

As the technology progresses, the product will continue to improve and the technical information of the sample may differ from the actual product.  
The actual supply status of the product shall be subject to the sales contract and the sample shall be for reference only.  
If you would like to get the latest information about related products, please keep in touch with us.



# XR168E

Rotary Drilling Rig



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Edition: 1st, 6, 2024  
Printing date: 6, 2024



XCMG Foundation Construction Machinery Business Division (XCMG Foundation) is one of XCMG’s core enterprises focusing on the research, development, manufacturing and sales of piling machinery, trenchless machinery, coal mining machinery, mining and tunneling machinery, and resource drilling and production machinery, as well as construction method technical support, engineering construction and other full value chain activities to provide customers with comprehensive solutions.

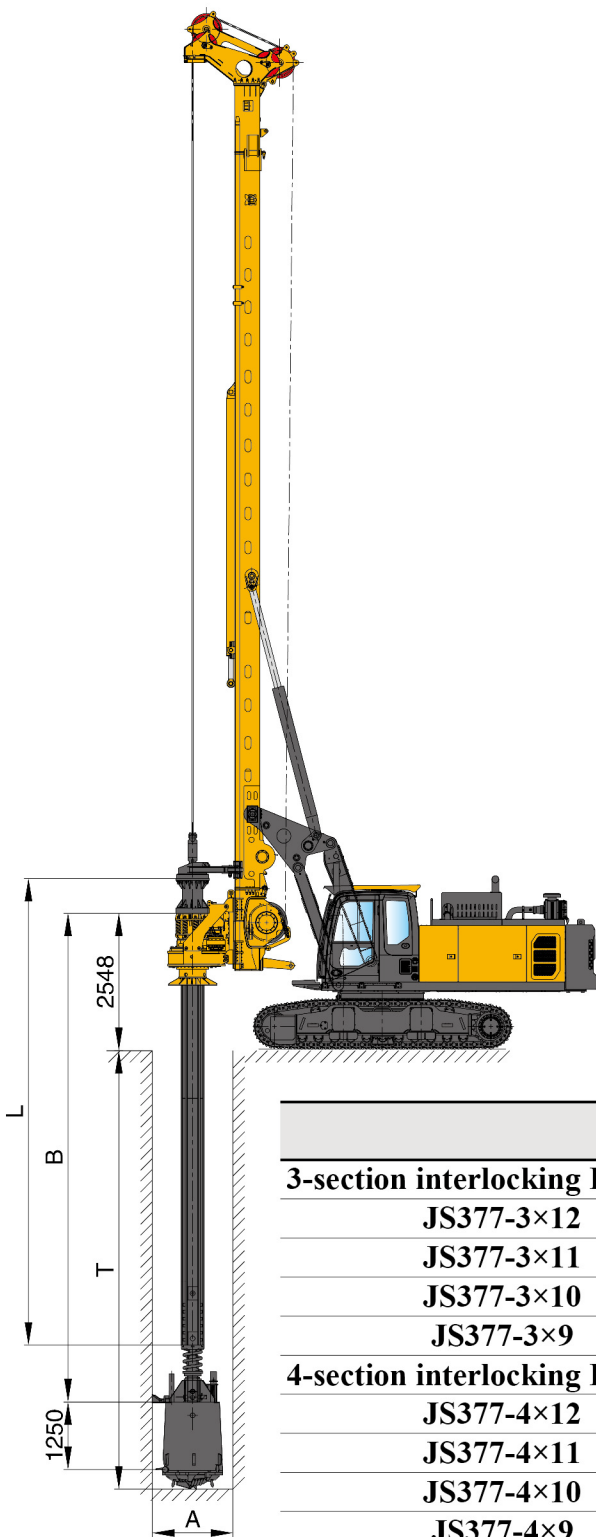
XCMG Foundation centers on technological innovation and quality improvement. Currently, the trenchless machinery ranks first in the world and the piling machinery is in the first class. Roadheaders, drill jumbos, deep well drilling rigs and other products have leapt to the forefront of the domestic market. Various types of products have been exported to more than 80 countries and regions.

At present, XCMG Foundation has moved to a new intelligent manufacturing base which covers a total area of 110 hectare, in accordance with the requirements of digitization, greening, and intelligence, and is fully committed to building the world's top brand for foundation construction machinery.



Items		Units	Values
Main data	Max. drilling diameter	mm	Φ1500 (crowd cylinder)
	Max. drilling depth	m	56
	Working height	m	19.3
	Working weight	t	53
Chassis	Width	mm	3000~4200
	Track shoe width	mm	700
	Track length	mm	4825
	Driving force	kN	340
	Traveling speed	km/h	0~2.1
Luffing mechanism	Working range	mm	3535~3935
Drilling mast	Lateral inclination	°	3
	Front inclination	°	5
	Back inclination	°	90
Rotary drive	Torque	kN·m	178
	Rotation speed	r/min	6~38
Crowd cylinder	Crowd force	kN	160
	Lifting force	kN	180
	Stroke	mm	4200
Main winch	Lifting force	kN	170
	Speed	m/min	0~80
	Rope diameter	mm	28
Auxiliary winch	Lifting force	kN	60
	Speed	m/min	0~80
	Rope diameter	mm	16
Engine	Model	/	Cummins QSB6.7
	Power	kW	173
	Diesel oil tank	L	390
	Emission	/	EU stage V
Hydraulic system	Max. flow	L	2×225+80
	Max. working pressure	MPa	33





L: Length of single section Kelly bar  
B: Length of Kelly bar (extracted)  
T: Drilling depth  
G: Weight of Kelly bar

Drilling data have been determined with an effective tool length of NL = 1.5 m and with the mast at a minimum operating radius.  
For further drilling depths, diameters and other Kelly types, please contact us.

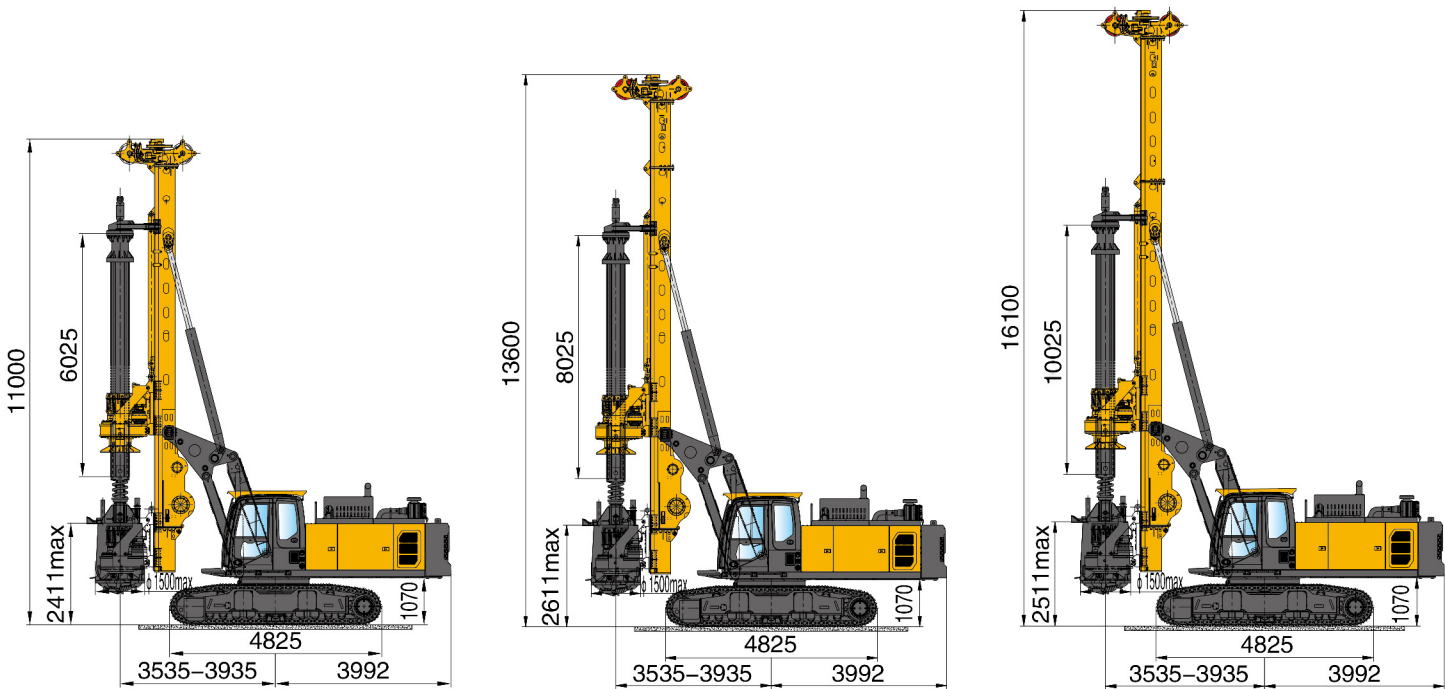
Drilling depth – uncased Kelly drilling				
3-section interlocking Kelly bar	L (m)	B (m)	G (kg)	T (m)
JS377-3×12	12	34.1	5900	32.5
JS377-3×11	11	33.1	5500	29.5
JS377-3×10	10	30.1	5100	26.5
JS377-3×9	9	27.1	4700	23.5
4-section interlocking Kelly bar	L (m)	B (m)	G (kg)	T (m)
JS377-4×12	12	45.3	6900	44
JS377-4×11	11	41.3	6400	40
JS377-4×10	10	37.3	5900	36
JS377-4×9	9	33.3	5400	32
5-section Friction Kelly bar	L (m)	B (m)	G (kg)	T (m)
MZ377-5×12	12	57.3	6250	56
MZ377-5×11	11	52.3	5800	51
MZ377-5×10	10	47.3	5350	46

Low headroom model is optional, the parameters are as follows:

Item	Unit	XR168E		
Working height	m	11	13.6	16.1
Max. drilling diameter	mm	φ1500	φ1500	φ1500
Max. drilling depth	m	20	28	36
Kelly bar	/	Interlocking JS377-4×6	Interlocking JS377-4×8	Interlocking JS377-4×10

Remarks:

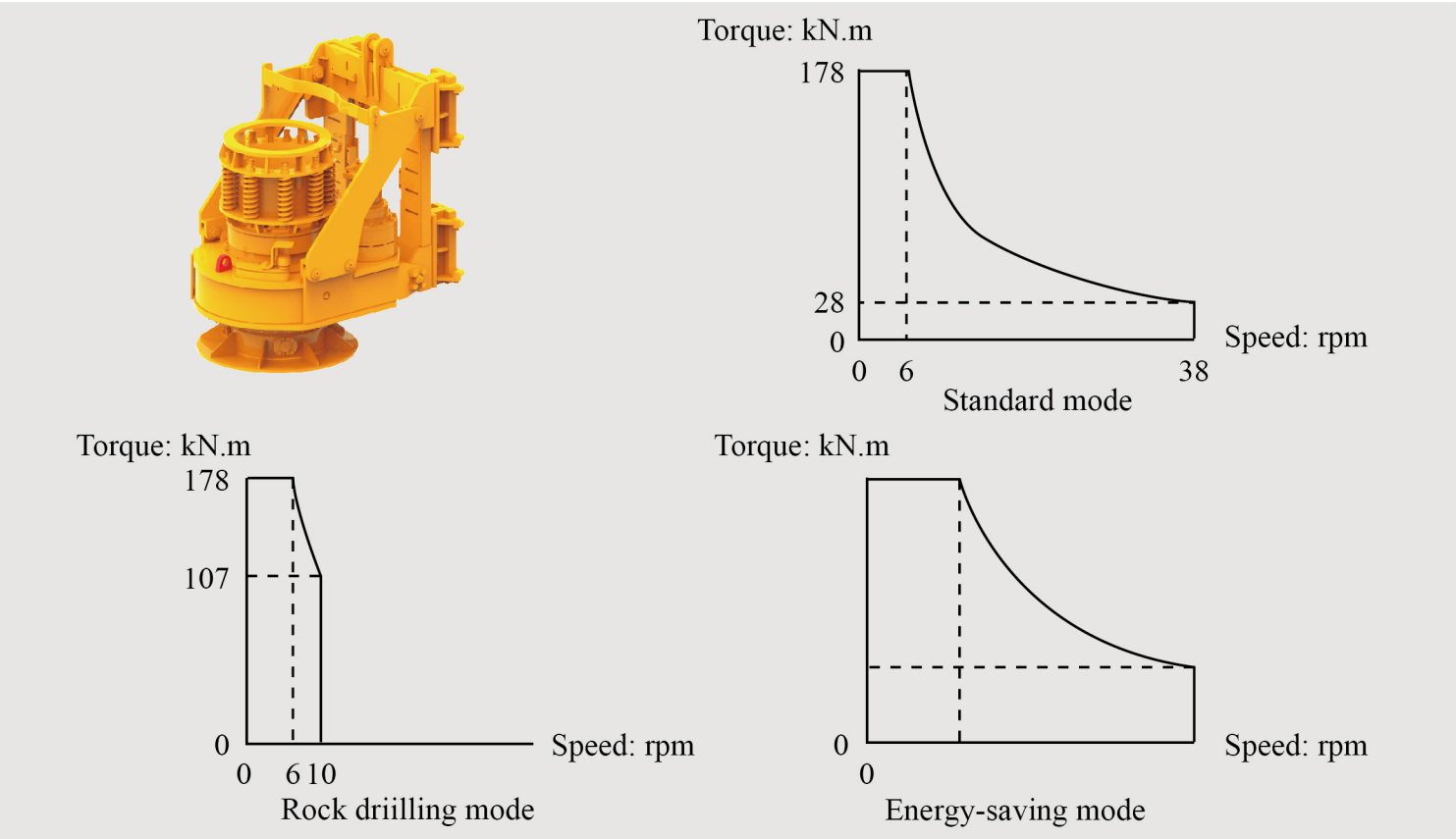
1. When dismantling the bottom drilling mast, the maximum drilling diameter can reach 2500 mm, and the maximum drilling depth needs to be reduced by 1 m. During construction, attention should be paid to avoid interference between the drill bit, the drilling mast, and the chassis, and to consider the soil unloading space.
2. During transportation, the cathead needs to be folded upwards.



Height limit: 11 m

Height limit: 13.6 m

Height limit: 16.1 m



		Kelly drilling
Undercarriage	Retractable crawler chassis	●
	Casing oscillator interface	△
	Wireless remote control walking	○
Upper structure	Cummins QSB6.7diesel engine Stage V – US EPA Tier 4F	●
	Doubel boom luffing mechanism	●
	Luffing limit	●
	Braided electrical harness	●
	Automatic centralized lubrication	○
	Sound-light alarm	●
	LED lighting system	●
	Tail safety monitoring	●
	Right side safety monitoring	●
	Fire extinguisher 1×6kg	●
	Top safety fence	○
	Fuel self priming pump	●
	Automatic shut-off while refueling	●

		Kelly drilling
Cab	FOPS	●
	Front protective grille	●
	Rear view mirror	●
	Electric double speed wiper	●
	Front sun blind	●
	Top sun blind	○
	Cold and warm air conditioner	●
	Level meter	●
	Reading light	●
	Cigarette lighter	●
	Fire extinguisher	●
	Safety hammer	●
	Clothes hook	●
	Lap belt	●
	Air suspension seat	●
	Radio	●
	Cushion depth and inclination adjustment	○
	Seat electric heating function	○
	Seat mechanical lumbar support	○
	Seat massage function	○





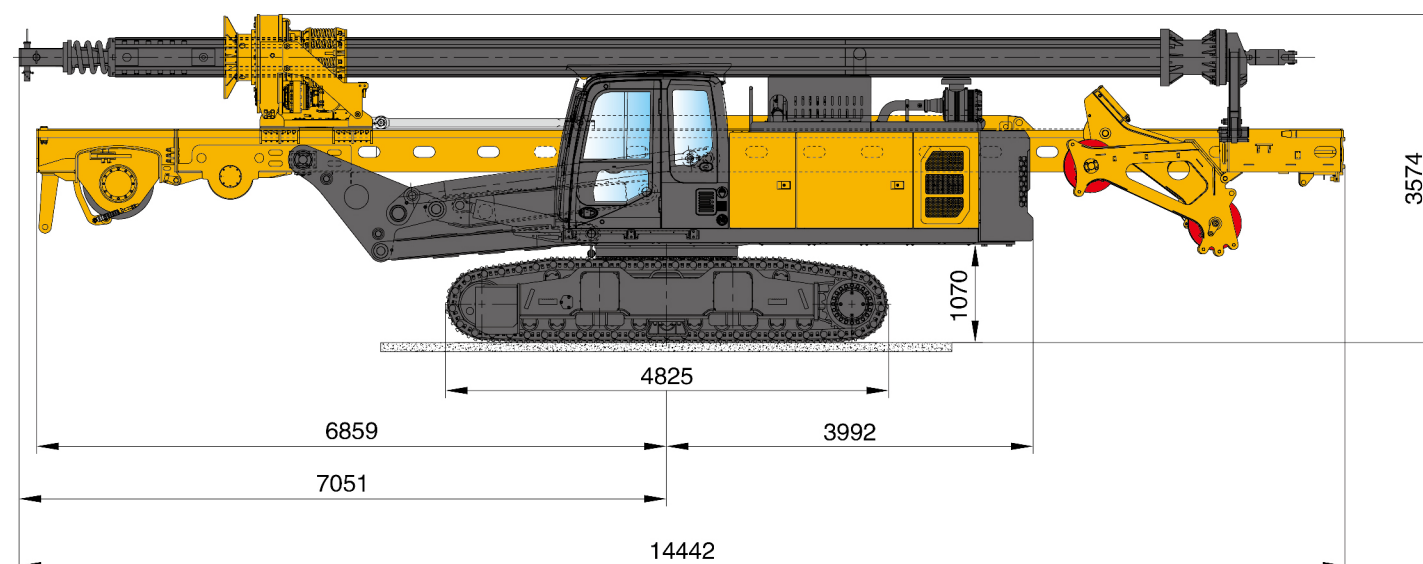
		Kelly drilling
Hydraulic system and control system	Filter clogging alarm	●
	Hydraulic oil suction alarm	●
	Oil suction filter element	△
	Centralized pressure measuring valve block	●
	GPS	○
	PLC intelligent control	●
	10.1 inch touch screen display	●
	Infrared surveillance camera	●
	Automatic rotary positioning	○
	Rotation angle display	●
	Real time display of drilling depth	●
	Sound-light alarm for rotation and walking	●
	Multi gear control of rotary drive	●
	Rotary drive standard mode	●
	Rotary drive rock drilling mode	●
	Rotary drive torque display	●
	Rotary drive speed display	●
	Rotary drive cruise control	○
	Automatic spin-off	●
	High-speed spin-off	○
	Rotary drive torque limit	○
	Stepless crowd force regulation	●
	Height limit of main winch	●

		Kelly drilling
Hydraulic system and control system	Lifting force display of main winch	●
	Lifting speed display of main winch	●
	Bottom contact protection of main winch	●
	Double floating control of main winch	●
	Automatic engine idling	●
	Intelligent fault monitoring	●
	Manual/automatic adjustment of drilling mast verticality	●
	Mast verticality detection	●
	Switch of eight languages	●
	Monitoring technology of Kelly bar anti stuck	○
	Height limit of auxiliary winch	○
	Lifting force display of auxiliary winch	○
Rotary drive	Three-stage vibration damping system	●
	Box four-sealing structure	●
	Anti suction technology of motor	●
	Bracket and box horizontal pin structure	○
	Casing drive device	○
Kelly bar	φ377 4 sections interlocking Kelly bar, 44 m drilling depth	●
	φ377 5 sections friction Kelly bar, 56 m drilling depth	○
Other technologies	11 m overall clearance working height	○
	Dismantling the bottom drilling mast to meet the requirements of large-diameter drilling	○

Standard : ●    Optional: ○    Not available: △

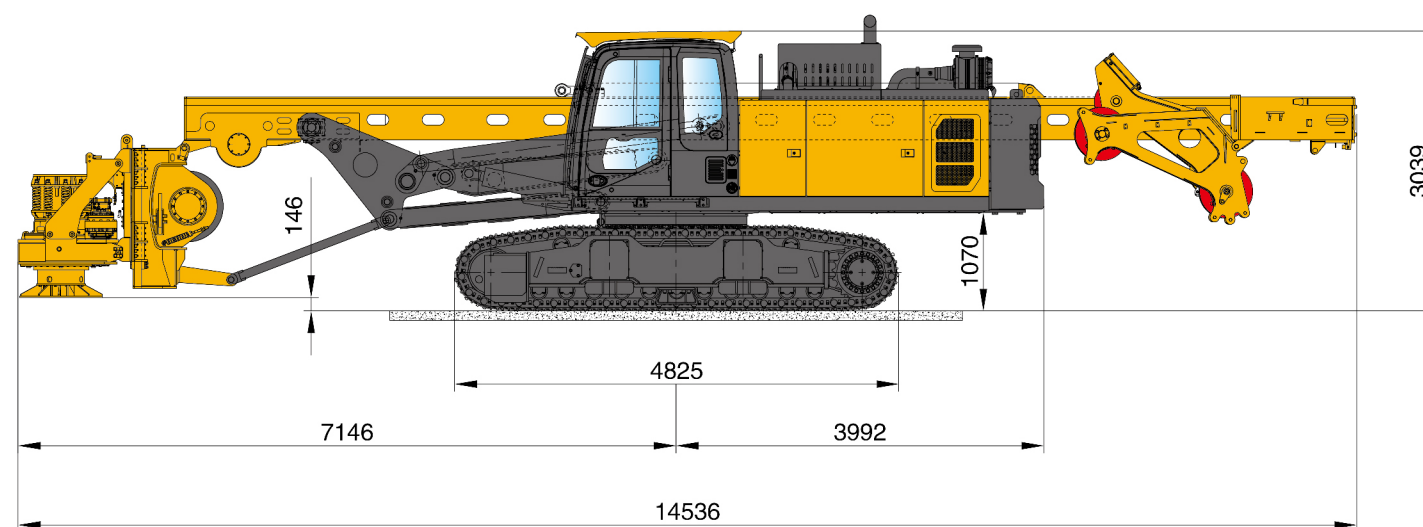


**Transportation with Kelly bar**



Transportation weight: 51 t  
Transportation width: 3000 mm

**Transportation without Kelly bar**



Transportation weight: 43 t (excluding Kelly bar and drilling tools)  
Transportation width: 3000 mm

**Construction cases**

