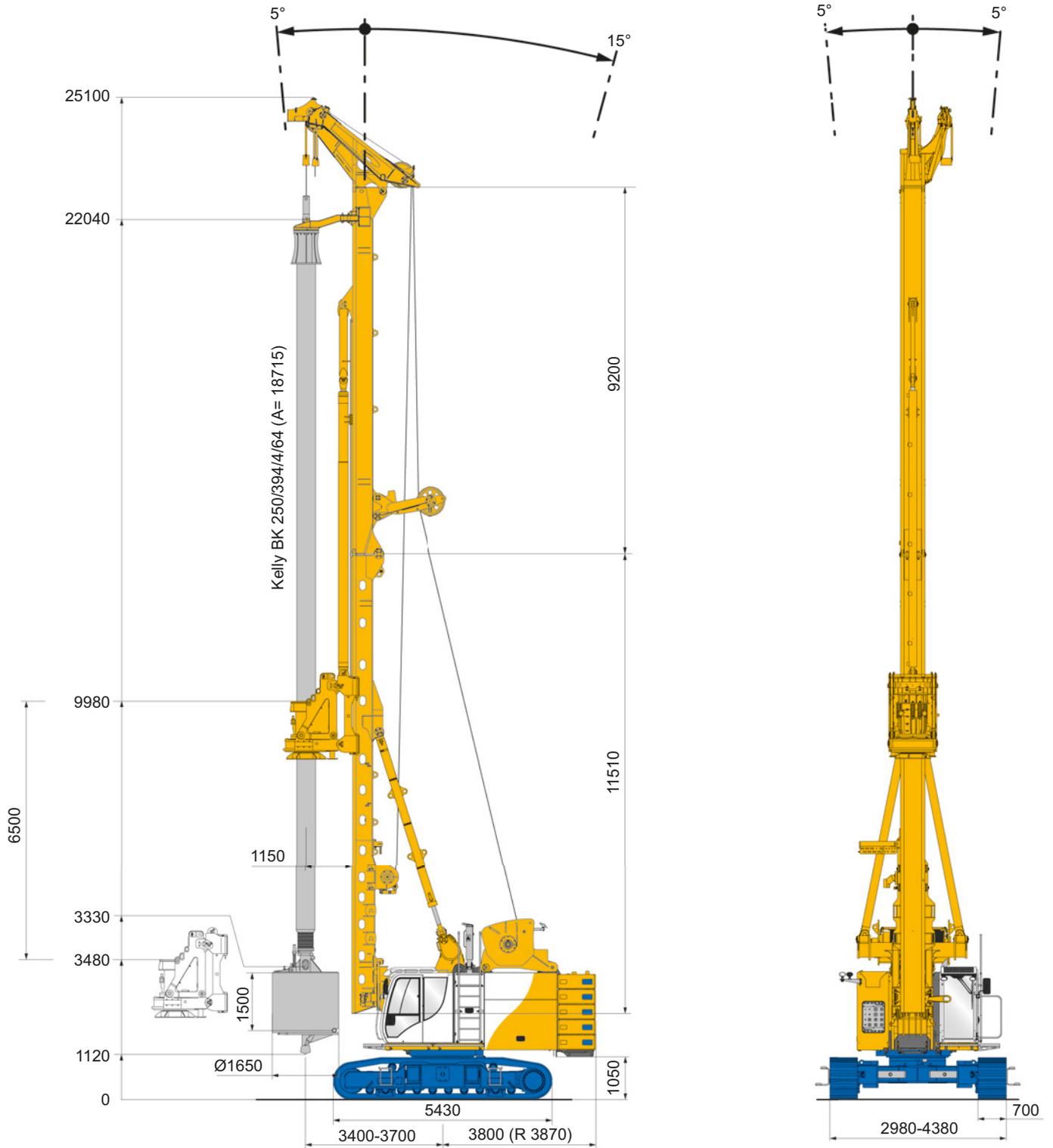
HSE safety features

- 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

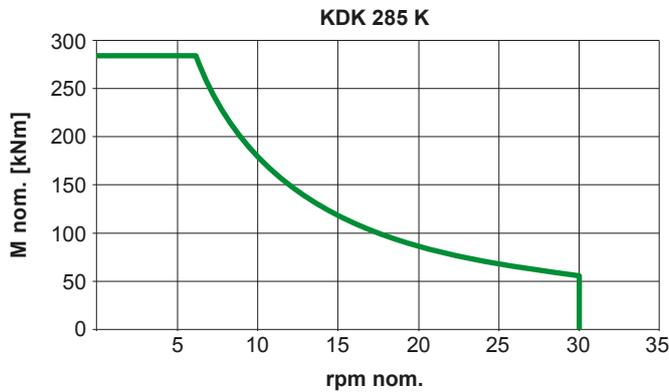
- Comprehensive Bauer test program
- Optimal adjustment and calibration of all main functions
- Heat transfer test
- Noise emission measurements
- Electromagnetic compatibility test





Operating weight approx. 93 t
(as shown)

Rotary drive	KDK 285 K
Torque (nominal) at 350 bar	280 kNm
Max. speed	30 rpm



Crowd cylinder		
Crowd force push / pull (effective)		200 / 270 kN
Crowd force / line pull (measured at the casing drive adapter KDK)		260 / 210 kN
Speed (down / up)		4.0 / 5.0 m/min
Fast speed (down / up)		20 / 20 m/min
Main winch		
Winch classification		M6 / L3 / T5
Line pull (1st layer) effective / nominal		220 / 285 kN
Rope diameter		28 mm
Line speed (max.)		75 m/min
Auxiliary winch		
Winch classification		M6 / L3 / T5
Line pull (1st layer) effective / nominal		80 / 100 kN
Rope diameter		20 mm
Line speed (max.)		55 m/min
Base carrier		
		BT 70
Engine	CAT C 9.3	CAT C 9.3
Rated output ISO 3046-1	280 kW	280 kW
	1,800 rpm	1,800 rpm
Engine conforms to EU 2016/1628	ORA *	Stage V
EPA/CARB		Tier 4 final
GB20891-2014	China Stage III	
Diesel tank capacity / AdBlue	730 l / -	730 l / 34.5 l
Ambient air temperature (at full power) up to		45° C
Sound pressure level in cabin (EN 16228, Annex B)		LPA 80 dB (A)
Sound pressure level (2000/14/EG and EN 16228, Annex B)		LWA 109 dB (A)
Hydraulic power output (measured at inlet to rotary drive)		210 kW
Hydraulic pressure		350 bar
Hydraulic oil tank capacity		650 l
Under carriage		
	UW 65	UW 80
Crawler type	B 6	B 7
Traction force effective / nominal	450 / 530 kN	520 / 607 kN

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

Base carrier

Standard

- Removable counterweights 12.5 t, **Fig. A**
- Engine diagnostic system
- Gratings on side and in front of operator's cab
- Integrated service platform
- Camera system for rear area surveillance
- Multigrade hydraulic oil
- Bauer comfort operator's cab (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. 14.9 t)
- Air compressor 1,000 l/min
- Central lubrication system
- Bauer service kit
- Arctic kit
- Cab space heater with automatic timer
- Bio-degradable oil for hydraulic system
- Protective roof guard
- Protective front windscreen guard
- Under carriage UW 80
- Triple grouser track shoes 800 mm
- Quick-release couplings for removable crawler side frames
- Service tool kit

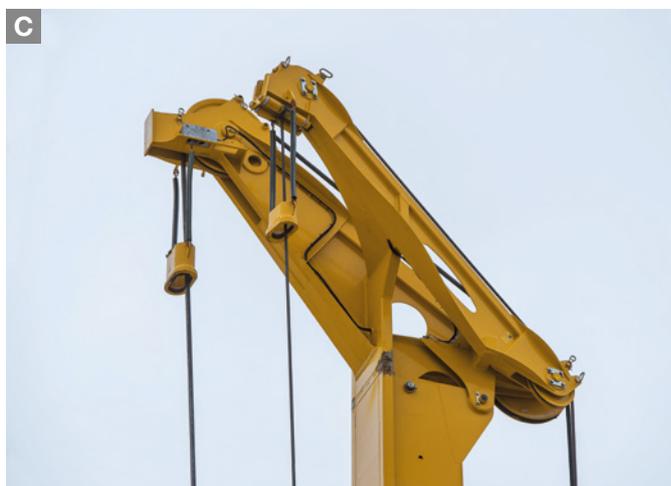
BG attachment

Standard

- Bauer V-type kinematic system
- Mast head, for optional use with drill axis 1,150 or 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 up to 1,900 mm



Rotary drive (KDK)

Standard

- Integrated Kelly damping system
- Exchangeable Kelly drive adapter assembly KA 500/394
- Exchangeable Kelly drive keys
- Quick-release couplers 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

- Cardanic joint
- Brake kit for automatic casing drive adapter, **Fig. E**
- Kelly drive adapter assembly KA 500/419

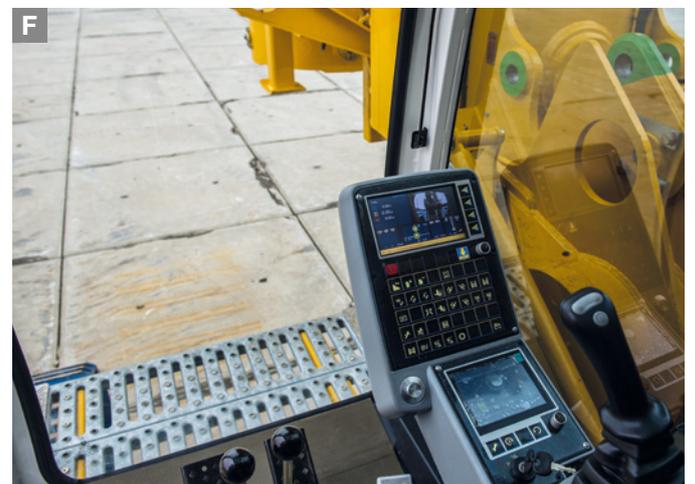
Measuring and control equipment

Standard

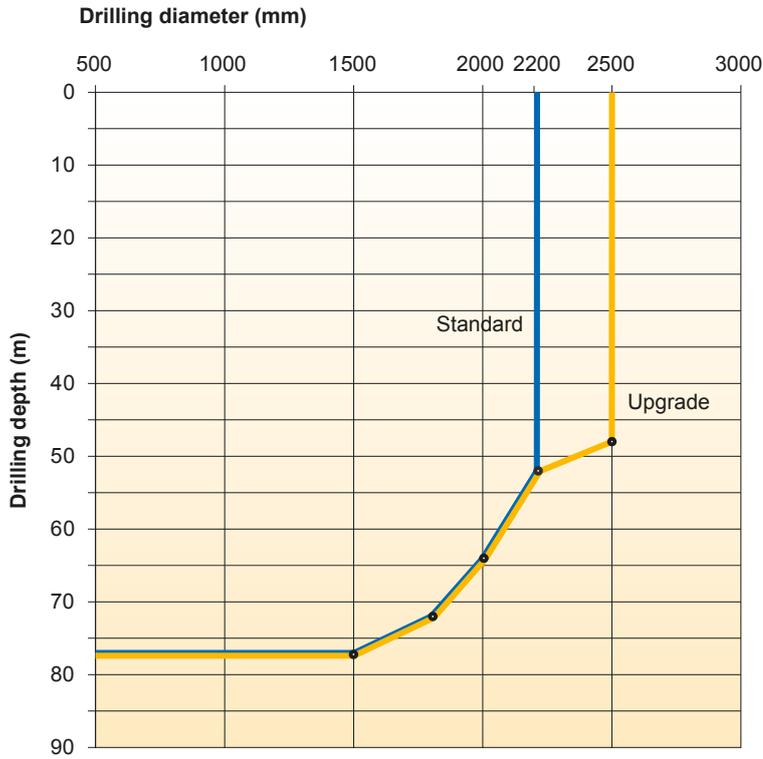
- Bauer extended monitor incl. integrated diagnostic function, **Fig. F**
- Display of faulty messages as plain text
- Digital display of pump pressure
- Mast inclination measurements on x/y axis (digital / analog display)
- Automatic vertical alignment of mast
- Optical mast inclination monitoring system
- 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
- Electronic load sensing

Optional

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



Drilling capabilities (uncased)



Rig configurations

	Standard	Upgrade
Drilling axis	1,150 mm	1,350 mm
Counterweight	12.5 t	14.9 t
Under carriage	UW 65	UW 80
Overall height	25.1 m	25.1 m

for fluid-supported
deep Kelly drilling

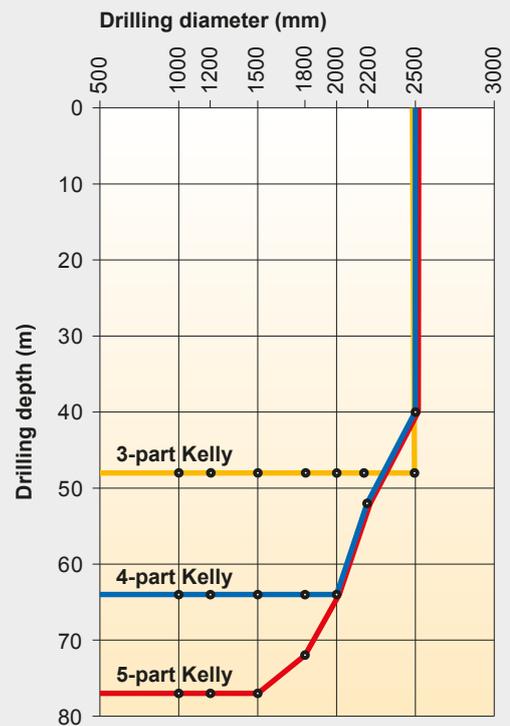
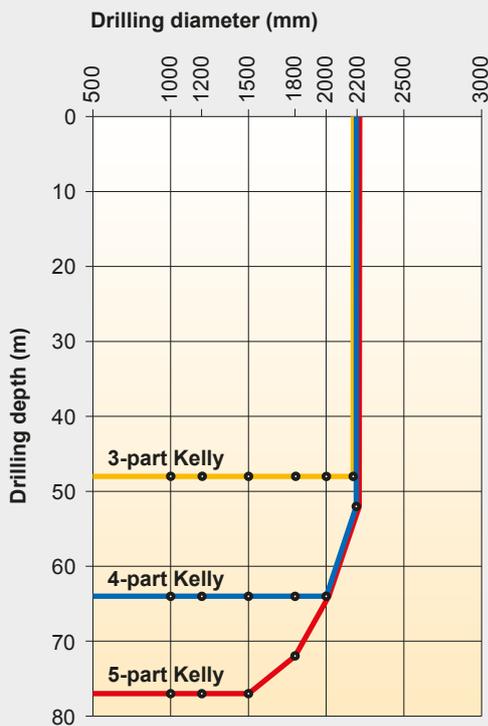
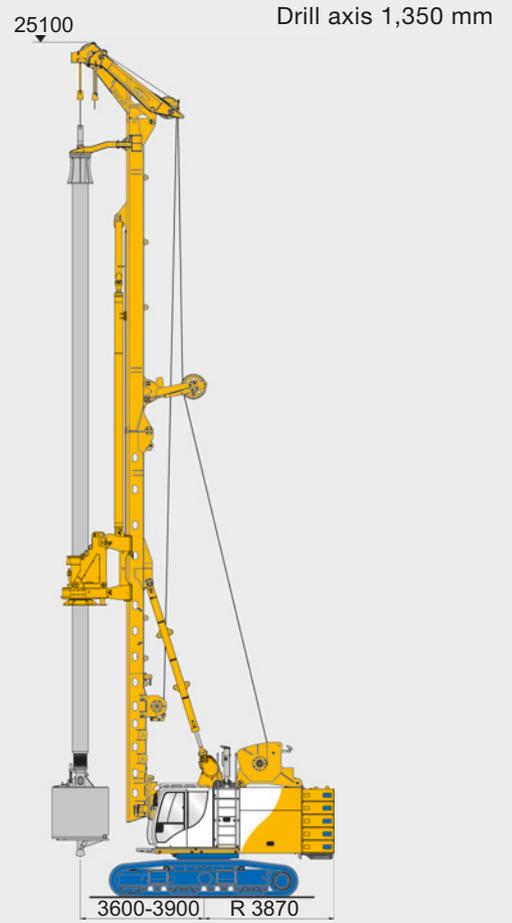
for cased Kelly drilling
(also with casing oscillator)

Data shown are valid for minimum horizontal mast reach and using BAUER attachment.
For more information, please contact the BAUER Sales Department. Other configurations possible on request.

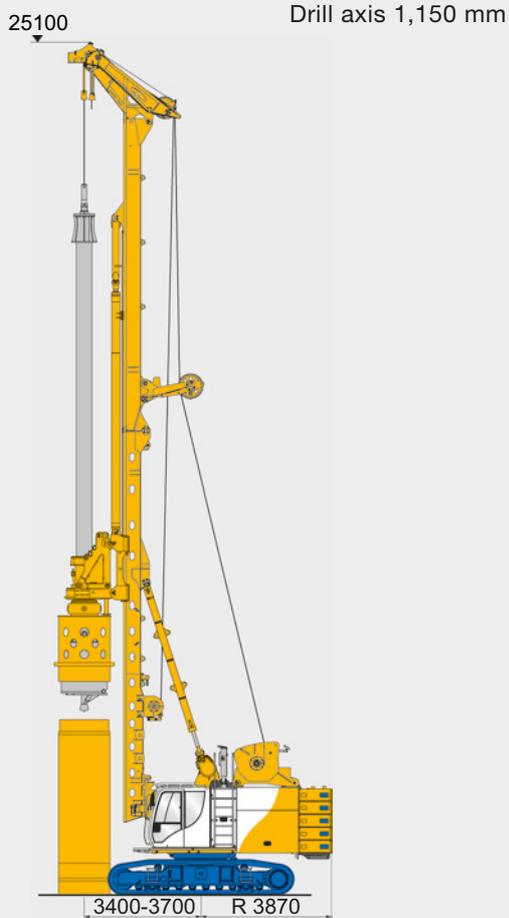
Standard



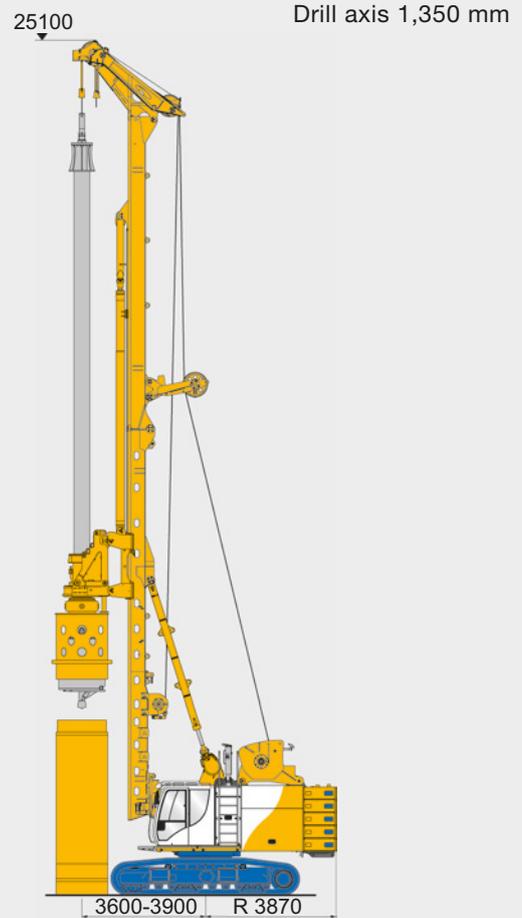
Upgrade



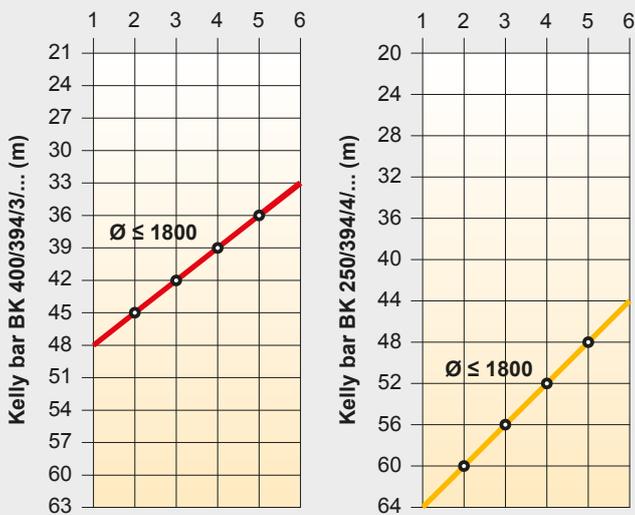
Standard with rotary drive KDK



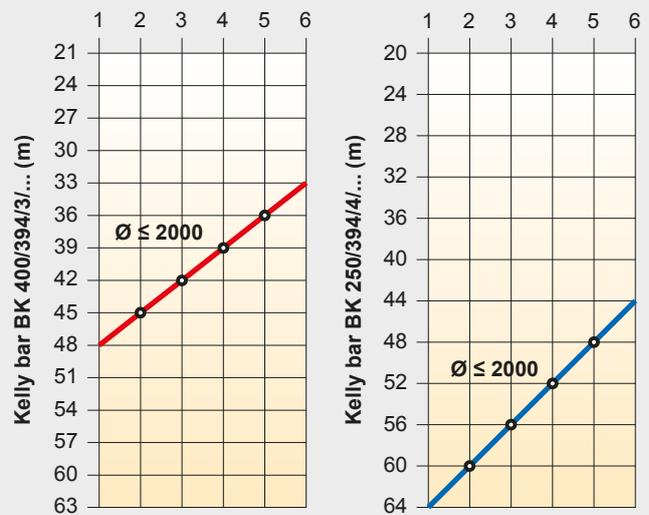
Upgrade with rotary drive KDK



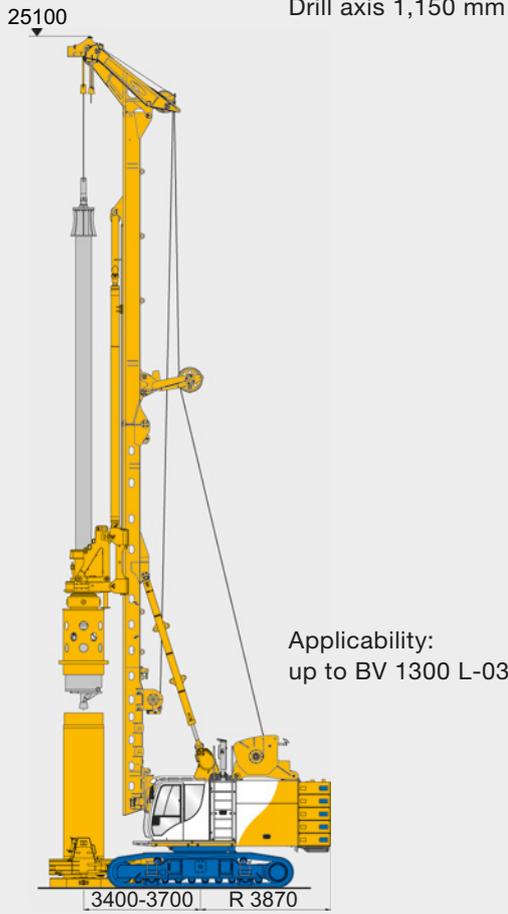
Length of casing section (m)



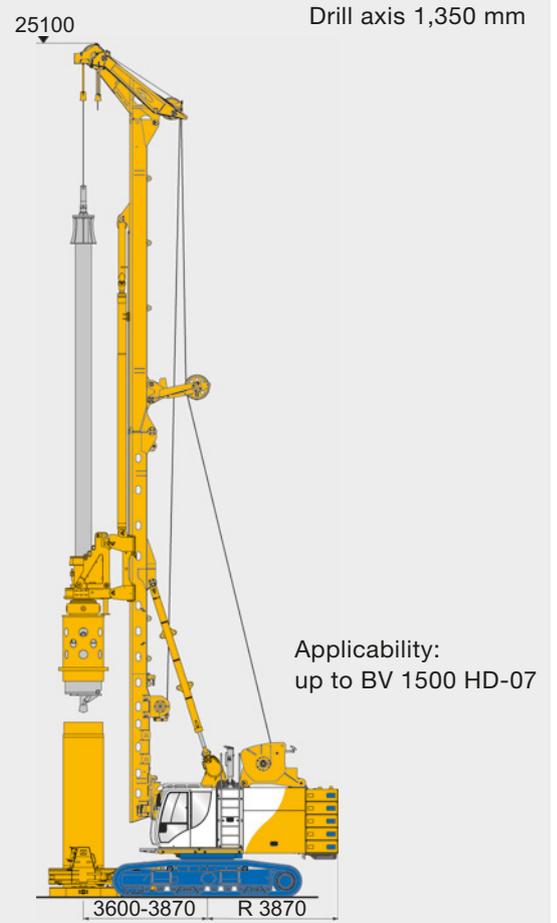
Length of casing section (m)



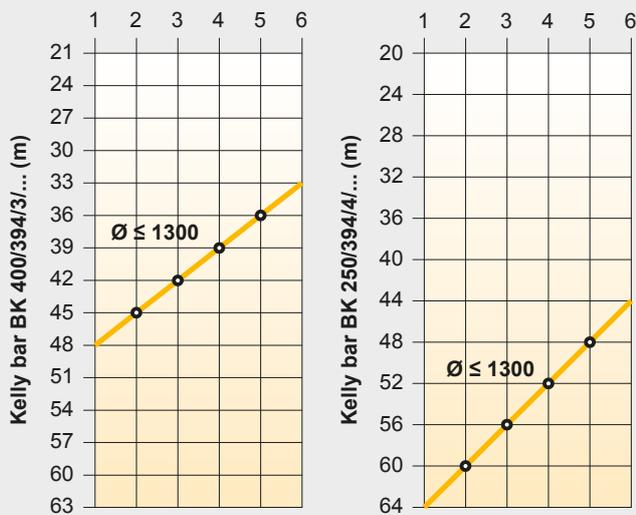
Standard with casing oscillator



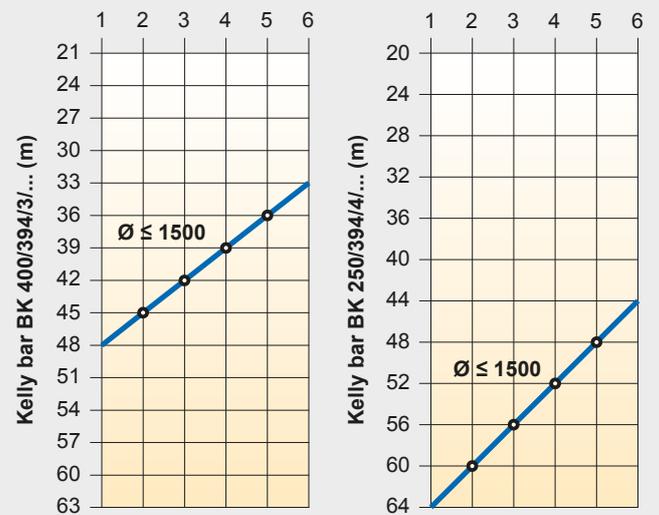
Upgrade with casing oscillator



Length of casing section (m)



Length of casing section (m)

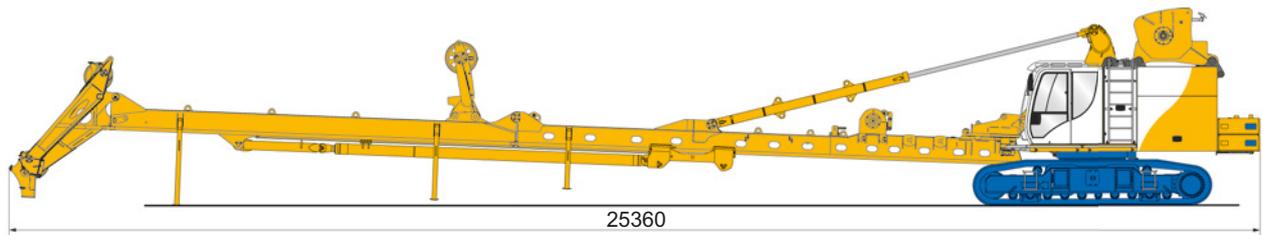




Rigging position for connecting of hydraulic hoses

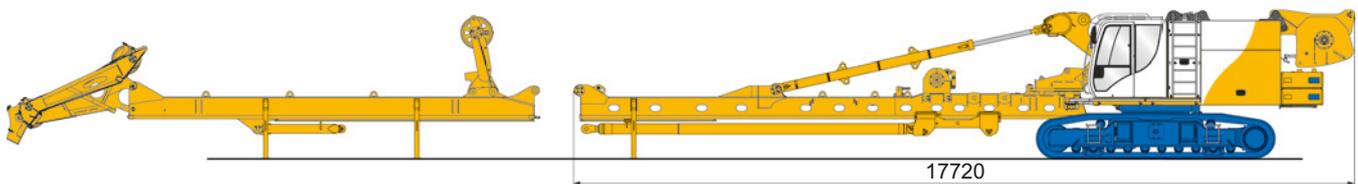
Health and safety features

- All hydraulic hoses of the KDK can be attached from ground level
- No overflow of hydraulic oil
- Applicable with all thrust rods



Transport weight (without upper mast section)

G = 60.0 t



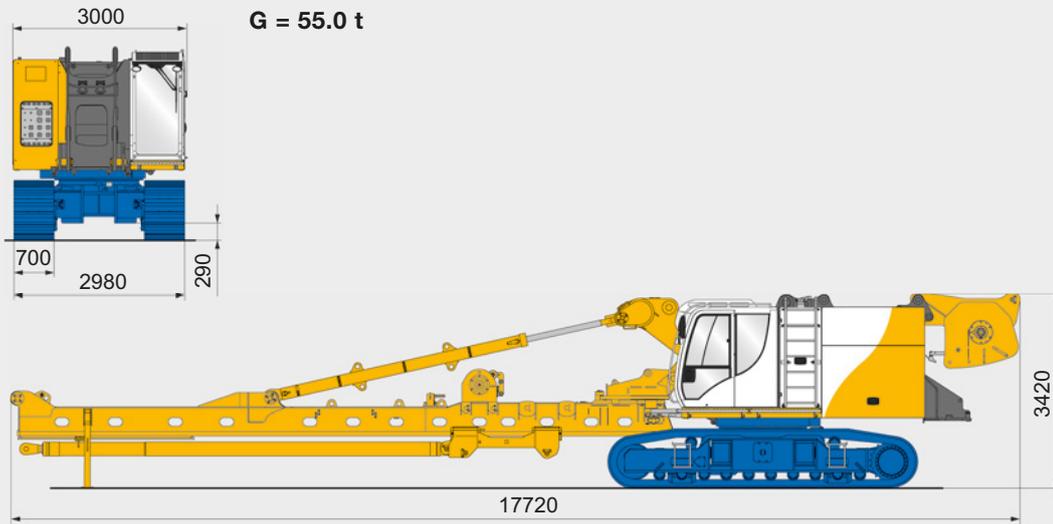
Safe and simple disassembly of inverted crowd cylinder system

- Easy disassembly by removing one pin only
- No hydraulic line in upper mast section
- No disconnection of hydraulic lines, thus minimized risk of oil leakages developing at couplings

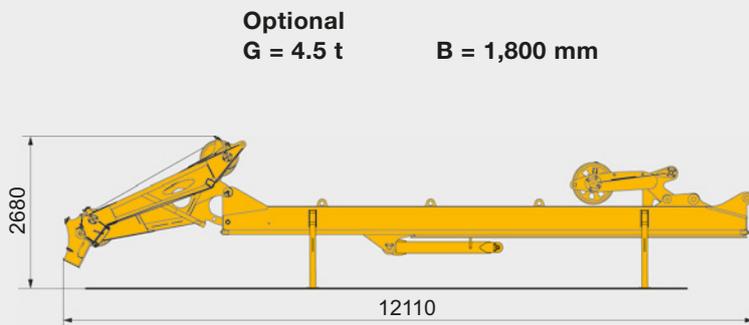
G = weight
B = width

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

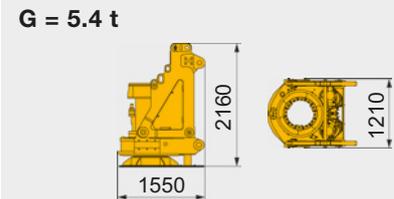
Base carrier with lower mast section



Upper mast section 9 m



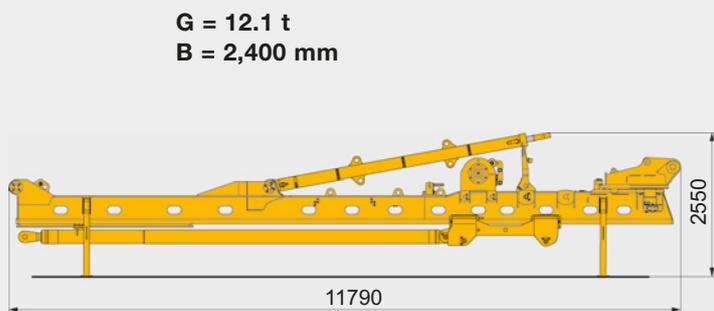
Rotary drive



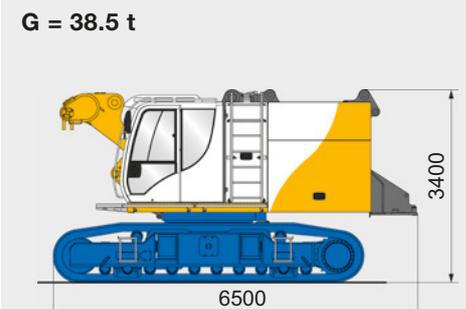
Counterweight



Lower mast section



Base carrier without counterweight





Global Network



Service



Equipment



Training

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ValueLine



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