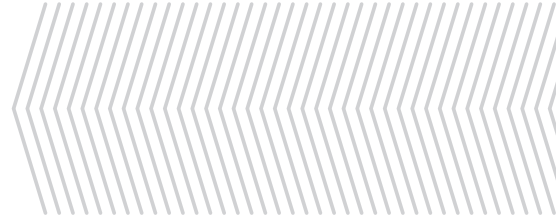


EK250

CYLINDER CROWD DRILLING RIG



CZM
FOUNDATION EQUIPMENT



czm-us.com

EK250

FEATURES

The **EK250** is a robust, heavy-duty drilling rig engineered for high production in hard soil and rock drilling. Designed to deliver the high torque and crowd force, with structural durability required for the toughest foundation applications, it combines strength, performance, and reliability to handle demanding jobsite conditions. The EK250 operates with full capability in both **Long Mast** and **Short Mast** configurations, for projects containing large diameter, deep shafts or under power lines.

CZM'S OPERATOR ASSIST TECHNOLOGY:

- › Auto Gear shifting for Rotary
- › Auto Gear shifting for Main winch
- › Drill Lock
- › Auto Crowd
- › Auto Level
- › Return to Center

TELEMATICS: The rig includes a CZM Telematics System for remote monitoring, diagnostics, and software updates, enabling CZM Support to assist with troubleshooting and performance optimization.

BASE

The new Cat® 340 Next Gen is a purpose-built machine powered by a fuel-efficient U.S. EPA Tier 4 Final C9.3 ACERT engine.

Equipped with CAT Vision Link that allows management to monitor machine operations and maintenance data online and wireless, providing information such as location, hours, fuel usage, idle time, event codes and maintenance schedule.

ROTARY

Robust design, with 2 slewing bearings on top and bottom, robust pinion and main gear.

2 groups of Hydraulic Motor / Planetary Gears for high torque and long life.

Anti-cavitation and anti-shock system for longer hydraulic motor life.

Cooling system for hydraulic motors and gearboxes.

Power-shift for High spin-off speed (100rpm) for quick discharge of soil.

3 operation speeds and 3 spinoff speeds. For high torque and high speeds.

Automatic gear shifting, for seamless operation, high production.

Exchangeable keys, bolted and reversible. No need to rebuild keys by welding inside the rotary.

Hydraulic measurement of torque displayed in the cab for the operator.



UNDERCARRIAGE

Caterpillar variable undercarriage with a reinforced H-style frame provides increased stability and traction force. Its variable width design expands for maximum stability during drilling and retracts for easy transport.

MAST

Reinforced mast, with high strength steel.

MAIN WINCH

Special groove for better cable winding and longer cable life.

Press roller to maintain cable alignment standard.

2 gears allows for both high speed and high pulling force.

Automatic gear shifting, for seamless operation, high production.

Automatic down the hole winch stop. When Kelly bar reaches the bottom of the hole, winch automatically stops.

CAB

AM/FM Radio, Air conditioning/Heating

Top protection

LCD monitor for Engine and Hydraulics computer, with diagnostic system

CONTROL SYSTEM

Touch Screen Display

Measurements:

- Torque and rotary speeds
- Drilling depth
- Mast inclination X/Y axis
- Main Winch pulling force
- Crowd force

Automatic functions:

- Auto-level of mast
- Rotary automatic gear shifting
- Main Winch automatic gear shifting

Maintenance and data logging



SAFETY

Stability according to EN16228

Base, Mast and Boom Inclinometers

Working radius warning

Limit switches for Boom, Mast Tilt, Main Winch and Service Winch

Operator warnings for non recommended operations.

ACCESSORIES

Lighting package

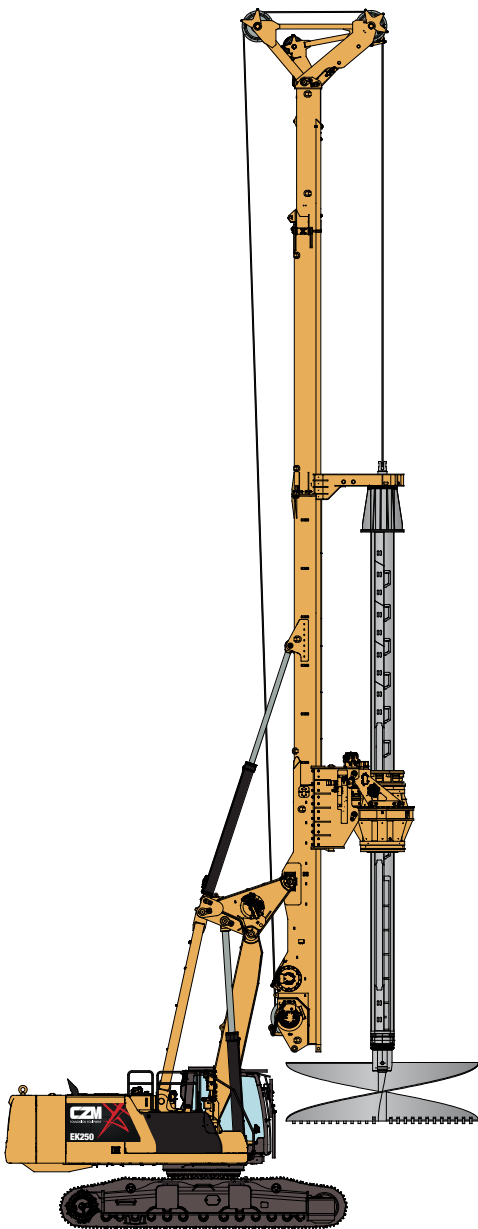
Refueling pump

O-ring kits

Toolbox

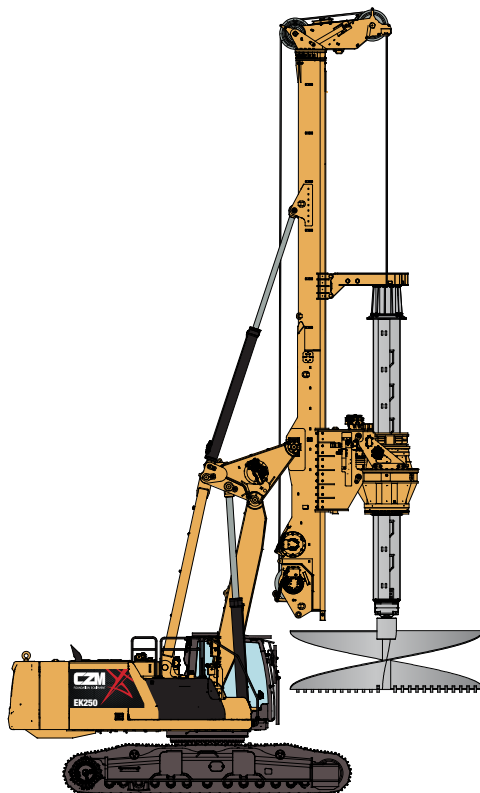
EK250

APPLICATIONS



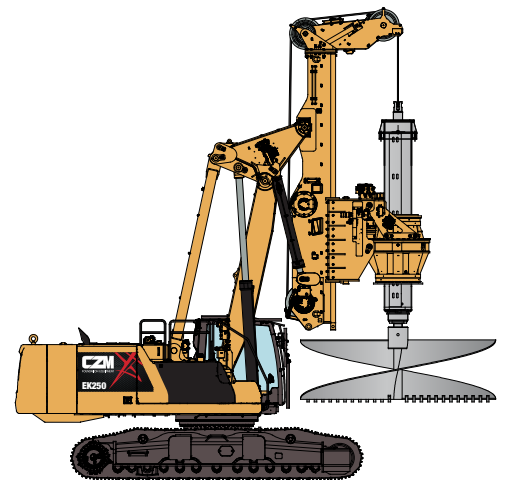
STANDARD MAST

Standard Drilling Depth	125 ft
Diameter (Max. w/ lower mast)	8 ft 4 in
Diameter (Max. w/o lower mast)	13 ft
Max. Torque	234,000 ft.lbs
Operating weight*	195,000 lb



MID MAST

Standard Drilling Depth	95 ft
Diameter (Max. w/ lower mast)	8 ft 4 in
Diameter (Max. w/o lower mast)	13 ft
Max. Torque	234,000 ft.lbs
Operating weight*	187,200 lb



SHORT MAST

Standard Drilling Depth	55 ft
Diameter (Max. w/ lower mast)	8 ft 4 in
Diameter (Max. w/o lower mast)	13 ft
Max. Torque	234,000 ft.lbs
Operating weight*	170,000 lb

* Weight includes standard kelly bar, without tool.

EK250

TECHNICAL SPECIFICATIONS

ROTARY HEAD

Maximum torque (Nominal)	234,000 ft.lbs
Working speed of rotation	10-22 rpm
Spin-off rotation	50-100 rpm

CROWD SYSTEM

Cylinder stroke - standard mast	19 ft 6 in
Cylinder stroke - short mast	8 ft 3 in
Cylinder push force	73,400 lbf
Cylinder push speed	34 ft/min
Cylinder pull force	81,900 lbf
Cylinder pull speed	31 ft/min

MAIN WINCH

Max. pull-force - 1st Layer (effective)*	59,000 lbf
Max. pull-force - 1st Layer - 2nd Speed (effective)	46,400 lbf
Line speed - 1st Layer*	200 ft/min
Max. line speed - 1st Layer - 2nd Speed	260 ft/min
Cable diameter	1 ½ in
Drum diameter - 1st Layer*	22 in

*Option for Short Mast Main Winch Max. Line pull of 66,500 lbf (180 ft/min)

AUXILIARY WINCH

Max. pull-force - 1st Layer (effective)	22,000 lbf
Line speed - 1st Layer	85 ft/min
Cable diameter	3/4 in
Drum diameter - 1st Layer	16.5 in

MAST INCLINATION

Backward	15°
Forward	5°
Sideways	5° / 5°

DIESEL ENGINE Cat® 340 - (Cat® C9.3 ACERT™)

Net Power (ISO 14396)	352 hp
Displacement	568 in³
Fuel Tank	158 gal

HYDRAULIC SYSTEM - (Cat® 340)

Hydraulic pressure	5,076 psi
Flow rate (main circuit)	2x74 gal/min
Flow rate (auxiliary circuit)	26.5 gal/min
Hydraulic oil tank capacity	42.5 gal

UNDERCARRIAGE

Track length	19 ft 8 in
Length to Center of rollers	16 ft 5 in
Closed position width (retracted)	9 ft 10 in
Working position width (extended)	14 ft 1 in
Shoes width	31.5 in
Max. drawbar pull	144,600 lbf
Max. travel speed	1.0 mph

STANDARD MAST

GENERAL DIMENSIONS



KELLY BAR OPTIONS	PART #	# ELEMENTS	DEPTH - DPT ¹	TRANSPORT - KCL ²	HGT ³	KOP ⁴	WEIGHT ⁵
4/125 Interlock	25842.4125.000	4	123 ft 4 in	41 ft	18 ft 8 in	130 ft 9 in	20,100 lb
4/158 Interlock	25842.4158.000	4	157 ft 3 in	49 ft 3 in	18 ft 8 in	164 ft 7 in	23,300 lb
4/200 Interlock ⁶	25842.4200.000	4	204 ft	61 ft 1 in	9 ft 10 in	211 ft 6 in	28,500 lb

¹ DPT: Total depth with 5 ft tool boomed all the way back. Additional 2 ft of depth if boomed forward.

² KCL: Length measured from bottom of stub to top of swivel.

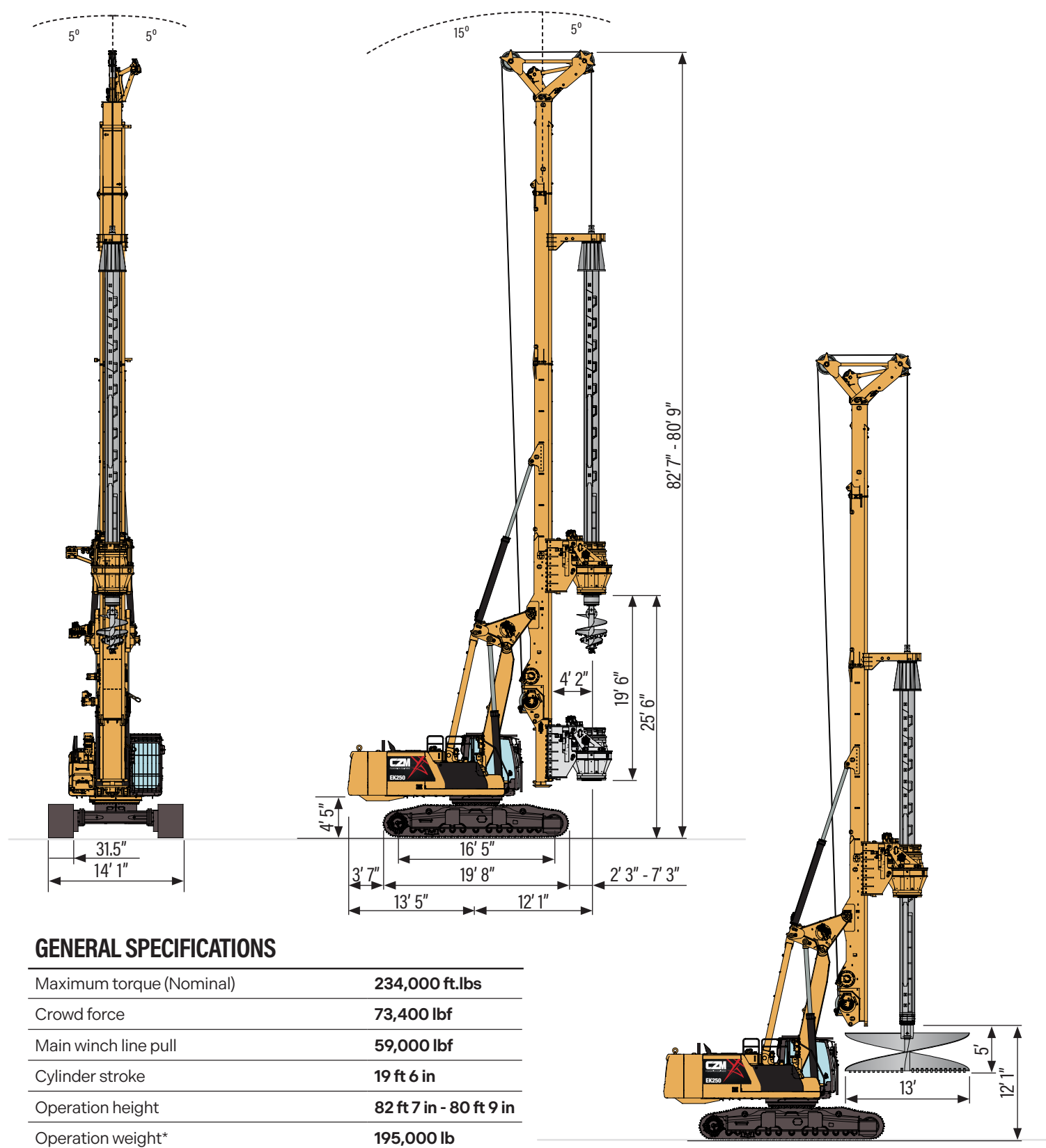
³ HGT: Length measure from ground to bottom of auger assuming a 5 ft tall tool.

⁴ KOP: Length measure from top of flange to bottom of stub (without a tool).

⁵ Weight includes A-frame and swivel.

⁶ Special kelly bar, not in stock.

Other kelly bars available upon request.



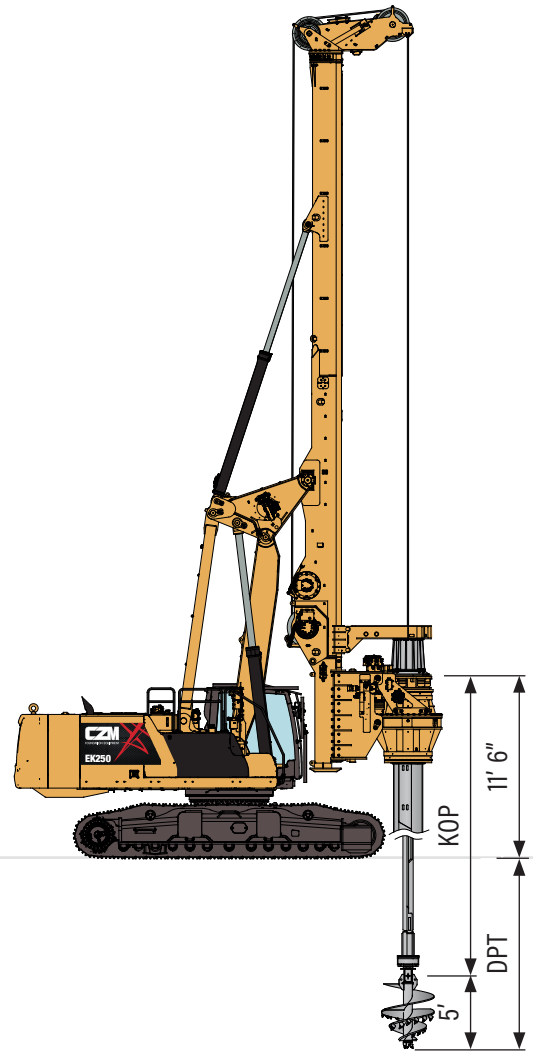
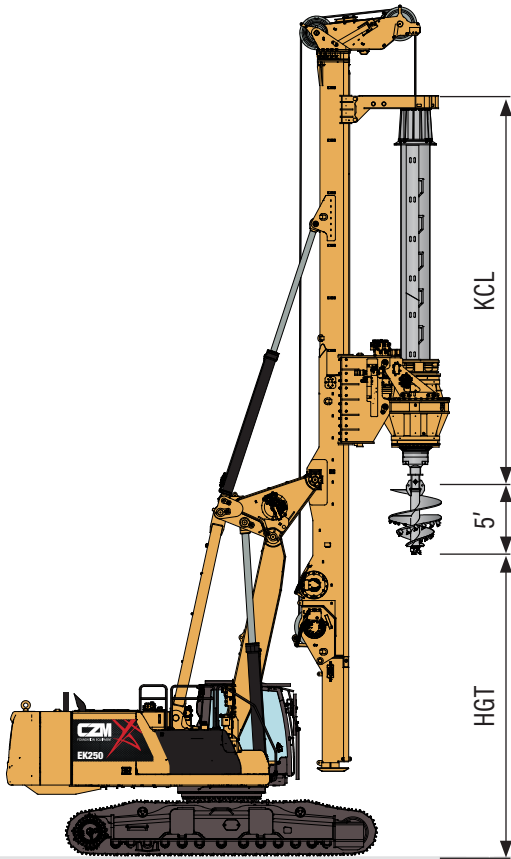
GENERAL SPECIFICATIONS

Maximum torque (Nominal)	234,000 ft.lbs
Crowd force	73,400 lbf
Main winch line pull	59,000 lbf
Cylinder stroke	19 ft 6 in
Operation height	82 ft 7 in - 80 ft 9 in
Operation weight*	195,000 lb

* with 4/125 Kelly bar, without tool.

MID MAST

GENERAL DIMENSIONS



KELLY BAR OPTIONS	PART #	# ELEMENTS	DEPTH - DPT ¹	TRANSPORT - KCL ²	HGT ³	KOP ⁴	WEIGHT ⁵
Standard 6/95 Interlock	25852.6095.000	6	93 ft	22 ft 10 in	18 ft 8 in	100 ft 4 in	16,500 lb

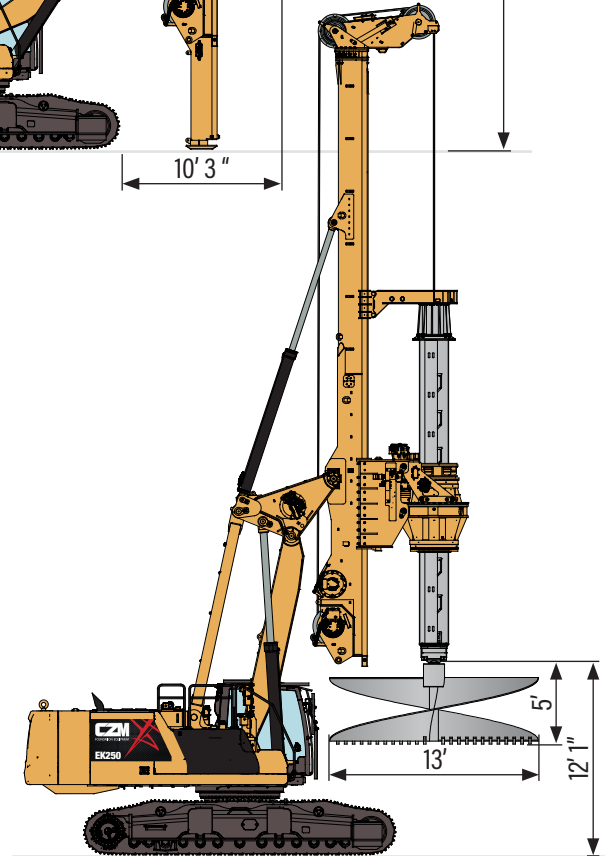
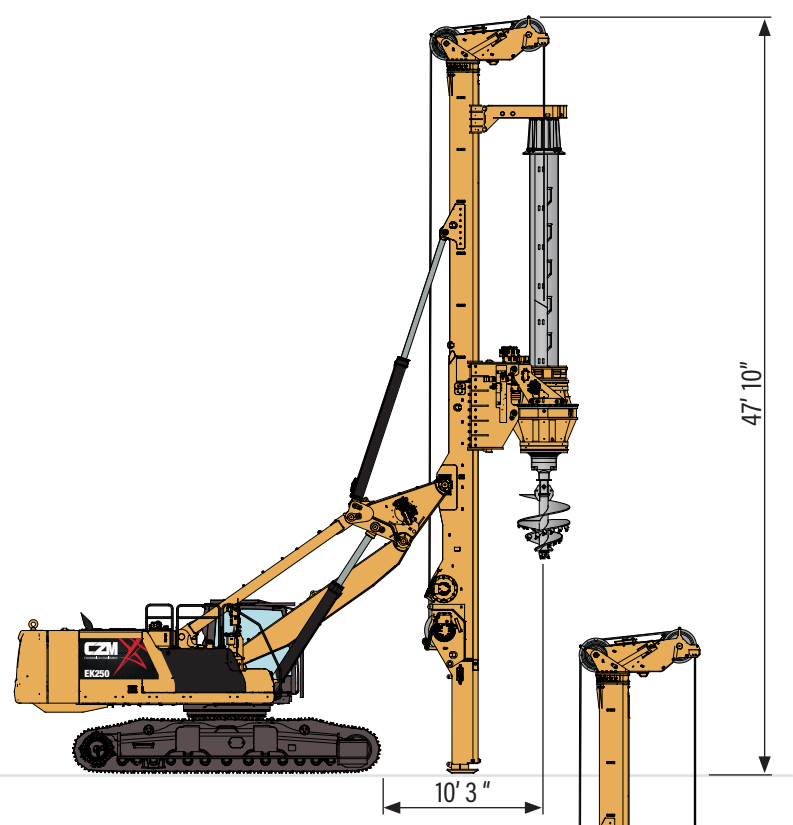
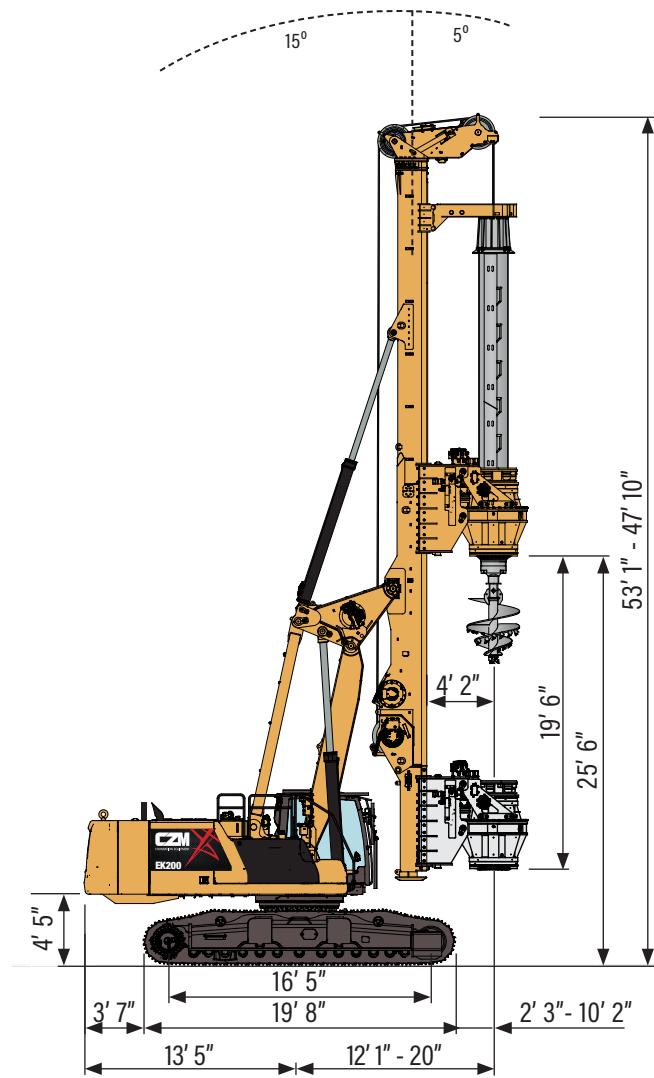
¹ DPT: Total depth with 5 ft tool boomed all the way back*. Additional 5 ft of depth if boomed forward.

² KCL: Length measured from bottom of stub to top of swivel.

³ HGT: Length measure from ground to bottom of auger assuming a 5 ft tall tool. More clearance can be reached with mast extension.

⁴ KOP: Length measure from top of flange to bottom of stub (without a tool).

⁵ Weight with A-frame and swivel.



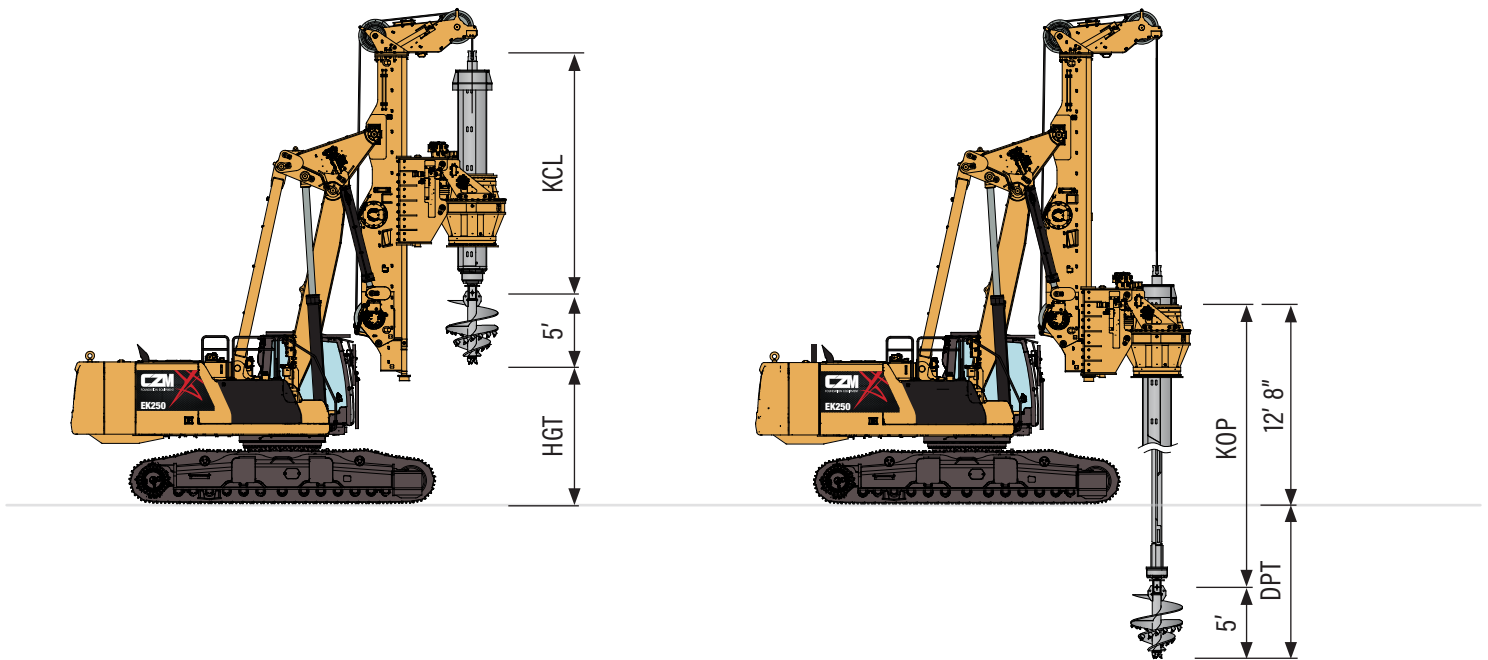
GENERAL SPECIFICATIONS

Maximum torque (Nominal)	234,000 ft.lbs
Crowd force	73,400 lbf
Main winch line pull	59,000 lbf
Cylinder stroke	19 ft 6 in
Operation height	53 ft 1 in - 47' 10"
Operation weight*	187,200 lb

* with 4/125 kelly bar, without tool.

SHORT MAST

GENERAL DIMENSIONS



KELLY BAR OPTIONS	PART #	# ELEMENTS	DEPTH - DPT ¹	TRANSPORT - KCL ²	HGT ³	KOP ⁴	WEIGHT ⁵
Standard 6/55 Interlock	25852.6055.000	6	50 ft 10 in	15 ft 7 in	8 ft 10 in	59 ft 4 in	10,500 lb
6/72 Interlock	25852.6072.000	6	71 ft 2 in	18 ft 10 in	5 ft 4 in	79 ft 3 in	12,200 lb

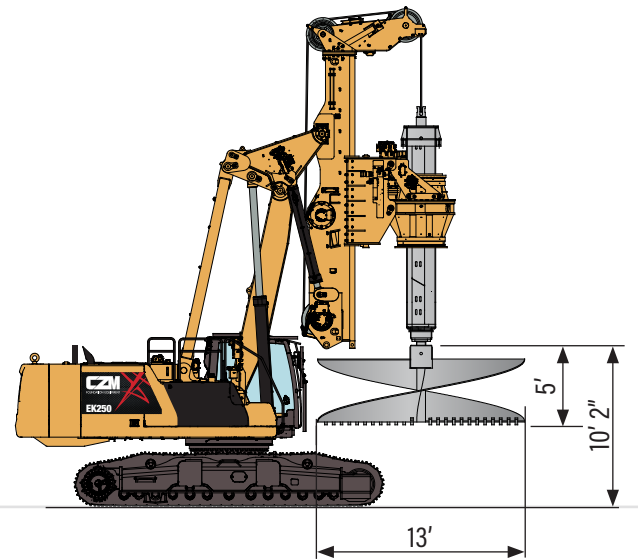
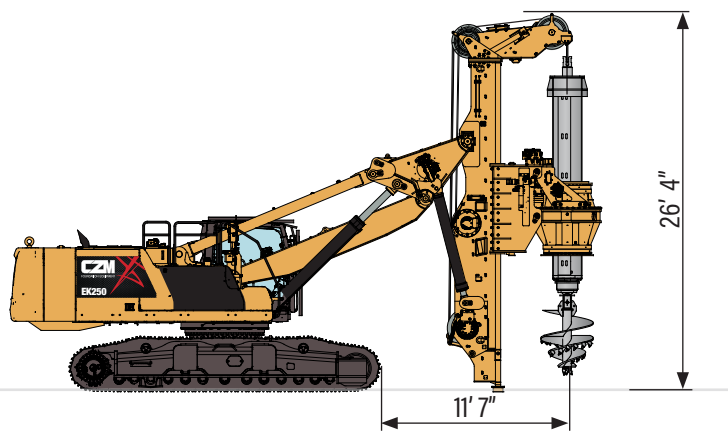
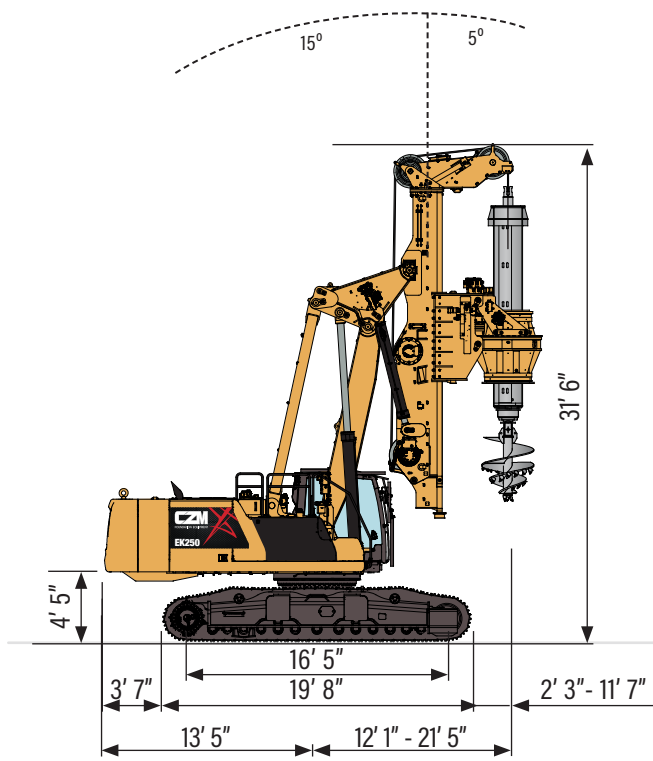
¹ DPT: Total depth with 5 ft tool boomed all the way back*. Additional 6 ft 9 in of depth if boomed forward.

² KCL: Length measured from bottom of stub to top of swivel.

³ HGT: Length measure from ground to bottom of auger assuming a 5 ft tall tool. More clearance can be reached with mast extension.

⁴ KOP: Length measure from top of flange to bottom of stub (without a tool).

⁵ Weight with swivel.



GENERAL SPECIFICATIONS

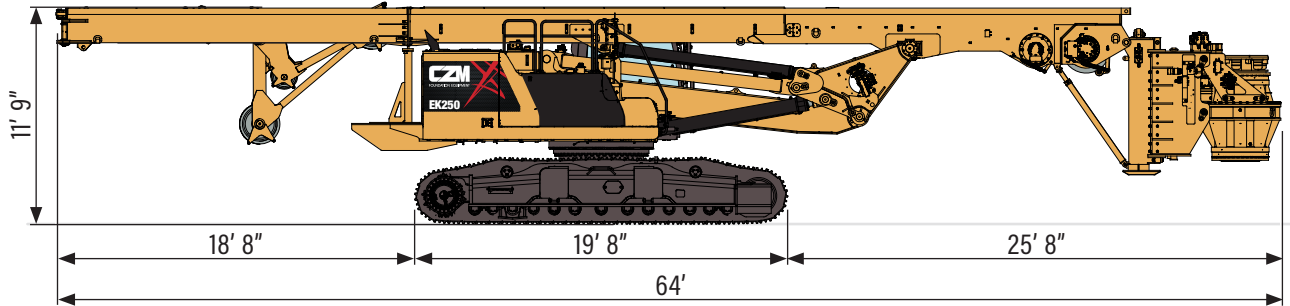
Maximum torque (Nominal)	234,000 ft.lbs
Crowd force	73,400 lbf
Main winch line pull	66,500 lbf
Cylinder stroke	8 ft 3 in
Operation height	31 ft 6 in - 26 ft 4 in
Operation weight*	170,000 lb

* with 6/55 kelly bar, without tool

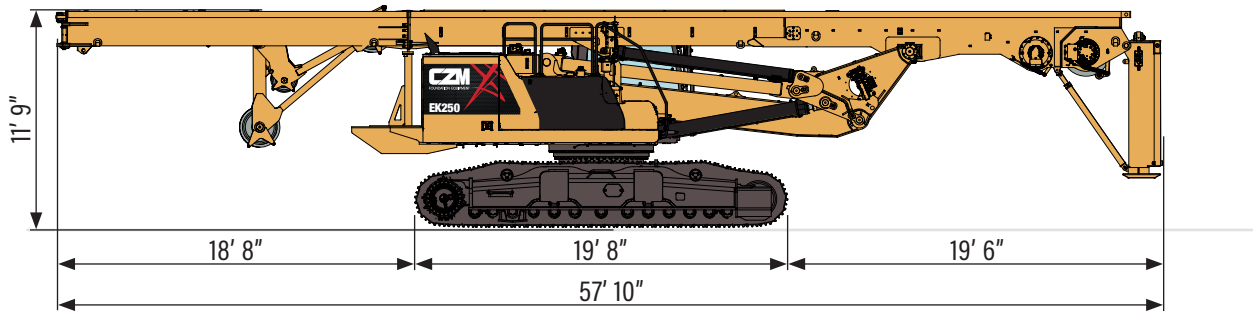
TRANSPORT

DIMENSIONS

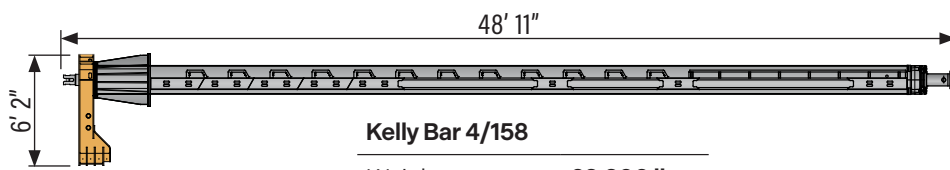
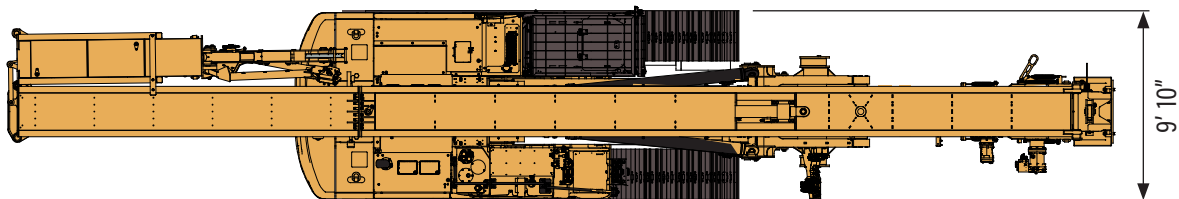
STANDARD MAST



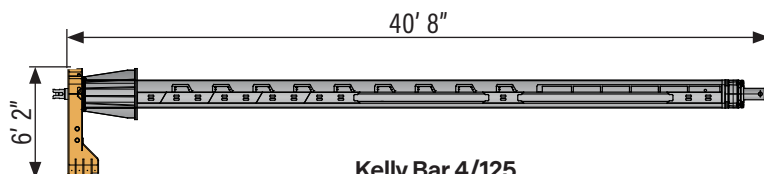
Height	11 ft 9 in	Width	9 ft 10 in
Length	64 ft	Weight	145,870 lb



Height	11 ft 9 in	Width	9 ft 10 in
Length	57 ft 10 in	Weight	129,290 lb

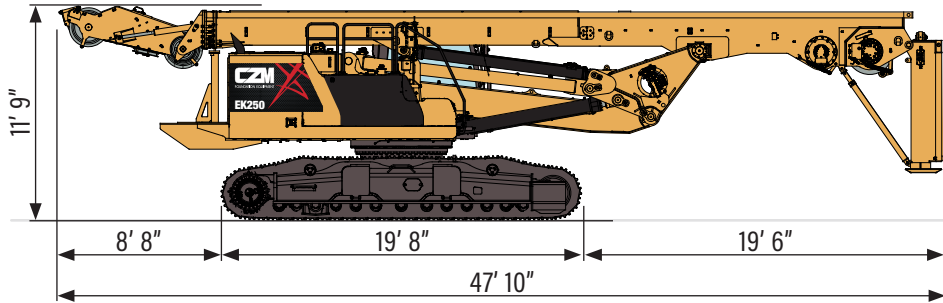


Kelly Bar 4/158
Weight **23,300 lb**

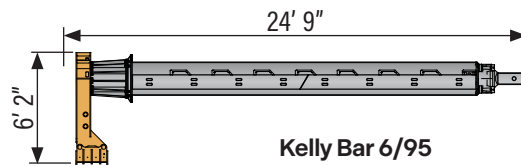


Kelly Bar 4/125
Weight **20,100 lb**

MID MAST



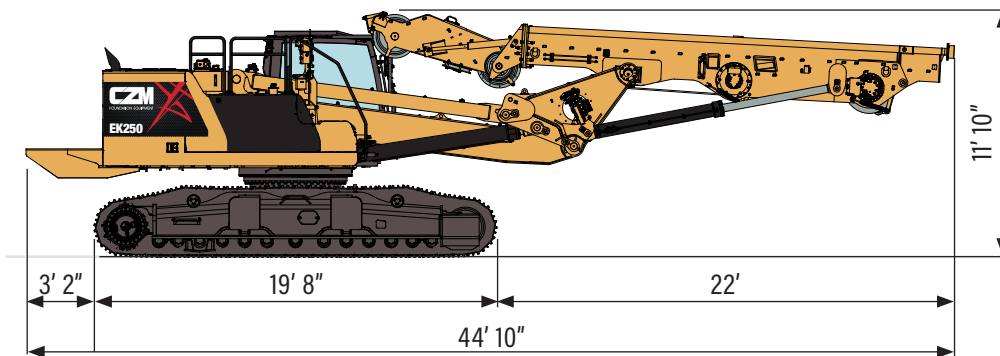
Height	11 ft 9 in
Length	47 ft 10 in
Width	9 ft 10 in
Weight	125,090 lb



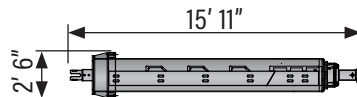
Kelly Bar 6/95

Weight **16,500 lb**

SHORT MAST



Height	11 ft 10 in
Length	44 ft 10 in
Width	9 ft 10 in
Weight	113,890 lb

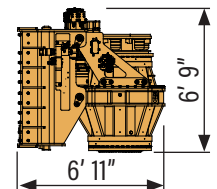
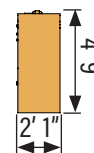
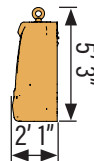


Kelly Bar 6/55

Weight **10,500 lb**

COMPONENTS

Rotary	16,580 lb
Main Cat® Counterweight	18,680 lb
Aux. Counterweight	10,350 lb









FOUNDATION EQUIPMENT

> HEADQUARTERS

962 Interstate Centre Blvd.
Ellabell, Georgia 31308
(912) 200-7654

czm-us.com



AFTER SALES

> CALIFORNIA

1720 N. Ventura Avenue
Ventura, CA 93001
(805) 701-9885

> GEORGIA

145 East Industrial Blvd.
Pembroke, GA 31321
(912) 200-7656

> KENTUCKY

170 Budco Lane
Elizabethtown, KY 42701
(912) 675-3059

> TEXAS

2501 Blue Mound Rd. W.
Haslet, TX 76052
(817) 232-8053

ABOUT CZM

CZM is headquartered in Savannah, Georgia, USA. For 50 years, we have specialized in manufacturing foundation equipment. We design and customize models for many different drilling applications including Drilled Shafts, CFA, Displacement piles, Soilmixing, Micropiles, Anchors, Driven piles and Soil improvement. We are a Caterpillar OEM (Original Equipment Manufacturer).

myCZM > portal.myczm-us.com

The myCZM Web Portal is the essential digital point of reference for all customers and dealers, providing instant access to everything you need.

- > **Machine Documentation:** Consult manuals, warranties, stability charts, and technical schematics (electrical/hydraulic).
- > **Spare Parts:** Navigate and identify needed parts, and submit direct quotation requests.
- > **Support:** Directly submit information and general inquiries.

CZM CAPITAL

CZM provides flexible, affordable financing to get our machines working for you, Get more than just a machine for your money.

Contact us today at (877) 773-0333.

Specifications are subject to change without notice.