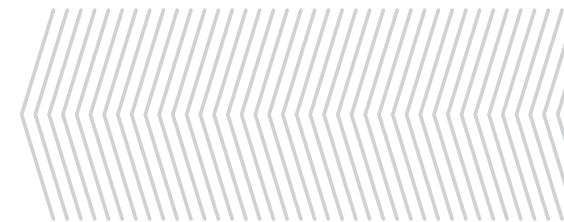


EK160

CYLINDER CROWD DRILLING RIG



czm-us.com

EK160

FEATURES

One load machine with fast and easy set-up.

Kelly bar is transported with the machine, no auxiliary equipment necessary for set up.

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® 330 Next Gen is a purpose-built machine powered by a fuel-efficient U.S. EPA Tier 4 Final C7.1 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 (120rpm) 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.

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

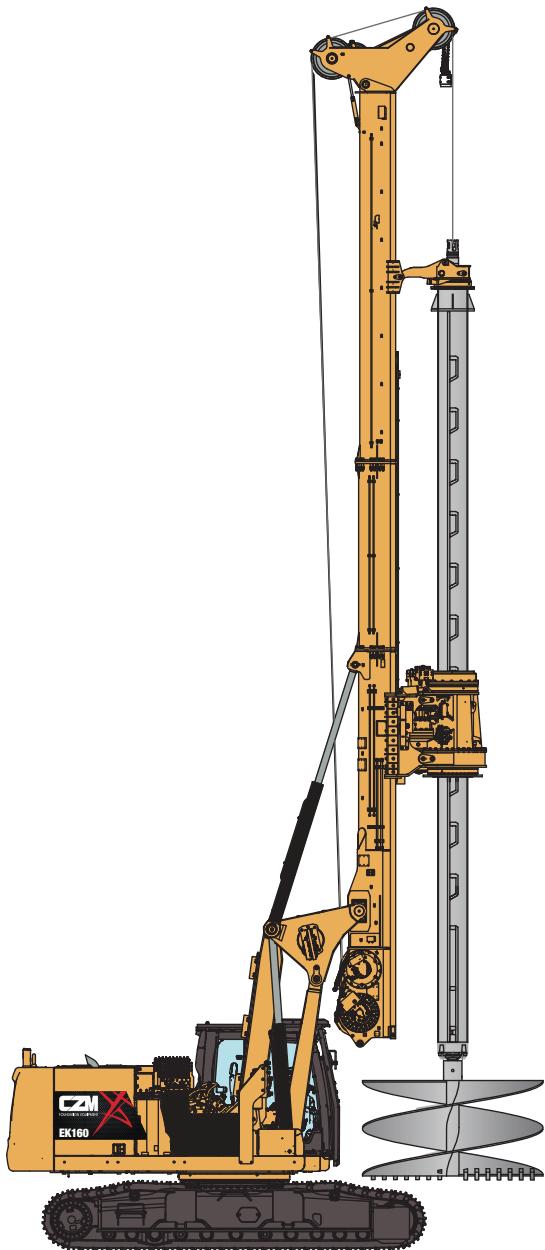
Refueling pump

O-ring kits

Toolbox

EK160

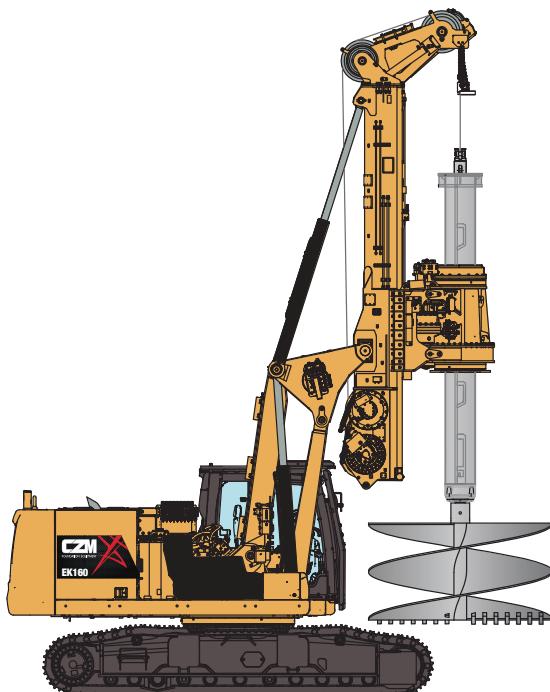
APPLICATIONS



STANDARD MAST

Standard Drilling Depth	120 ft
Diameter (Max. w/ lower mast)	5 ft
Diameter (Max. w/o lower mast)	10 ft
Max. Torque	155,500 ft.lbs
Operating weight*	107,000 lb

*Weight includes standard Kelly, without tool.



SHORT MAST

Standard Drilling Depth	45 ft
Diameter (Max. w/ lower mast)	5 ft
Diameter (Max. w/o lower mast)	10 ft
Max. Torque	155,500 ft.lbs
Operating weight*	97,500 lb

EK160

TECHNICAL SPECIFICATIONS



ROTARY HEAD - RT 460-14

Maximum torque (Nominal)	155,500 lbf.ft
Working speed of rotation	14-32 rpm
Spin-off rotation	70-120 rpm

CROWD SYSTEM

Cylinder stroke - standard mast	16 ft 5 in
Cylinder stroke - short mast	9 ft 6 in
Cylinder push force	43,000 lbf
Cylinder push speed	51 ft/min
Cylinder pull force	61,800 lbf
Cylinder pull speed	36 ft/min

MAIN WINCH

Max. pull-force - 1st Layer (effective)	40,800 lbf
Line speed - 1st Layer	290 ft/min
Cable diameter	24 mm
Drum diameter - 1st Layer	18.5 in

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	6° / 6°

DIESEL ENGINE Cat® 330 - (Cat® C7.1 ACERT™)

Net Power (ISO 14396)	279 hp
Displacement	428 in³
Fuel Tank	125 gal

HYDRAULIC SYSTEM - (Cat® 330)

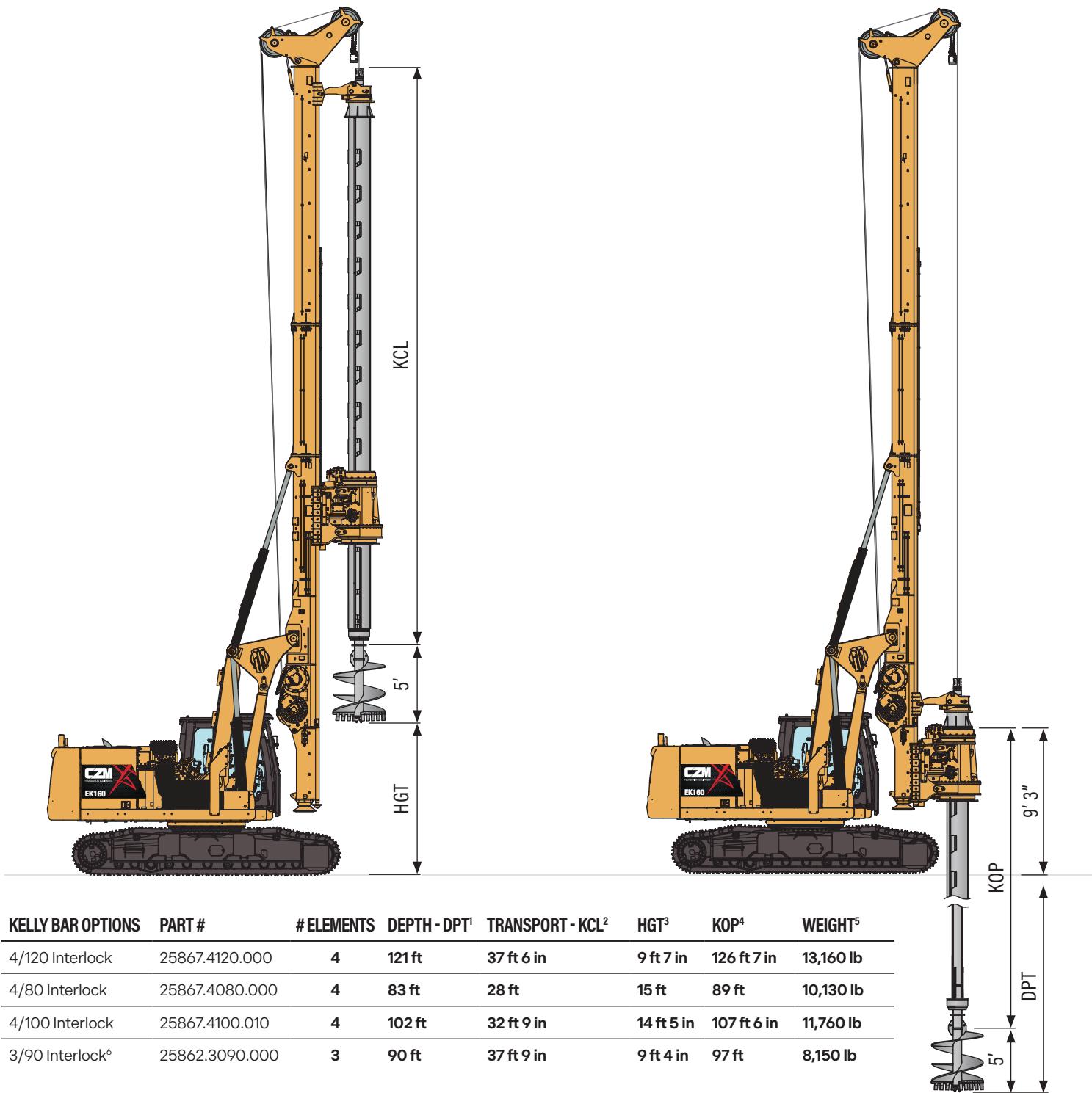
Hydraulic pressure	5,076 psi
Flow rate (main circuit)	2x74 gal/min
Flow rate (auxiliary circuit)	26.5 gal/min
Hydraulic oil tank capacity	38.8 gal

UNDERCARRIAGE

Track length	17 ft 1 in
Length to Center of rollers	14 ft 5 in
Closed position width (retracted)	9 ft 10 in
Working position width (extended)	14 ft
Shoes width	27.5 in
Max. drawbar pull	90,000 lbf
Max. travel speed	1.4 mph

STANDARD MAST

GENERAL DIMENSIONS



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.

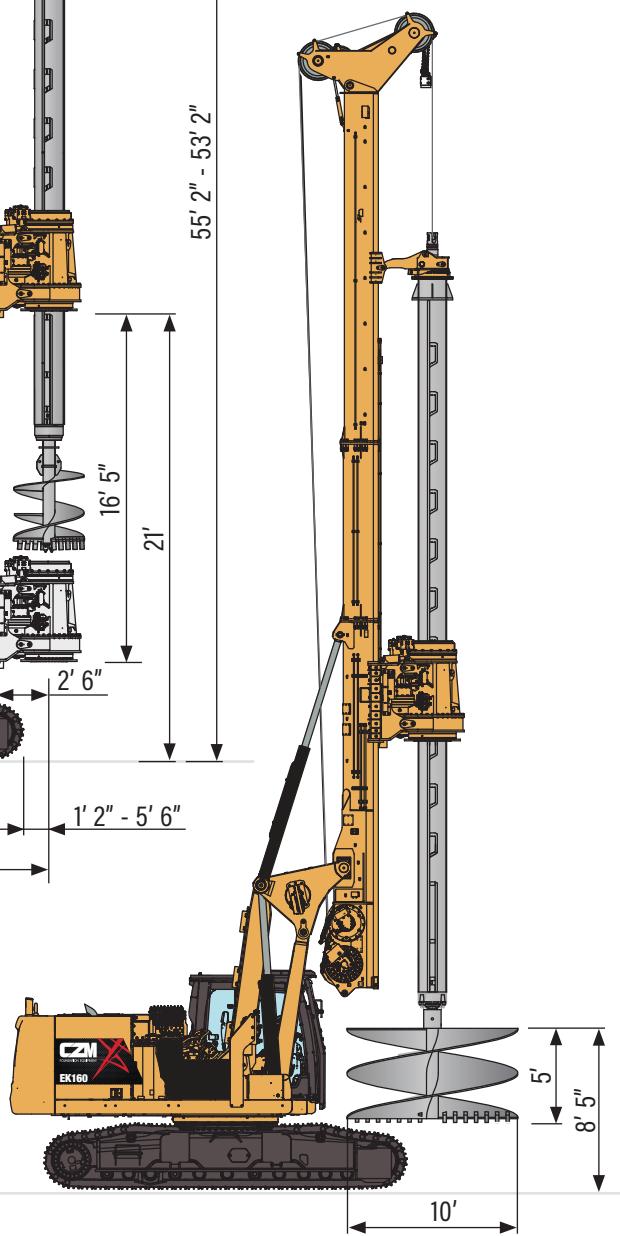
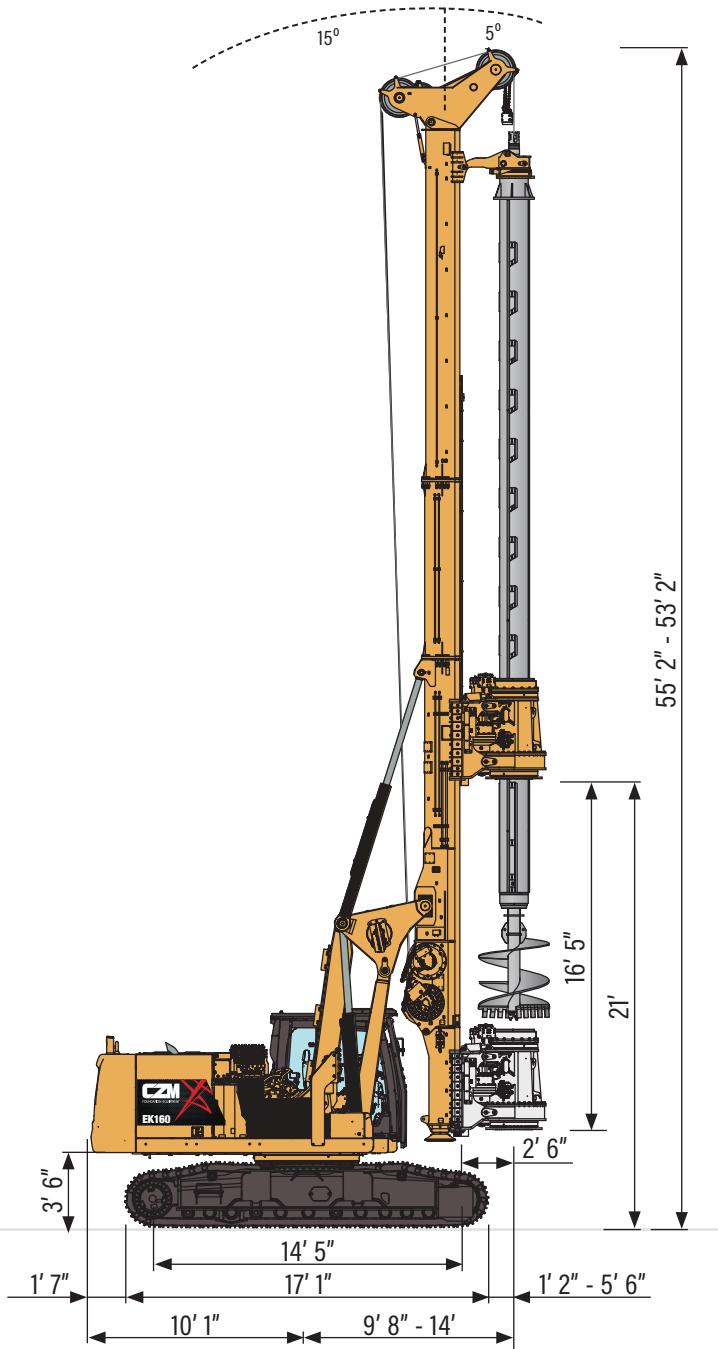
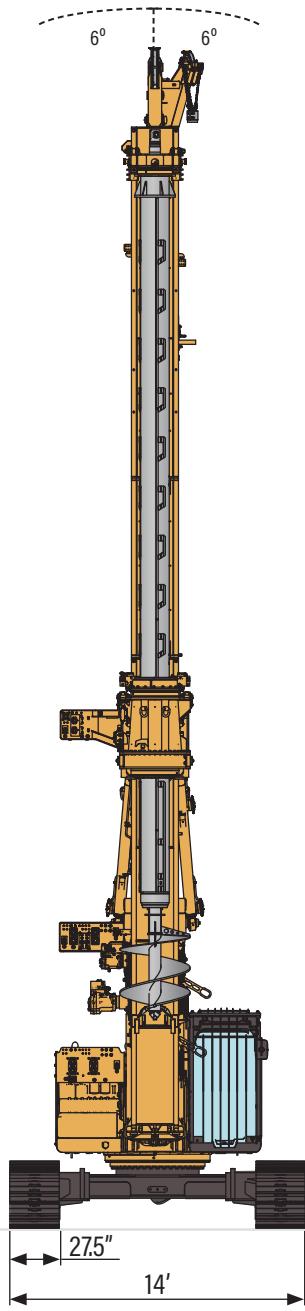
³ HGT: Length measure from ground to bottom of auger assuming a 5 ft tall tool.

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.



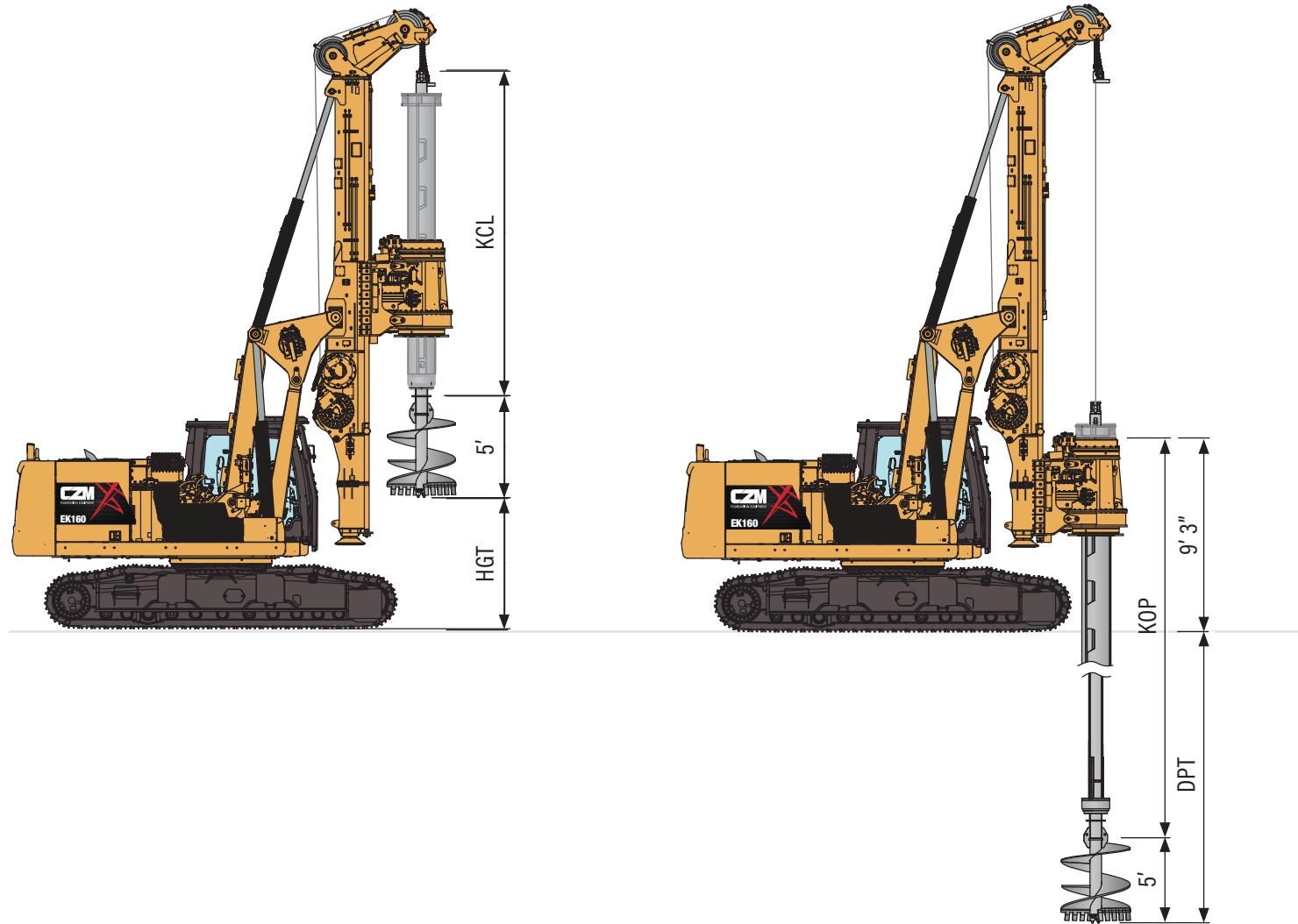
GENERAL SPECIFICATIONS

Maximum torque (Nominal)	155,500 ft.lbs
Crowd force	43,000 lbf
Main winch line pull	40,800 lbf
Cylinder stroke	16 ft 5 in
Operation height	55 ft 2 in - 53 ft 2 in
Operation weight*	107,000 lb

*Weight includes 4/120 Kelly, without tool.

SHORT MAST

GENERAL DIMENSIONS



KELLY BAR OPTIONS	PART #	# ELEMENTS	DEPTH - DPT ¹	TRANSPORT - KCL ²	HGT ³	KOP ⁴	WEIGHT ⁵
Standard 4/45 Interlock	25867.4045.000	4	42 ft 7 in	17 ft	5 ft 10 in	47 ft 9 in	6,185 lb
4/53 Interlock	25867.4053.000	4	53 ft	19 ft 5 in	3 ft 5 in	58 ft 2 in	6,720 lb

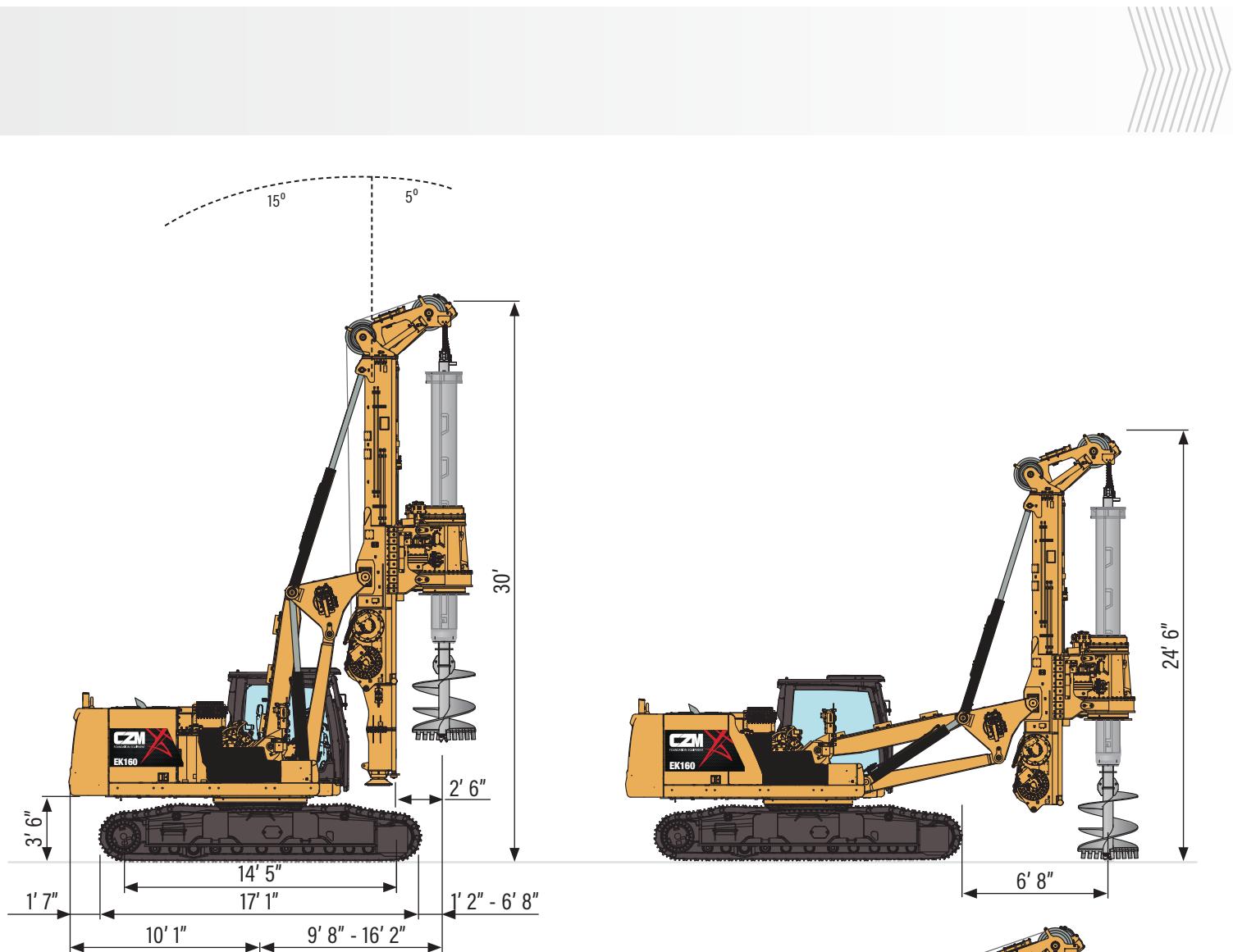
¹ DPT: Total depth with 5 ft tool boomed all the way back*. Additional 5 ft 6 in of depth if boomed forward.

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.

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

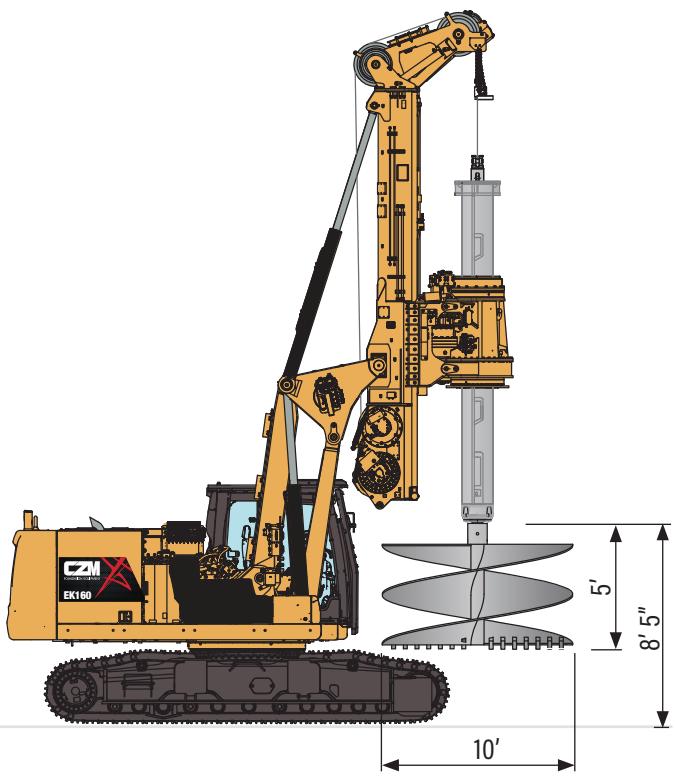
⁵Weight with swivel.



GENERAL SPECIFICATIONS

Maximum torque (Nominal)	155,500 ft.lbs
Crowd force	43,00 lbf
Main winch line pull	40,800 lbf
Cylinder stroke	9 ft 6 in
Operation height	30 ft - 24 ft 6 in
Operation weight*	97,500 lb

*Weight includes 4/45 Kelly, without tool.

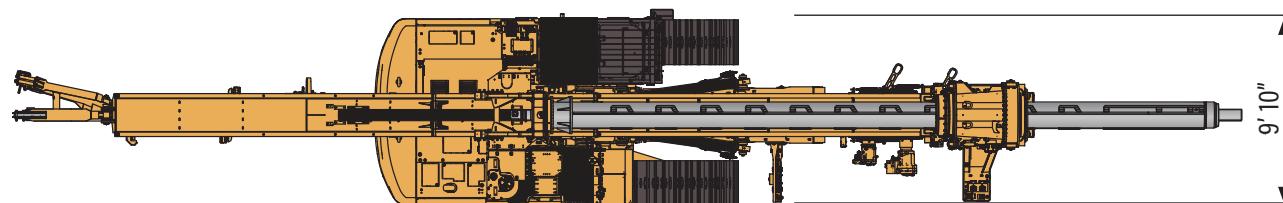
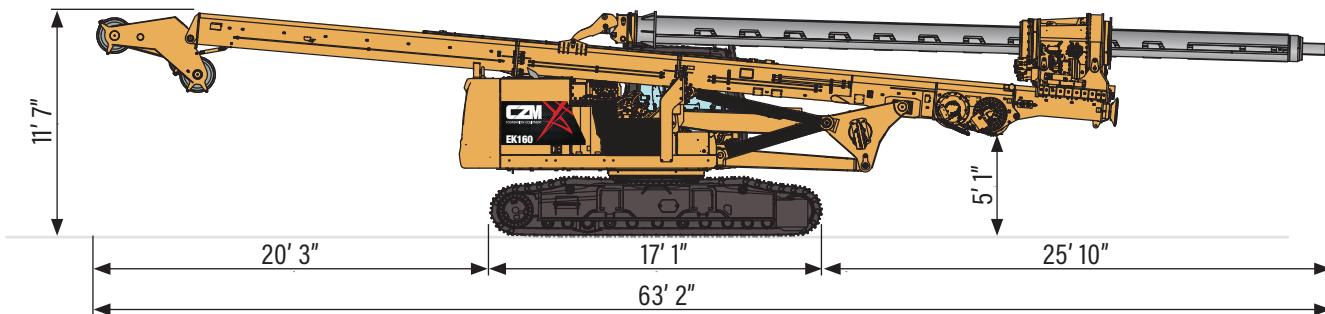




TRANSPORT

DIMENSIONS

STANDARD MAST



Height

11 ft 7 in

Width

9 ft 10 in

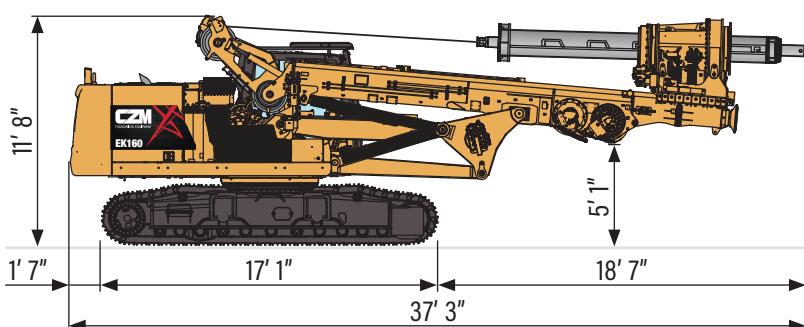
Length

63 ft 2 in

Weight (standard kelly 4 / 120 ft)

107,000 lb

SHORT MAST



Height

11 ft 8 in

Length

37 ft 3 in

Width

9 ft 10 in

Weight (kelly 4 / 45 ft)

97,500 lb

COMPONENTS

Rotary

8,100 lb

Main Cat® Counterweight

14,780 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



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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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- › **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.