

As technology continues to improve, we are unable to inform you of the change of our products in time. We apologize for any inconvenience caused!

March 2020



XCMG FOR YOUR SUCCESS



XCMG FOUNDATION CONSTRUCTION MACHINERY BUSINESS DIVISION

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XR240E
Rotary Drilling Rig

XCMG FOUNDATION CONSTRUCTION MACHINERY BUSINESS DIVISION

Highlights Introduction

▼01

As a multi-function machine, XR240E can realize quick function switching such as crowd cylinder, crowd winch, CFA and dual rotary drive to meet different construction needs.

▼02

The rotary drive performance and main winch performance are all increased by 20%, the work efficiency is much higher.

▼03

The rotary drive can be equipped with a torque multiplier (optional). The casing driving torque can reach 360kNm, and the ability to lower the casing is stronger.

▼04

The double jib parallelogram luffing mechanism is adopted, with large support angle, 16% increase in support range and more stable operation.

▼05

The intelligent control system can realize functions such as automatic adjustment and display of mast perpendicularity, automatic rotation, spin-off, lifting & concrete pouring and pile type display, etc. The bus panel design is adopted to prevent misoperation.

XR240E rotary drilling rig is widely used in the hole-forming operations of cast-in-place concrete piles in the construction of roads, railways, bridges, large venues and other projects, and it is especially suitable for industrial and civil buildings. It adopts mechanical interlocking or friction Kelly bars to work with rotary buckets such as sand drilling bucket, tubular drill and short spiral drill. It can also carry CFA, dual rotary drive or casing oscillator for construction.

▼06

The main and auxiliary winches both adopt single-rope technology. The service life of the wire rope is 2~4 times longer than that of the multi-row rope and the cost is lower.

▼07

The hydraulic system adopts negative flow control technology which has a fast response and good control performance.

▼08

High-power temperature-controlled independent hydraulic oil radiator can meet the construction requirements of high-temperature areas and adjust the fan speed according to temperature changes to save energy.

▼09

Isuzu electronically controlled turbocharged engine can ensure lower fuel consumption as well as convenient and efficient service.



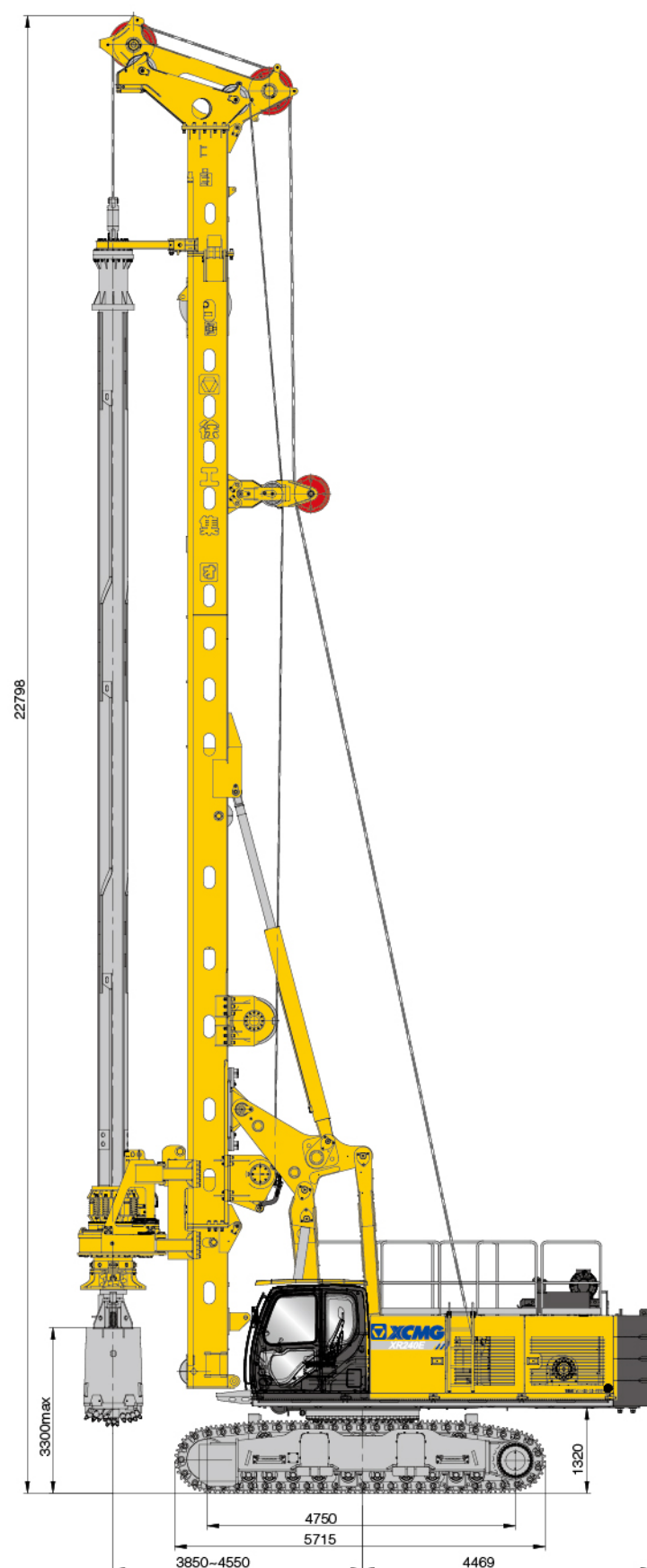
Dimension & Configuration

Standard

- Self-righting
- Rotation angle display
- Rotation sound-light alarm
- Security monitoring of the tail
- Luffing limit protection
- Mast limit (front and back, left and right)
- Manual/automatic adjustment of mast perpendicularity
- Mast perpendicularity detection
- Cathead cylinder
- Display of rotary drive torque
- Display of rotary drive speed
- Rock-entering mode of rotary drive
- Automatic forward & reverse spin-off
- Crowd cylinder
- Fuel self-priming pump
- Main winch floating
- Main winch bottom protection
- Main winch height limit
- Main winch infrared monitoring
- Real-time detection of drilling depth
- Main winch extraction force detection
- Auxiliary winch height limit
- Gradiometer
- Radio
- Air conditioner
- Oil pressure detection
- Intelligent fault detection
- Filter clogging alarm
- Scram protection
- PLC intelligent control module
- Central lubrication

Optional

- High-speed spin-off
- Crowd winch
- CFA for rotary drilling rig
- Transport landing leg
- Casing driving
- Torque multiplier



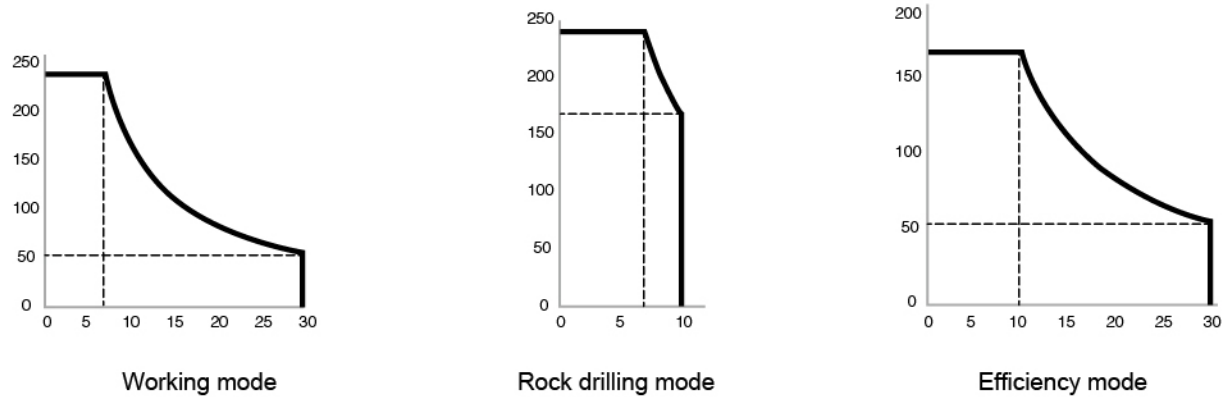
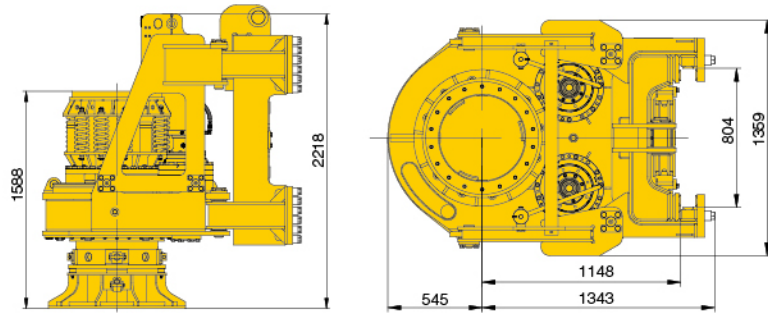
Main Technical Parameters

Working height	22.7 m	74 ft
Overall operating weight (standard)	84 t (without drilling tools)	92.6 ton(US)
Max. drilling diameter	φ2200 mm/φ2000 mm*	86.6 in/78.7 in*
Max. drilling depth	70 m	230 ft
Dimensions		
Working condition	8870×4400×22800 mm	349×173×90 in
Transport condition	17525×3250×3594 mm	690×128×142 in
Engine		
Rated power	270 kW/2000 r/min	362 hp/2000 rpm
Emission standard	EU III	EU III
Fuel tank capacity	580 L	153.2 US gal
Rotary drive		
Rated output torque	240 kNm	176899 lbf*ft
Rotary speed	7-30 r/min	7-30 rpm
Crowd cylinder		
Max. crowd force push/pull	210 kN/220 kN	47210 lbf/47210 lbf
Max. stroke	5 m	16 ft
Crowd winch (optional)		
Max. crowd force push/pull	250 kN/250 kN	56203 lbf/56203 lbf
Max. stroke	13 m	43 ft
Main winch		
Max. pulling force	240 kN	53954 lbf
Max. line speed	70 m/min	230 ft/min
Auxiliary winch		
Max. pulling force	80 kN	17985 lbf
Max. line speed	70 m/min	230 ft/min
Mast inclination		
Lateral/forward/backward	±4°/5°/15°	±4°/5°/15°
Undercarriage		
Max. travel speed of overall unit	1.8 km/h	1.1 mph
Min. ground clearance	450 mm	17.7 in
Width of triple grouser track shoes	800 mm	31.5 in
Width of crawlers retracted/extended	3250-4400 mm	128 -173.2 in
Max. climbable gradient of overall unit	35%	35%
Ground pressure	125 kPa	18 psi
Hydraulic system		
Hydraulic oil tank capacity	850 L	224.5 US gal
Working pressure	34.5 MPa	5004 psi

Note: Parameters with "*" refer to the ones of crowd winch configuration.

Rotary Drive

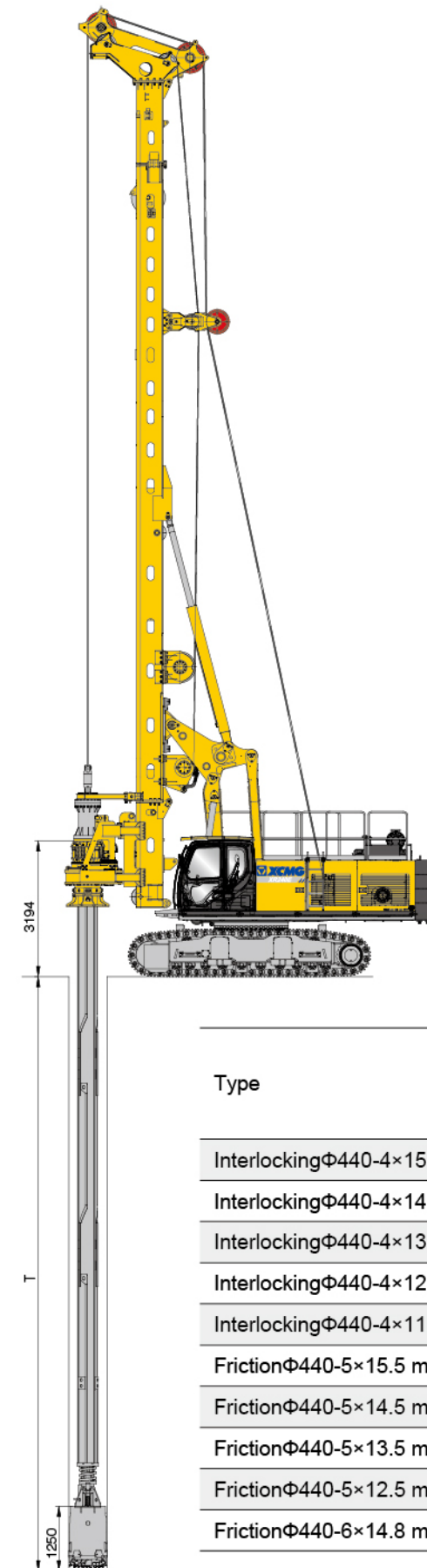
All-purpose rotary drive of crowd cylinder/winch adopts vertical pin connected power box and bracket, which has high reliability and convenient assembly as well as disassembly. The lower cover of the box body has double-layer sealing with good sealing performance and long service life. Casing driving and torque multiplier can be chosen to improve the casing capacity of the rig.



Kelly Bar

Interlocking Kelly bar	Weight		Drilling depth	
Φ440-4×15.5 m	10700 kg	23600 lb	56 m	183 ft
Φ440-4×14.5 m	10000 kg	22050 lb	52 m	170 ft
Φ440-4×13.5 m	9300 kg	20500 lb	48 m	157 ft
Φ440-4×12.5 m	8650 kg	19070 lb	44 m	144 ft
Φ440-4×11.5 m	8000 kg	17640 lb	40 m	131 ft
Friction Kelly bar	Weight		Drilling depth	
Φ440-5×15.5 m	11000 kg	24250 lb	70 m	229 ft
Φ440-5×14.5 m	10300 kg	22700 lb	65 m	213 ft
Φ440-5×13.5 m	9600 kg	21160 lb	60 m	196 ft
Φ440-5×12.5 m	8900 kg	19620 lb	55 m	180 ft
Φ440-6×14.8 m	11500 kg	25360 lb	80 m	262 ft

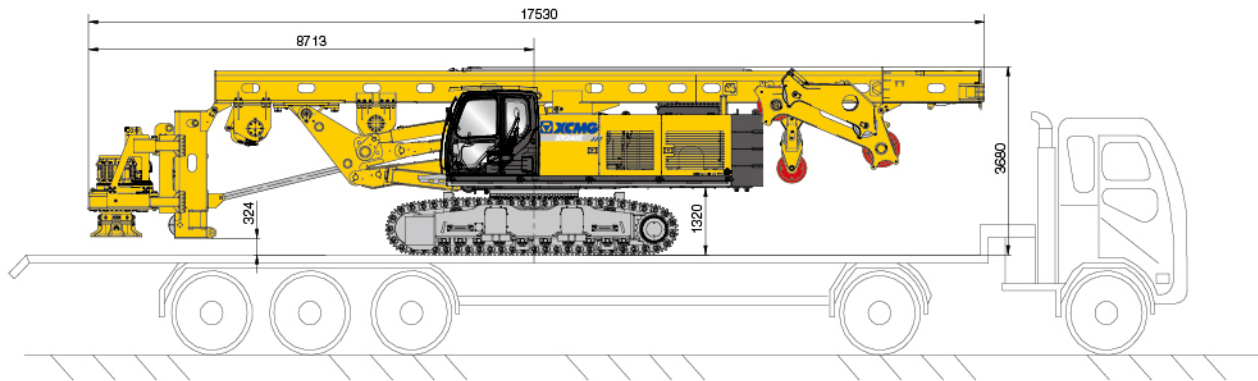
Kelly Drilling System



Type	Height of drill bit above ground	Recommended pile casing length	
		Without casing oscillator	With casing oscillator
InterlockingΦ440-4×15.5 m	1.8 m(5.9 ft)	1 m(3.3 ft)	/
InterlockingΦ440-4×14.5 m	2.8 m(9.2 ft)	2 m(6.6 ft)	/
InterlockingΦ440-4×13.5 m	3.8 m(12.5 ft)	3 m(9.8 ft)	1.5 m(4.9 ft)
InterlockingΦ440-4×12.5 m	4.8 m(15.7 ft)	4 m(13.1 ft)	2.5 m(8.2 ft)
InterlockingΦ440-4×11.5 m	5.8 m(19.0 ft)	5 m(16.4 ft)	3.5 m(11.5 ft)
FrictionΦ440-5×15.5 m	1.8 m(5.9 ft)	1 m(3.3 ft)	/
FrictionΦ440-5×14.5 m	2.8 m(9.2 ft)	2 m(6.6 ft)	/
FrictionΦ440-5×13.5 m	3.8 m(12.5 ft)	3 m(9.8 ft)	1.5 m(4.9 ft)
FrictionΦ440-5×12.5 m	4.8 m(15.7 ft)	4 m(13.1 ft)	2.5 m(8.2 ft)
FrictionΦ440-6×14.8 m	2.5 m(8.2 ft)	1.5 m(4.9 ft)	/

Transportation Plan

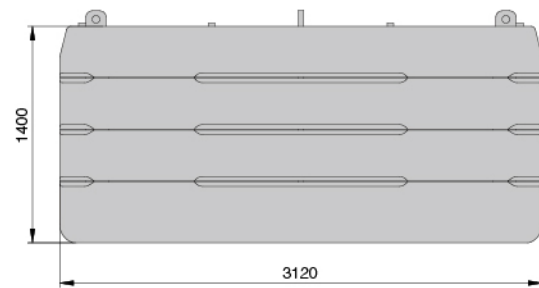
Whole Machine Transportation



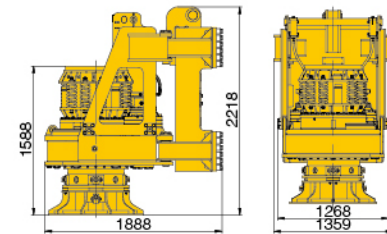
Transport weight: 66 t (without trailer, Kelly bar or drilling tools)
 Transport width: 3200 mm

Disassembly Transportation

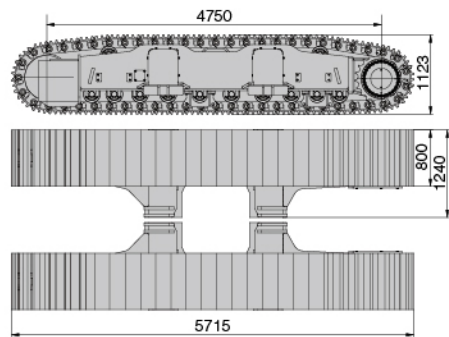
1. Disassemble the Kelly bar and drilling bit
2. Disassemble the counterweight
3. Disassemble the rotary drive
4. Disassemble left and right carling and track assembly



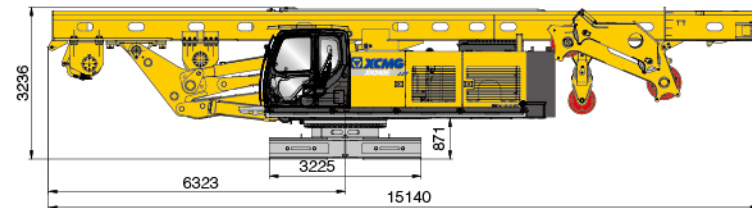
Weight of counterweight: 9 t



Weight of rotary drive assembly: 3.8 t



Weight of carling and track: 9 t



Weight: 33 t; Transport width: 3200 mm

Drilling Tools

Main application: gravel cobble and weathered rock



Double-bottom double-door bucket with cutting teeth



Double-bottom single-door bucket with cutting teeth

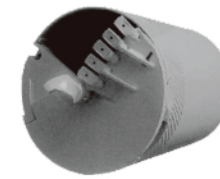


Double cut bucket with cutting teeth



Double cut single spiral auger with cutting teeth

Main application: soil, sand and ooze



Double-bottom single-door soil bucket



Double-bottom single-door soil bucket



Core barrel with cutting teeth



Core barrel with cone bit

Main application: hard bed rock and boulder formations

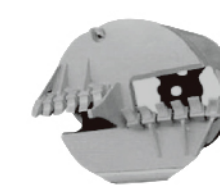
Main application: clay, soil, dry construction method



Split type drill bit



Double cut single spiral soil auger



Single-bottom double-door soil bucket



Cleaning bucket

Main application: cleaning up the sediment at the bottom of the hole

Main application: cobble, strong weathered rock, Tundra, broken rock



Single cut single spiral auger with cutting teeth



Double cut single spiral auger with cutting teeth

Main application: soil, sand, soft rock

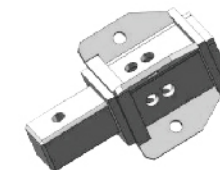


Belling bucket for soil



Belling bucket for rock

Others



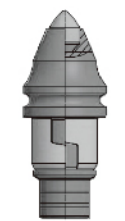
Kelly box adapter



Extension rod



Casing



Betek tooth

Construction Cases



E Series Rotary Drilling Rig

