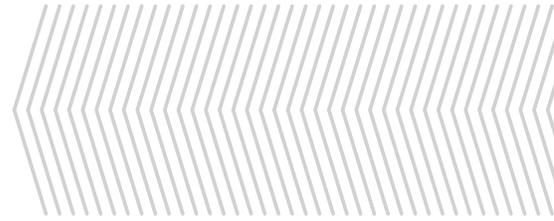


# EK200

## CYLINDER CROWD DRILLING RIG



**CZM**  
FOUNDATION EQUIPMENT



[czm-us.com](http://czm-us.com)

# EK200

## FEATURES

The EK200 is a versatile drilling rig, that is very productive on hard soil and rock drilling. It can be easily broken down for transport in 2 loads.

Easy conversion from standard to short mast by replacing:

- › **Top mast assembly**
- › **Crowd cylinder**
- › **Kelly bar**

### **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 (110rpm) 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 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

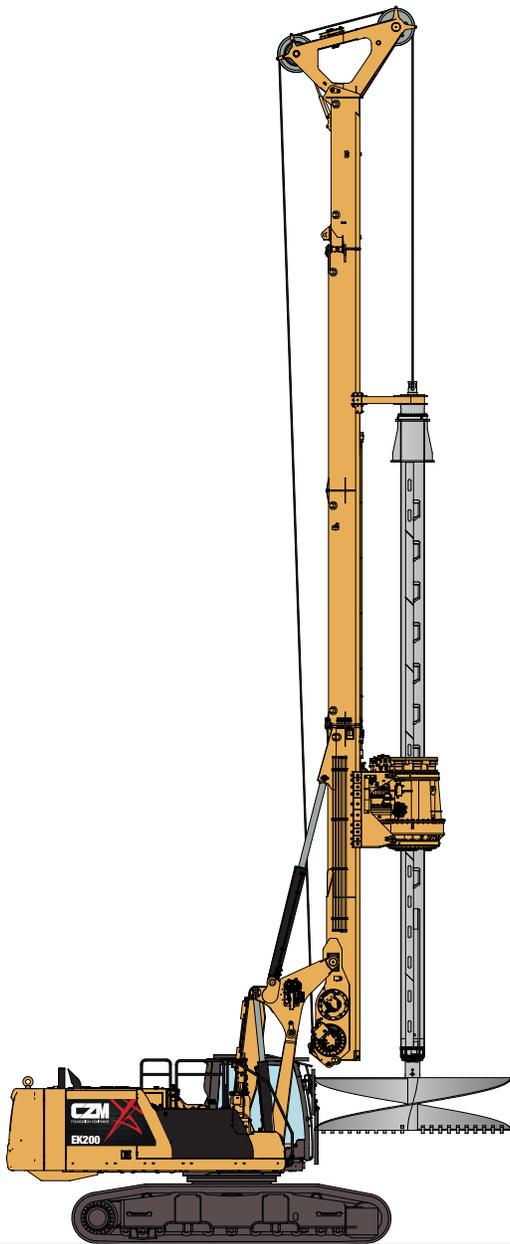
Refueling pump

O-ring kits

Toolbox

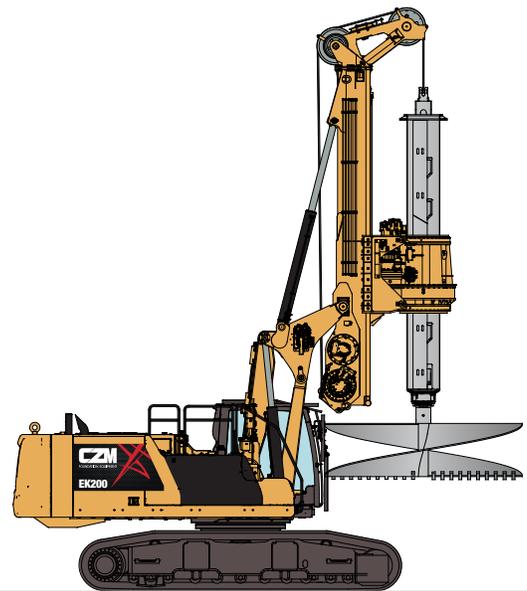
# EK200

## APPLICATIONS



### STANDARD MAST

Standard Drilling Depth	<b>125 ft</b>
Diameter (Max. w/ lower mast)	<b>5 ft 10 in</b>
Diameter (Max. w/o lower mast)	<b>11 ft</b>
Max. Torque	<b>193,750 ft.lbs</b>
Operating weight*	<b>139,000 lb</b>



### SHORT MAST

Standard Drilling Depth	<b>55 ft</b>
Diameter (Max. w/ lower mast)	<b>5 ft 10 in</b>
Diameter (Max. w/o lower mast)	<b>11 ft</b>
Max. Torque	<b>193,750 ft.lbs</b>
Operating weight*	<b>127,500 lb</b>

\*Weight includes standard Kelly, without tool.

# EK200

## TECHNICAL SPECIFICATIONS

### ROTARY HEAD - RT 460 - 14

Maximum torque (Nominal)	<b>193,750 ft.lbs</b>
Working speed of rotation	<b>12-26 rpm</b>
Spin-off rotation	<b>57 - 110 rpm</b>

### CROWD SYSTEM

Cylinder stroke - standard mast	<b>16 ft 5 in</b>
Cylinder stroke - short mast	<b>10 ft</b>
Cylinder push force	<b>65,000 lbf</b>
Cylinder push speed	<b>35 ft/min</b>
Cylinder pull force	<b>55,500 lbf</b>
Cylinder pull speed	<b>40 ft/min</b>

### MAIN WINCH

Max. pull-force - 1st Layer (effective)	<b>53,400 lbf</b>
Max. pull-force - 1st Layer - 2nd Speed (effective)	<b>43,100 lbf</b>
Line speed - 1st Layer	<b>220 ft/min</b>
Max. line speed - 1st Layer - 2nd Speed	<b>275 ft/min</b>
Cable diameter	<b>26 mm</b>
Drum diameter - 1st Layer	<b>20.5 in</b>

### AUXILARY WINCH

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

### MAST INCLINATION

Backward	<b>15°</b>
Forward	<b>5°</b>
Sideways	<b>4° / 4°</b>

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

Net Power (ISO 14396)	<b>352 hp</b>
Displacement	<b>568 in<sup>3</sup></b>
Fuel Tank	<b>158 gal</b>

### HYDRAULIC SYSTEM - (Cat® 340)

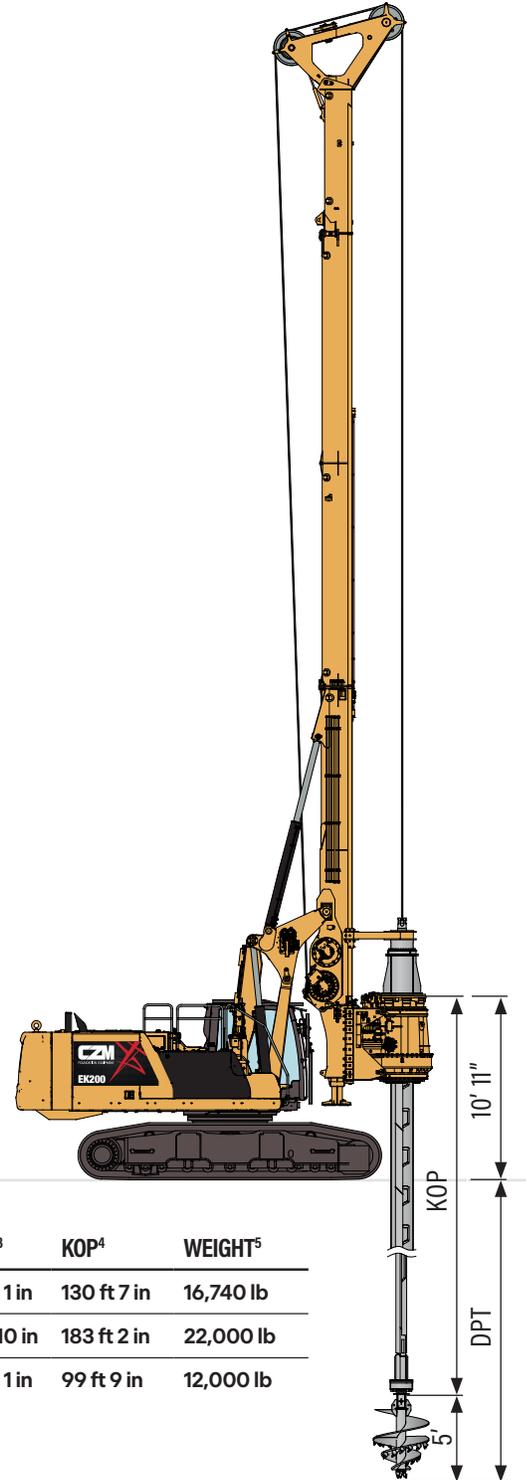
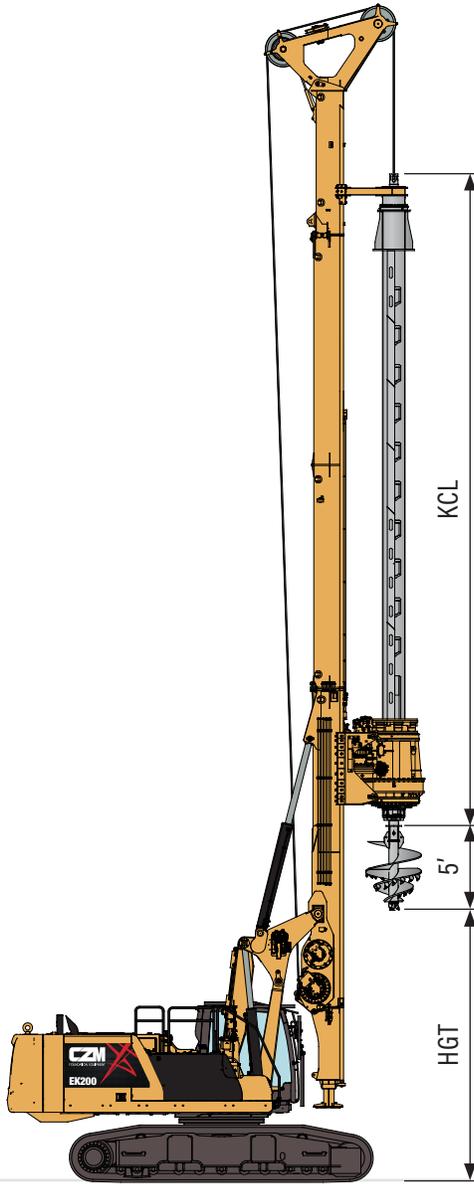
Hydraulic pressure	<b>5,076 psi</b>
Flow rate (main circuit)	<b>2x74 gal/min</b>
Flow rate (auxiliary circuit)	<b>26.5 gal/min</b>
Hydraulic oil tank capacity	<b>42.5 gal</b>

### UNDERCARRIAGE

Track length	<b>17 ft 10 in</b>
Length to Center of rollers	<b>15 ft 1 in</b>
Closed position width (retracted)	<b>9 ft 10 in</b>
Working position width (extended)	<b>14 ft 7 in</b>
Shoes width	<b>28.3 in</b>
Max. drawbar pull	<b>95,150 lbf</b>
Max. travel speed	<b>1.3 mph</b>

# STANDARD MAST

## GENERAL DIMENSIONS



KELLY BAR OPTIONS	PART #	# ELEMENTS	DEPTH - DPT <sup>1</sup>	TRANSPORT - KCL <sup>2</sup>	HGT <sup>3</sup>	KOP <sup>4</sup>	WEIGHT <sup>5</sup>
4/125 Interlock	25852.4130.000	4	124 ft	39 ft 4 in	16 ft 1 in	130 ft 7 in	16,740 lb
4/175 Interlock	25852.4175.000	4	176 ft 4 in	52 ft 6 in	6 ft 10 in	183 ft 2 in	22,000 lb
3/90 Interlock <sup>6</sup>	25852.3090.000	3	93 ft	39 ft 4 in	16 ft 1 in	99 ft 9 in	12,000 lb

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

<sup>2</sup> KCL: Length measured from bottom of stub to top of swivel.

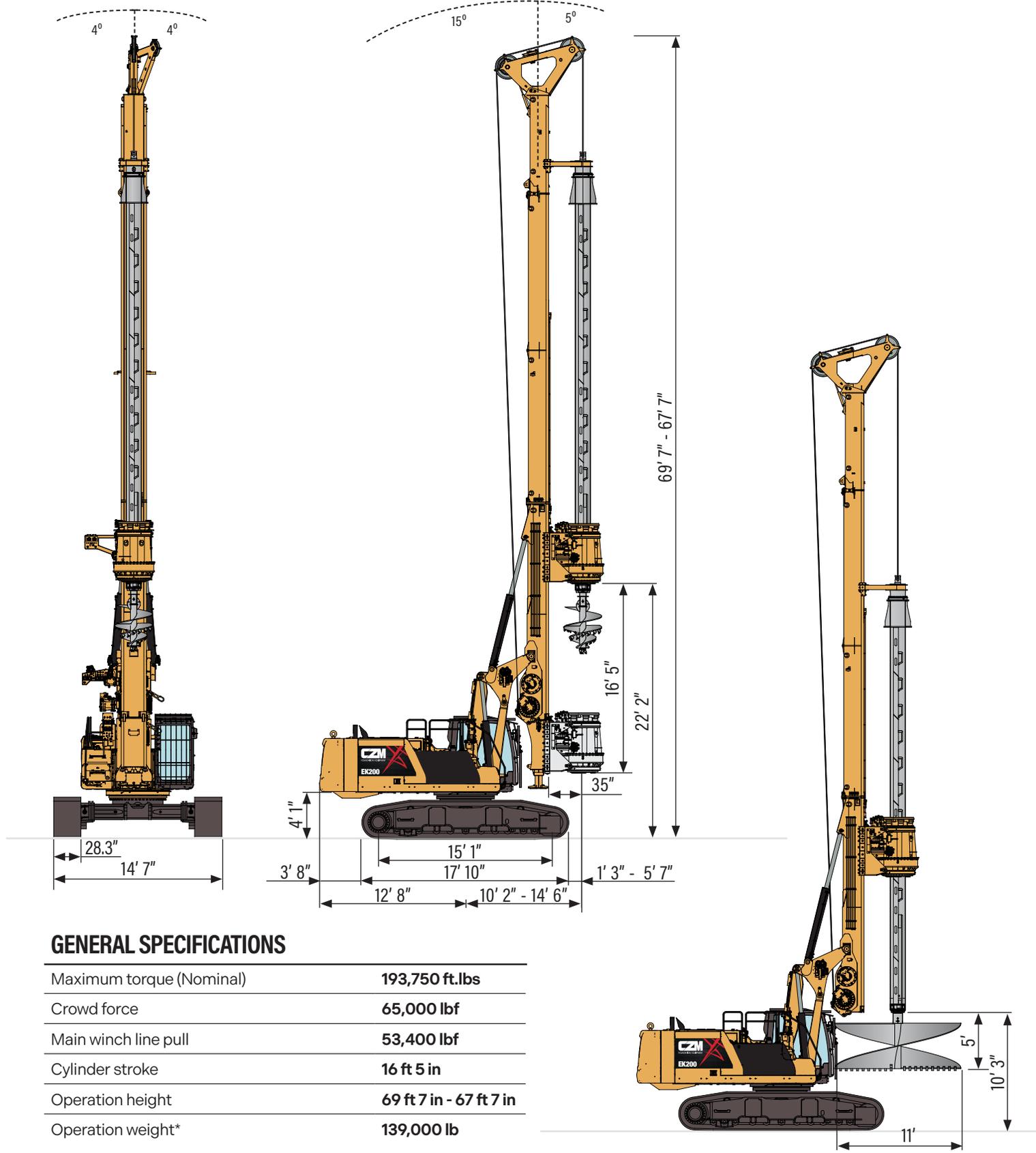
<sup>3</sup> HGT: Length measure from ground to bottom of auger assuming a 5 ft tall tool.

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

<sup>5</sup> Weight includes A-frame and swivel.

<sup>6</sup> Special kelly bar, not in stock.

Other kelly bars available upon request.



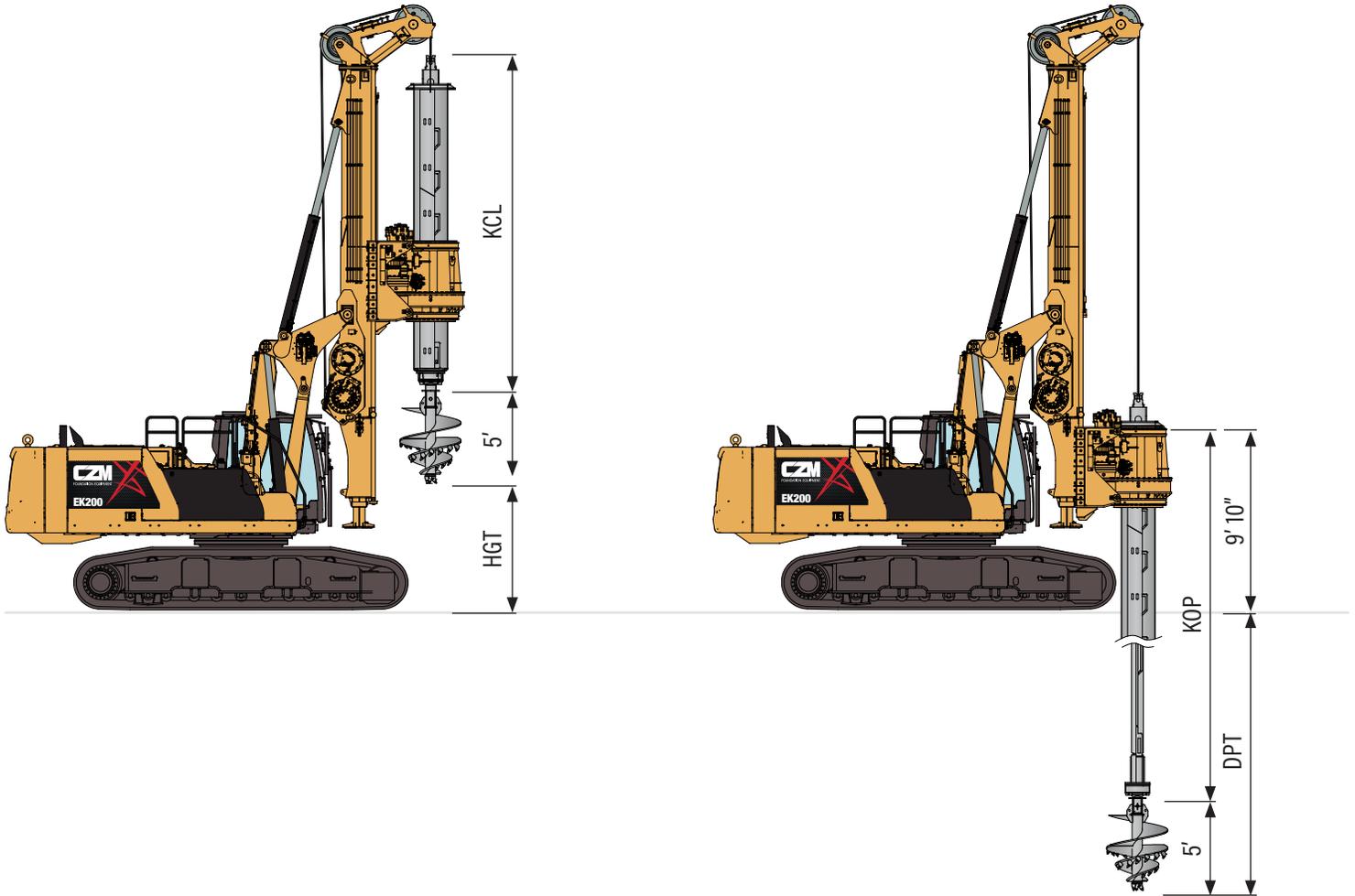
### GENERAL SPECIFICATIONS

Maximum torque (Nominal)	<b>193,750 ft.lbs</b>
Crowd force	<b>65,000 lbf</b>
Main winch line pull	<b>53,400 lbf</b>
Cylinder stroke	<b>16 ft 5 in</b>
Operation height	<b>69 ft 7 in - 67 ft 7 in</b>
Operation weight*	<b>139,000 lb</b>

\*Weight includes standard Kelly, without tool.

# SHORT MAST

## GENERAL DIMENSIONS



KELLY BAR OPTIONS	PART #	# ELEMENTS	DEPTH - DPT <sup>1</sup>	TRANSPORT - KCL <sup>2</sup>	HGT <sup>3</sup>	KOP <sup>4</sup>	WEIGHT <sup>5</sup>
Standard 6/55 Interlock	25852.6055.000	6	53 ft 6 in	15 ft 7 in	9 ft	59 ft 4 in	10,500 lb
6/72 Interlock	25852.6072.000	6	73 ft 6 in	18 ft 10 in	6 ft 3 in	79 ft 3 in	12,200 lb

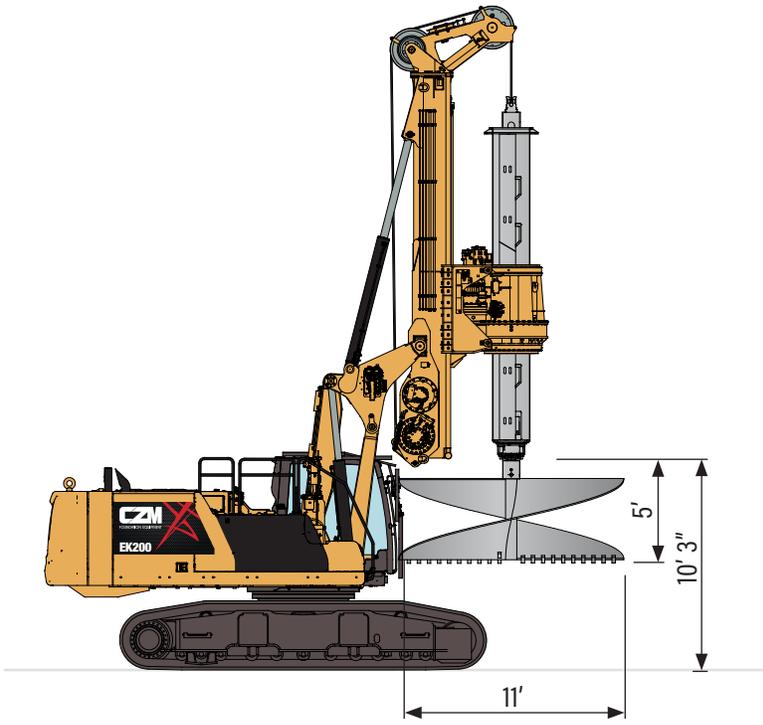
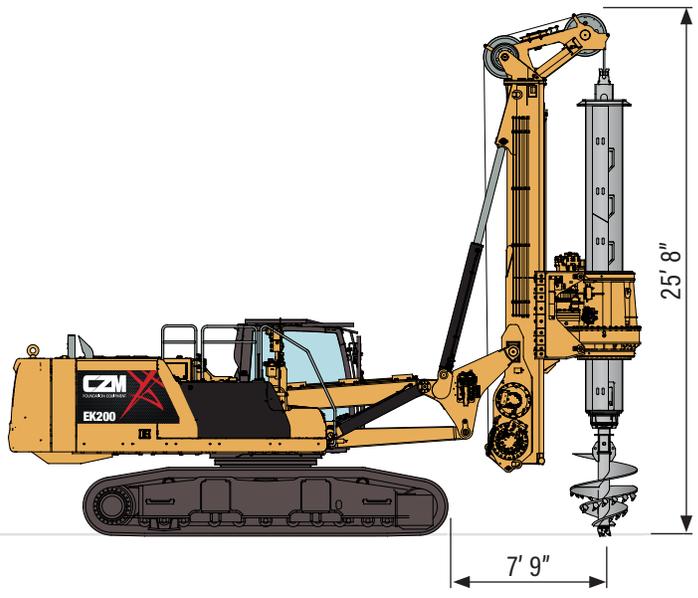
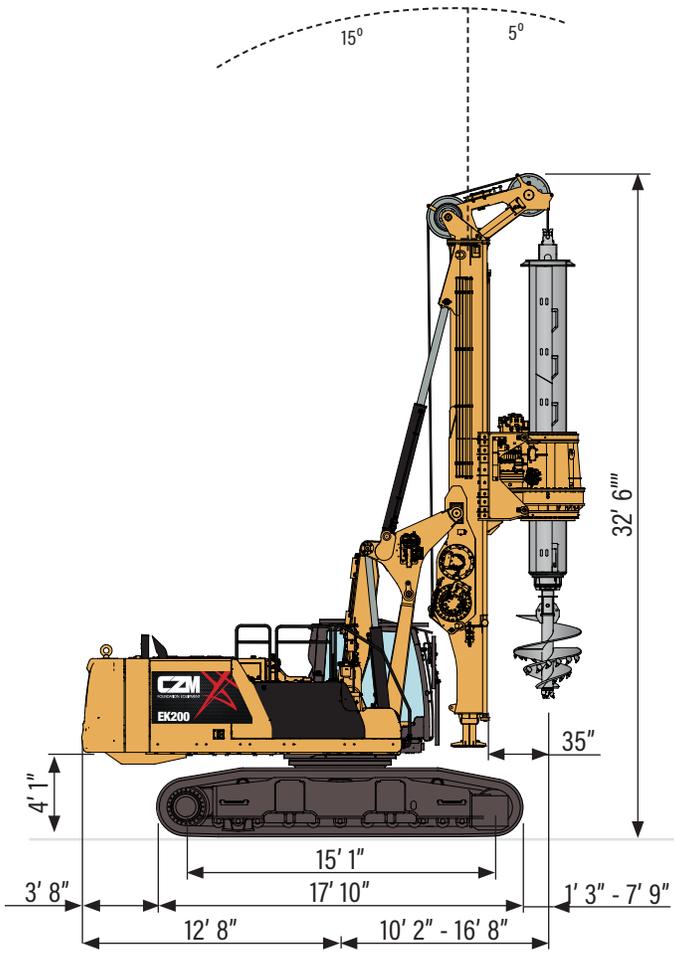
<sup>1</sup> DPT: Total depth with 5 ft tool boomed all the way back\*. Additional 5 ft of depth if boomed forward.

<sup>2</sup> KCL: Length measured from bottom of stub to top of swivel.

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

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

<sup>5</sup> Weight with swivel.



**GENERAL SPECIFICATIONS**

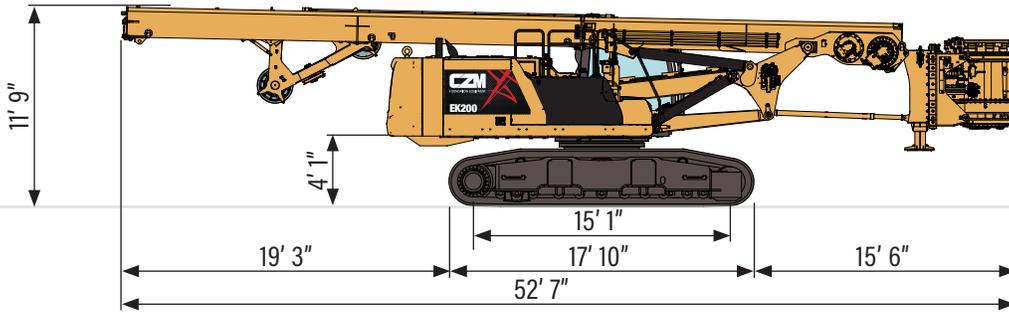
Maximum torque (Nominal)	<b>193,750 ft.lbs</b>
Crowd force	<b>65,000 lbf</b>
Main winch line pull	<b>53,400 lbf</b>
Cylinder stroke	<b>10 ft</b>
Operation height	<b>32 ft 6 in - 25 ft 8 in</b>
Operation weight*	<b>127,500 lb</b>

\*Weight includes standard Kelly, without tool.

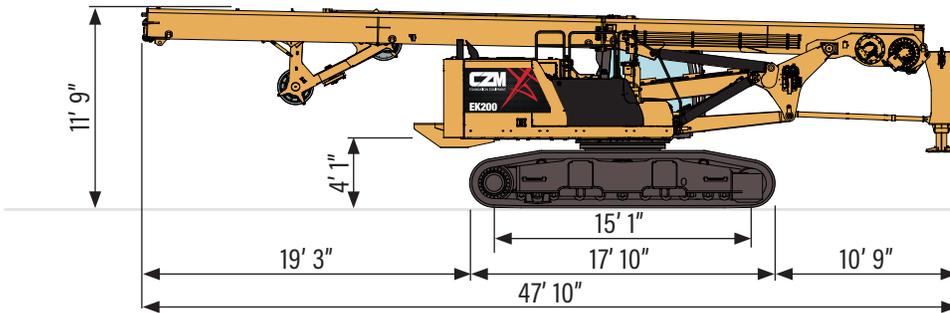
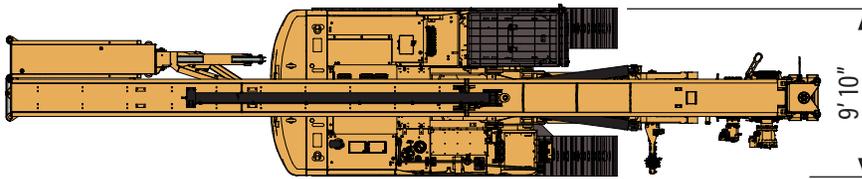
# TRANSPORT

## DIMENSIONS

### STANDARD MAST

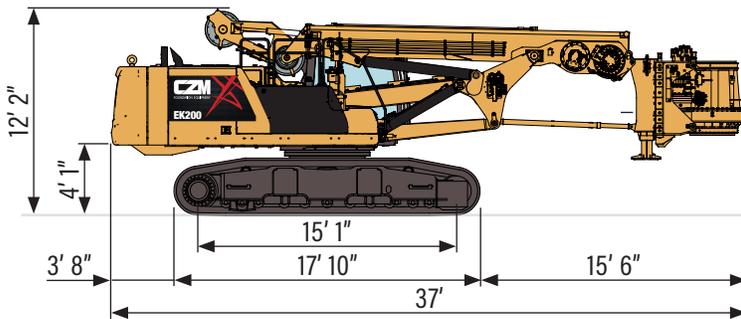


Height	11 ft 9 in
Length	52 ft 7 in
Width	9 ft 10 in
Weight	122,600 lb

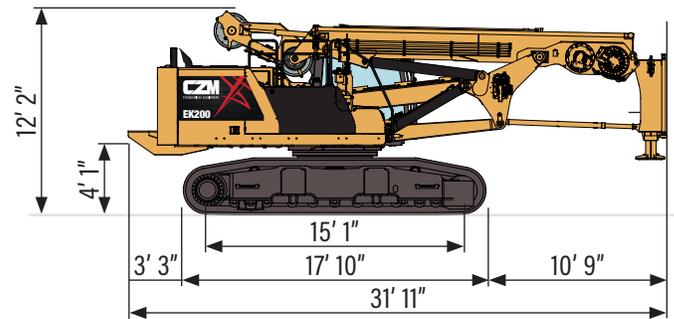


Height	11 ft 9 in
Length	47 ft 10 in
Width	9 ft 10 in
Weight	91,980 lb

### SHORT MAST



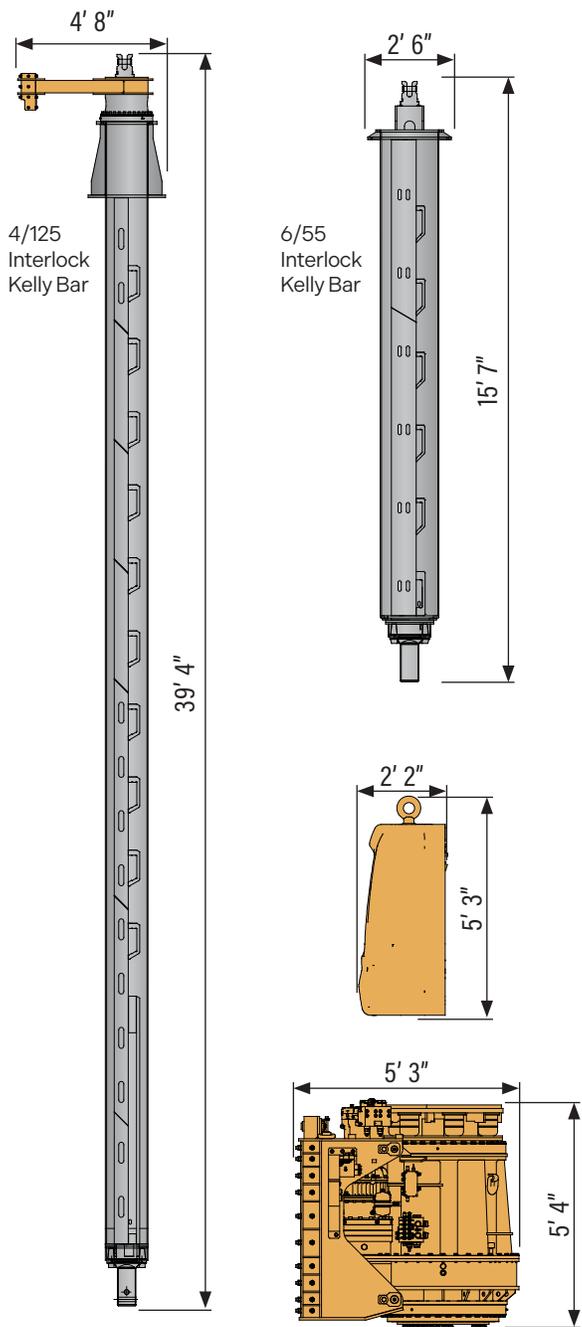
Height	12 ft 2 in
Length	37 ft
Width	9 ft 10 in
Weight	117,000 lb



Height	12 ft 2 in
Length	31 ft 11 in
Width	9 ft 10 in
Weight	86,720 lb

## COMPONENTS

Rotary	11,600 lb
Main Cat® Counterweight	18,740 lb
4/125 Interlock Kelly Bar	16,740 lb
6/55 Interlock Kelly Bar	10,500 lb





FOUNDATION EQUIPMENT

> HEADQUARTERS

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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).

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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.

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Specifications are subject to change without notice.