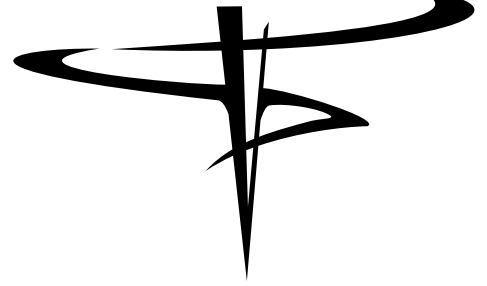




CZM

FOUNDATION EQUIPMENT



Product Line Catalog

czm-us.com

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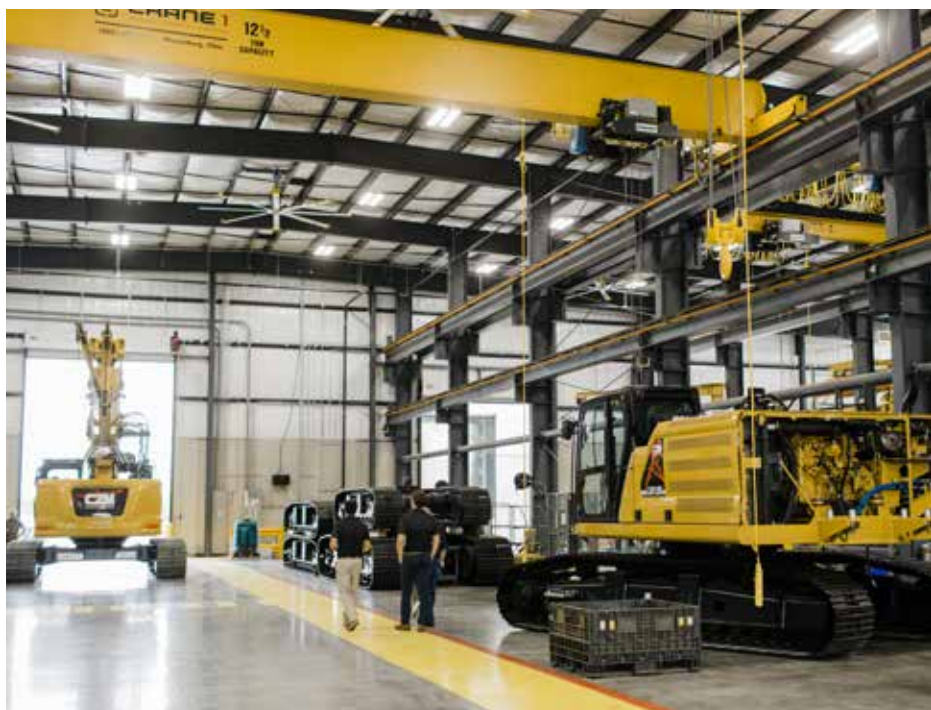
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CZM is a leading manufacturer of the American foundation drilling market.

We are committed to building the toughest line of drilling rigs in the industry.

We offer a wide range of models engineered for a variety of foundation applications, well suited to the demands of both US and worldwide contractors.

CZM is acknowledged by America's most renowned Foundation Contractors for our outstanding quality and superior after-sales service.

Our innovative design incorporates CATERPILLAR bases, along with first line components of American and European vendors.

We firmly believe that in order to deliver innovative solutions and superior products, it is paramount that we listen and respond to our customers' needs.

Manufacturing at our facility in Savannah, Georgia also assures minimum downtime. Each machine is backed up by the knowledge, structure and manpower at our factory.

Our customer-oriented philosophy relies on qualified professionals providing services that include sales, machine rental, corrective and preventative maintenance, commissioning, parts, tools and accessories.

Features & Control Systems



Cat® Features:

- Powered by fuel-efficient U.S. EPA Tier 4.
- Cat® Vision Link allows 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.
- Cat® variable undercarriage reinforced frame H style.
- CAB:
 - ROPS cab
 - AM/FM Radio
 - Air conditioning/Heating
 - Top protection
 - LCD monitor for Engine and Hydraulics computer, with diagnostic system.

CZM Drill-Rig Features:

- Rotary robust design in each class model for high torque and long life.
- Power-shift for high spin-off speed then efficient discharge of soil.
- Slewing bearings on top and bottom.
- Cooling system for hydraulic motors and gear box.
- Exchangeable keys, bolted. No need to rebuild keys by welding inside the rotary.
- Efficient hydraulic circuit includes:
 - Anti-cavitation and anti-shock system for longer hydraulic motor life.
 - 3 operation speeds and 3 spinoff speeds (high speed / high torque).
- Automatic gear shifting for seamless operation, high production.
- Automatic down the whole winch stop. When kelly bar reaches the bottom of the hole winch automatic stops.
- Free willing winch during crowd operation.
- Hydraulic and mechanic break.
- Hydraulic measurement of pulling force displaying in the cabin for operator.
- Swivel and limit switch

CZM 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



Accessories:

- Lighting package
- Refueling pump
- Cold weather start up package
- Fine filtration system
- Tool & O-Ring kits

Cylinder Crowd

Standard Mast

Our Standard Mast machines are designed for kelly bar drilling with cylinder crowd, with easy conversion from Standard Mast to Short Mast. These machines are built on Caterpillar bases with extendable undercarriages and they vary in size from an EK65 (60,000 lbs operation weight) to a EK300 (217,600 lbs operation weight). From easy soil to hard rock, these machine are ideal for many types of applications.

EK300	6
EK250	8
EK240	10
EK200	12
EK160	14
EK125	16
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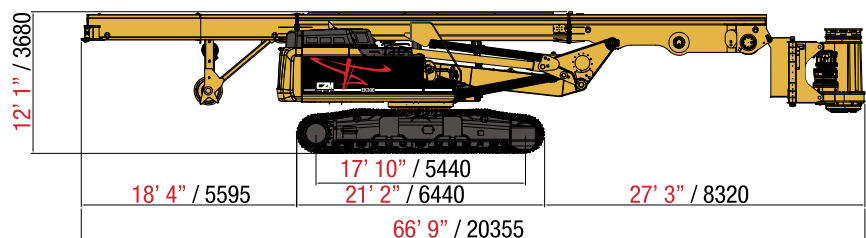
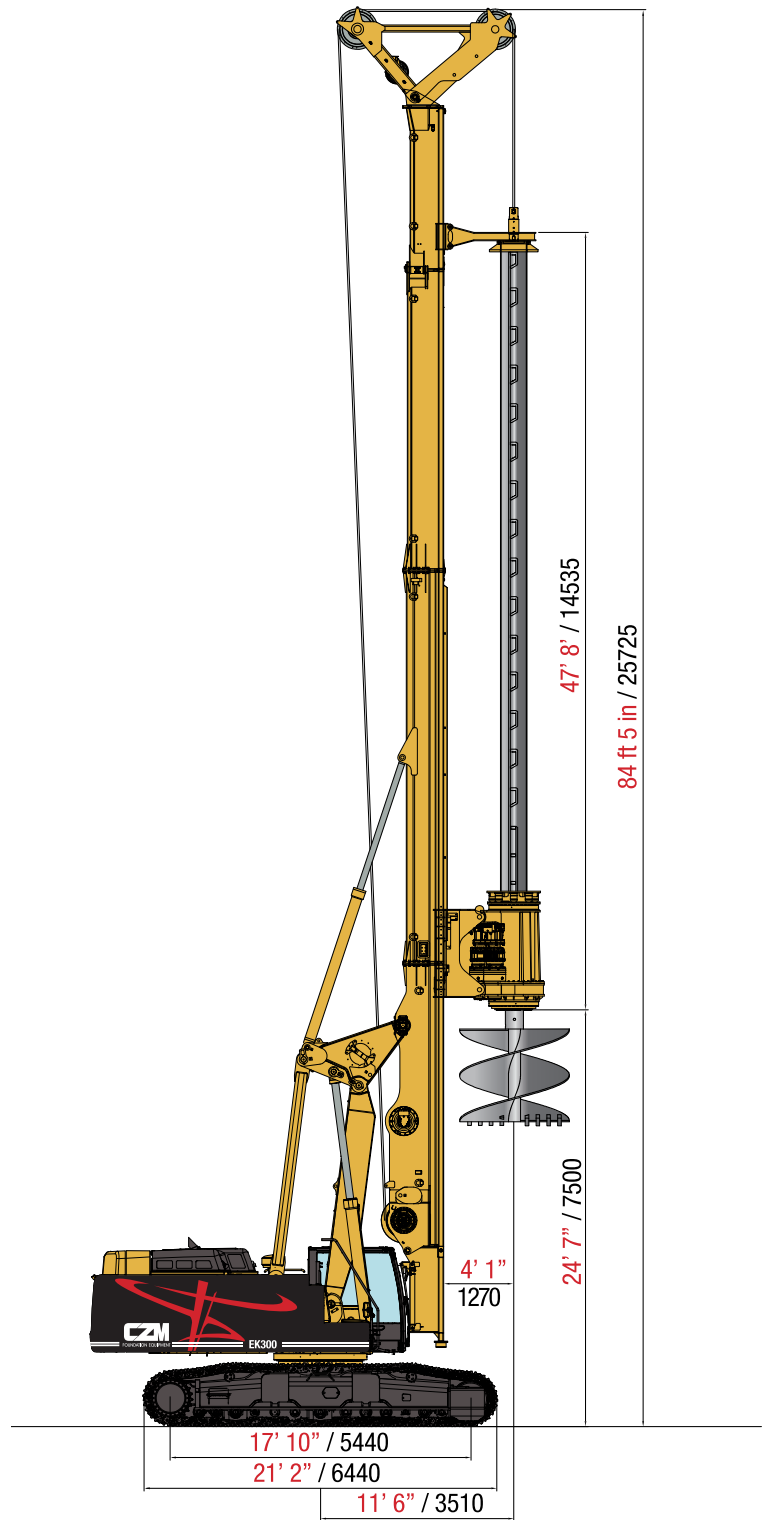
Short Mast

The Short Mast version of our kelly bar cylinder crowd machines are ideal for drilling with an overhead restriction. Drilling under power lines, existing bridges or inside a building is possible due to the limited height of the mast. With a large inner passage in the rotary, CZM's can have interlocking kelly bars with more elements, that allow you to drill deep even on low over headroom.

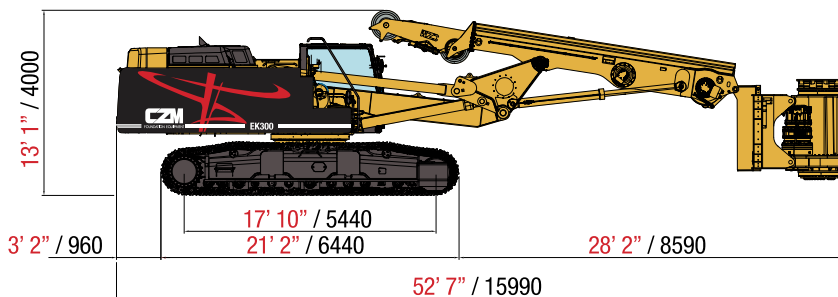
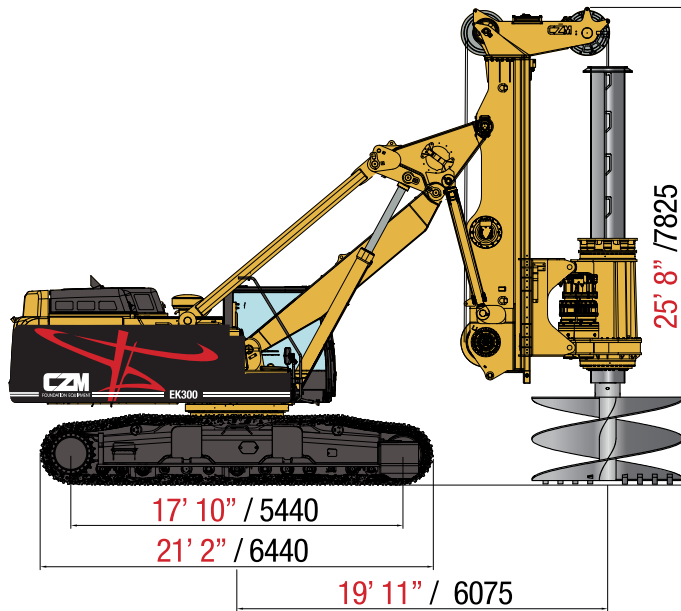
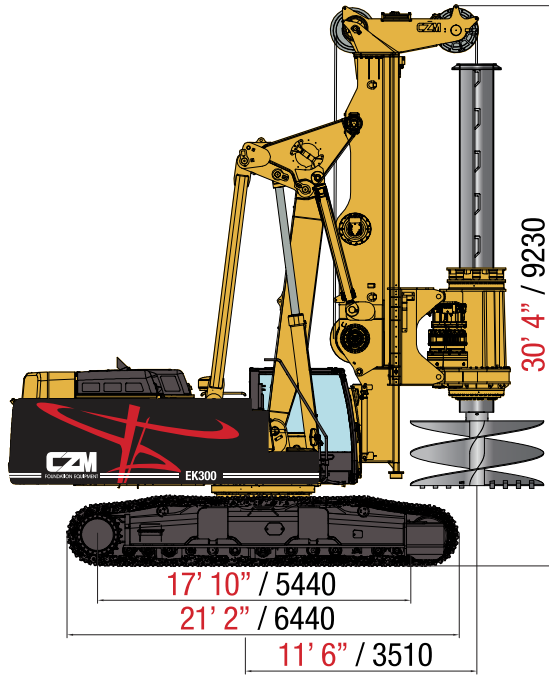
EK300SM	7
EK250SM	9
EK240SM	11
EK200SM	13
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EK300

Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	252,000 lbf.ft	35,000 kgf.m
Maximum Diameter	15 ft	4,600 mm
Std. Depth Interlocking Kelly (4 El.)	157 ft	48,000 mm
Crowd Force	82,650 lbf	37,500 kgf
Crowd Cylinder Stroke	21 ft 4 in	6,500 mm
Main Winch Line Pull	71,000 lbf	32,200 kgf
Min. Transport Weight	136,500 lb	61,920 kg
Operation Weight	217,600 lb	98,700 kg



EK300SM

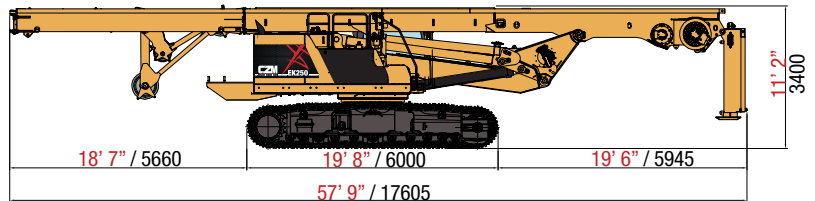
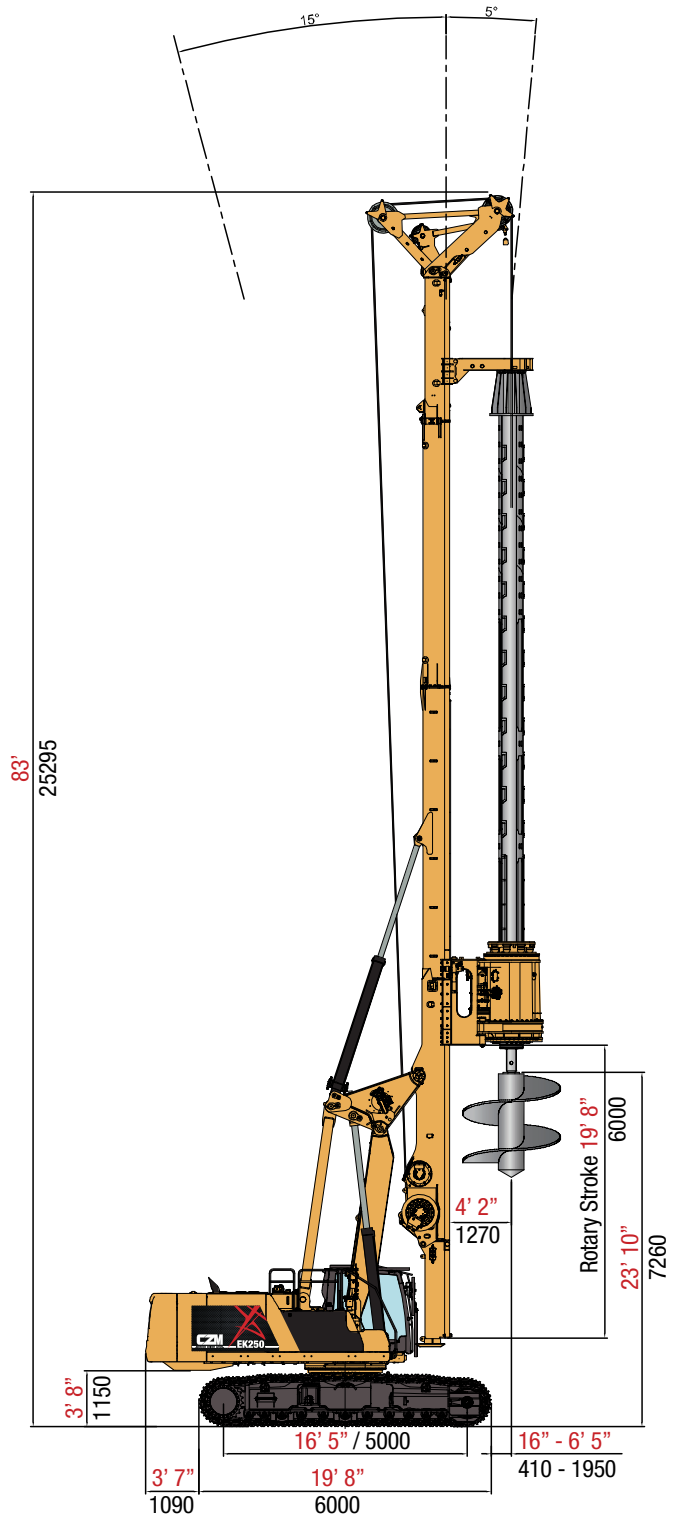


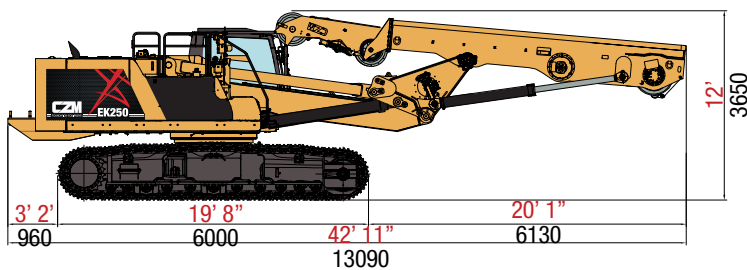
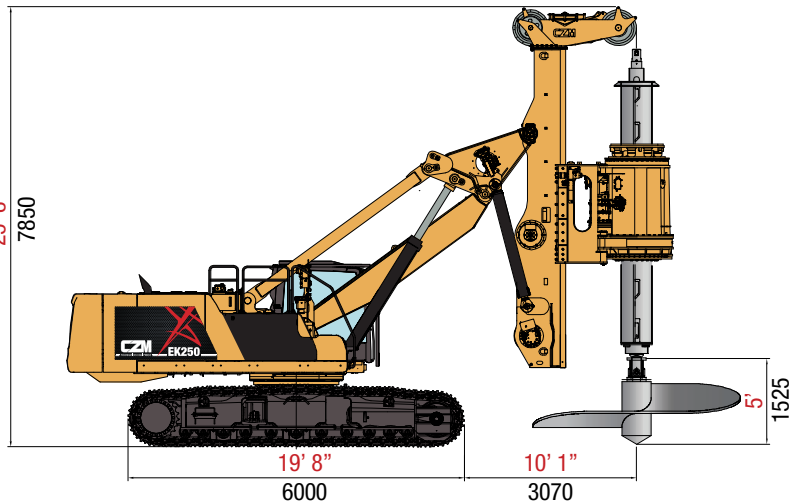
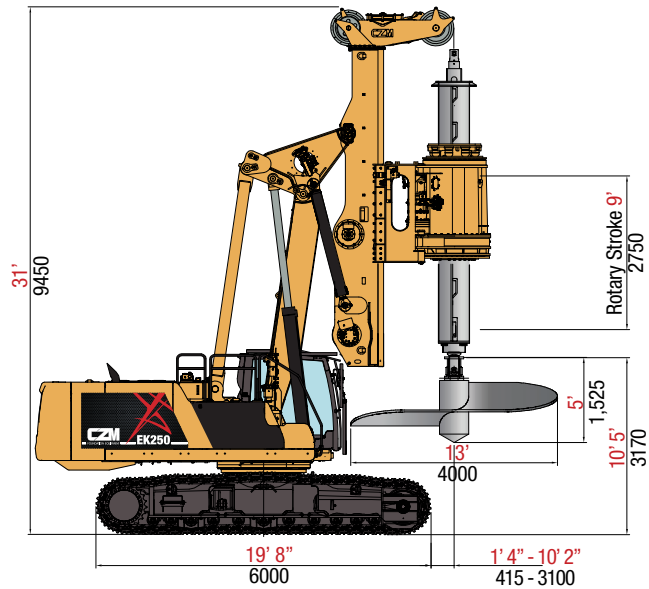
Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	252,000 lbf.ft	35,000 kgf.m
Maximum Diameter	15 ft	4,600 mm
Std. Depth Interlocking Kelly (5 El.)	60 ft	18,300 mm
Crowd Force	82,650 lbf	37,500 kgf
Crowd Cylinder Stroke	9 ft	2,750 mm
Main Winch Line Pull	71,000 lbf	32,200 kgf
Min. Transport Weight	107,300 lb	48,500 kg
Operation Weight	199,900 lb	90,700 kg



EK250

Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	234,561 lbf.ft	32,429 kgf.m
Maximum Diameter	13.1 ft	4,000 mm
Std. Depth Interlocking Kelly (4 EI.)	158 ft	48,000 mm
Max. Depth Interlocking Kelly (4 EI.)	200 ft	61,000 mm
Crowd Force	81,813 lbf	37,110 kgf
Crowd Cylinder Stroke	19 ft 8 in	6,000 mm
Main Winch Line Pull	58,887 lbf	26,711 kgf
Min. Transport Weight	119,000 lb	54,000 kg
Operation Weight	187,750 lb	85,150 kg





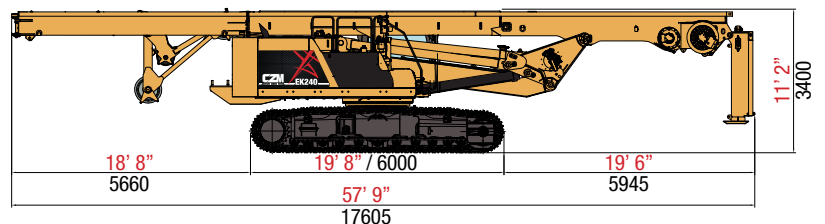
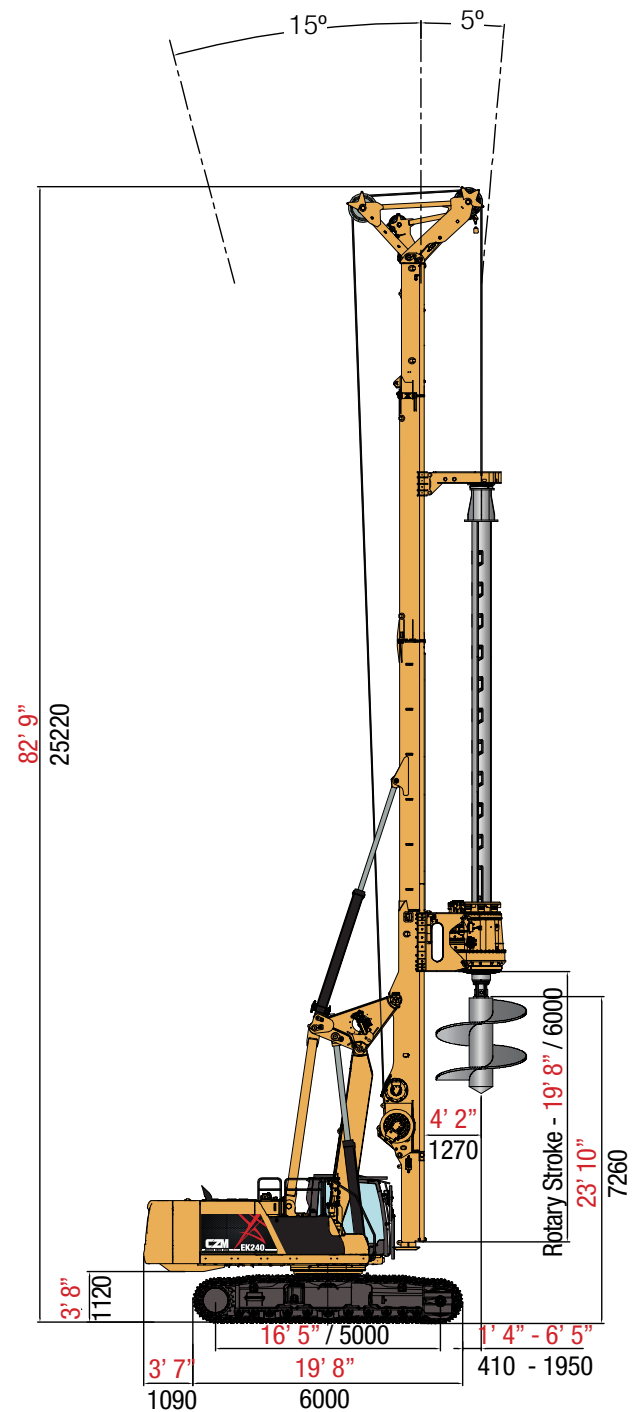
EK250SM

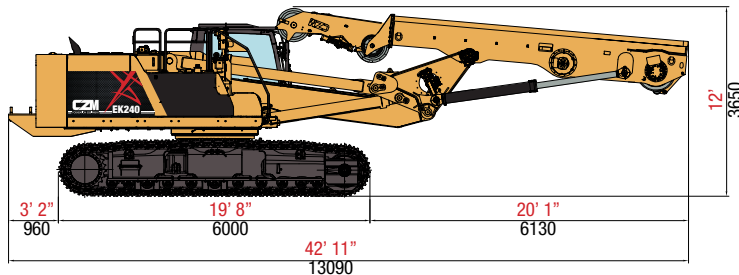
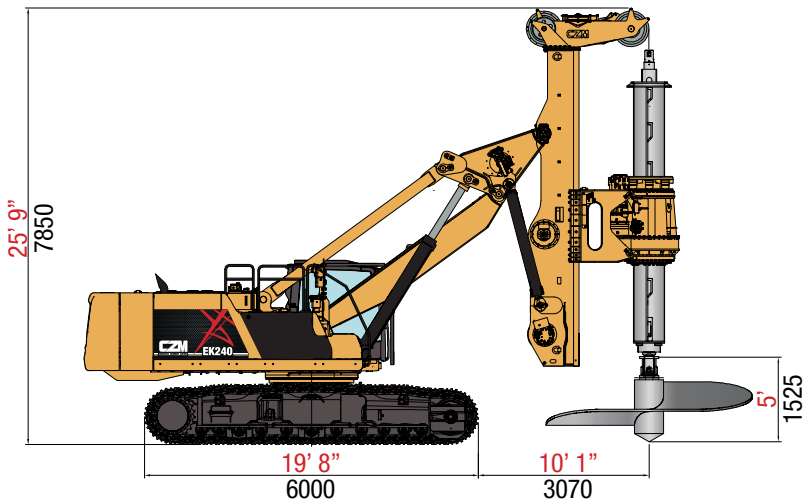
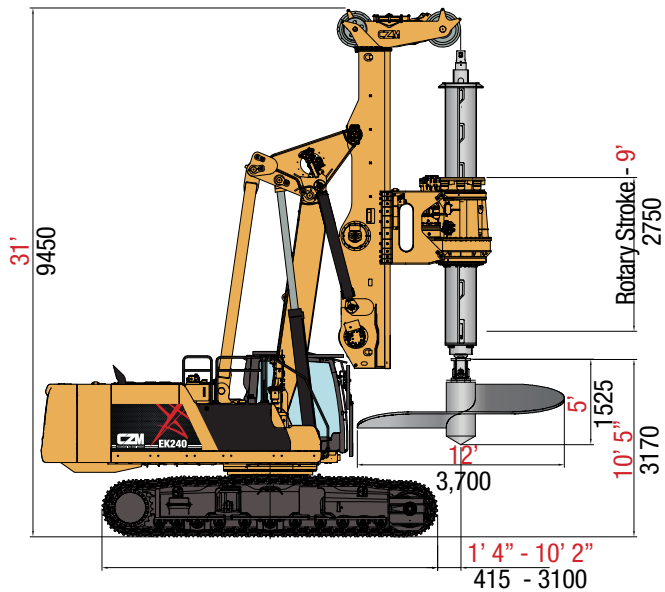
Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	234,561 lbf.ft	32,429 kgf.m
Maximum Diameter	13.1 ft	4,000 mm
Std. Depth Interlocking Kelly (6 El.)	72 ft	22,000 mm
Crowd Force	81,813 lbf	37,110 kgf
Crowd Cylinder Stroke	8 ft 3 in	2,520 mm
Main Winch Line Pull	58,887 lbf	26,711 kgf
Min. Transport Weight	108,000 lb	49,000 kg
Operation Weight	158,750 lb	78,200 kg



EK240

Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	209,800 lbf.ft	29,000 kgf.m
Maximum Diameter	13 ft	3,960 mm
Std. Depth Interlocking Kelly (4 El.)	130 ft	39,600 mm
Max. Depth Interlocking Kelly (4 El.)	200 ft	61,000 mm
Crowd Force	73,326 lbf	33,000 kgf
Crowd Cylinder Stroke	19 ft 8 in	6,000 mm
Main Winch Line Pull	58,700 lbf	26,500 kgf
Min. Transport Weight	117,000 lb	53,200 kg
Operation Weight	165,000 lb	75,000 kg





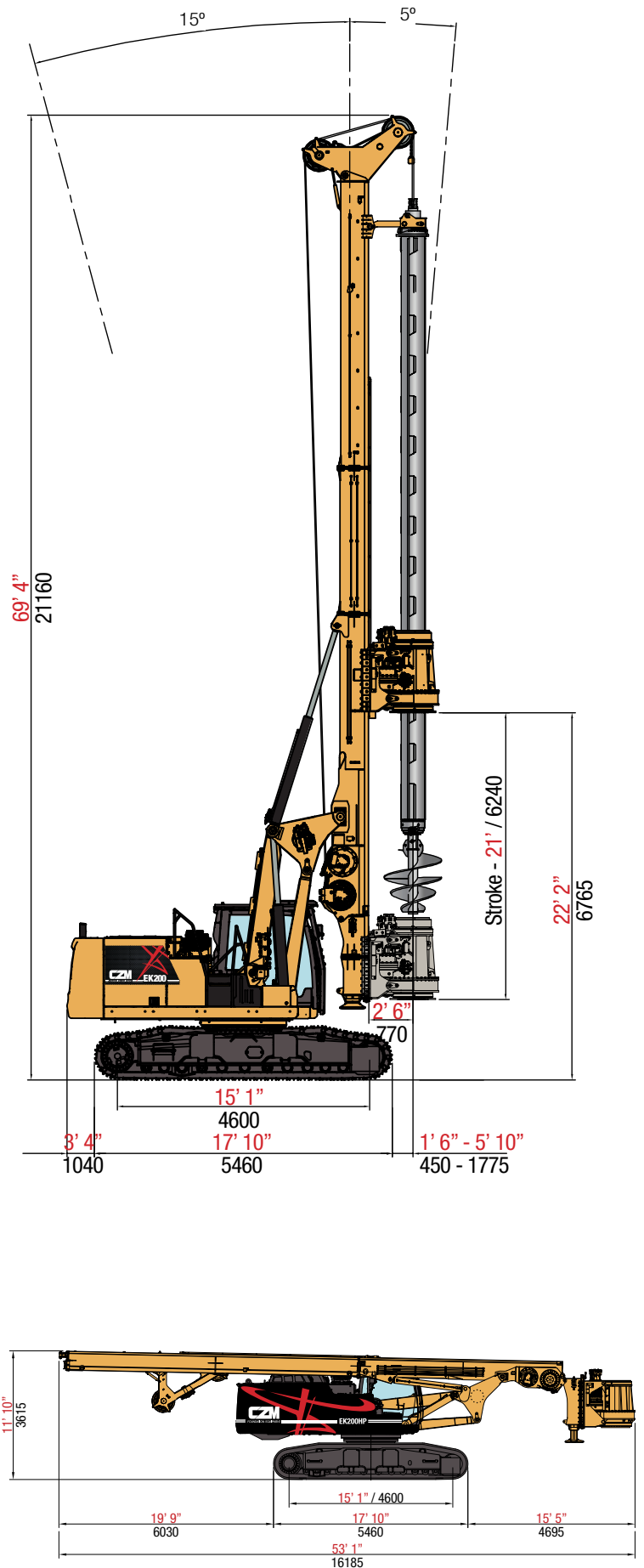
EK240SM

Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	209,800 lbf.ft	29,000 kgf.m
Maximum Diameter	13 ft	3,960 mm
Std. Depth Interlocking Kelly (6 El.)	72 ft	22,000 mm
Max. Depth Interlocking Kelly (6 El.)	95 ft	29,000 mm
Crowd Force	73,326 lbf	33,000 kgf
Crowd Cylinder Stroke	9 ft	2,750 mm
Main Winch Line Pull	58,700 lbf	26,500 kgf
Min. Transport Weight	107,000 lb	48,600 kg
Operation Weight	153,000 lb	69,550 lb

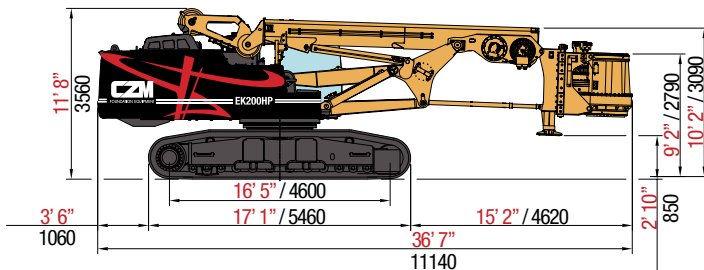
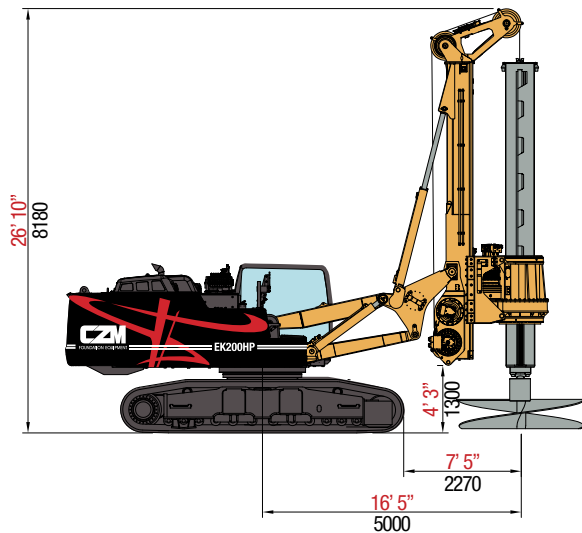
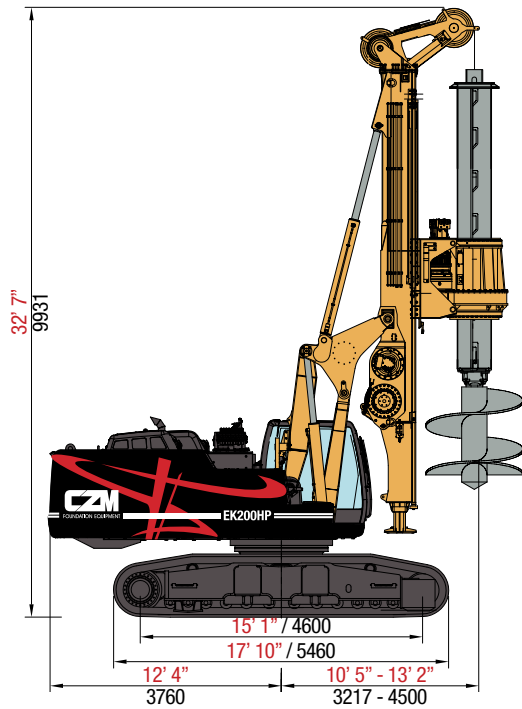


EK200

Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	193,360 lbf.ft	26,700 kgf.m
Maximum Diameter	11 ft	3,350 mm
Std. Depth Interlocking Kelly ^(4 EI.)	130 ft	39,000 mm
Max. Depth Interlocking Kelly	200 ft	61,000 mm
Crowd Force	52,200 lbf	23,750 kgf
Crowd Cylinder Stroke	16 ft 5 in	5,000 mm
Main Winch Line Pull	50,800 lbf	23,100 kgf
Min. Transport Weight	92,000 lb	41,800 kg
Operation Weight	147,900 lb	67,250 kg



EK200SM

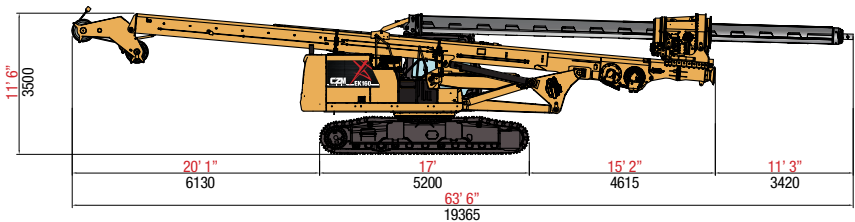
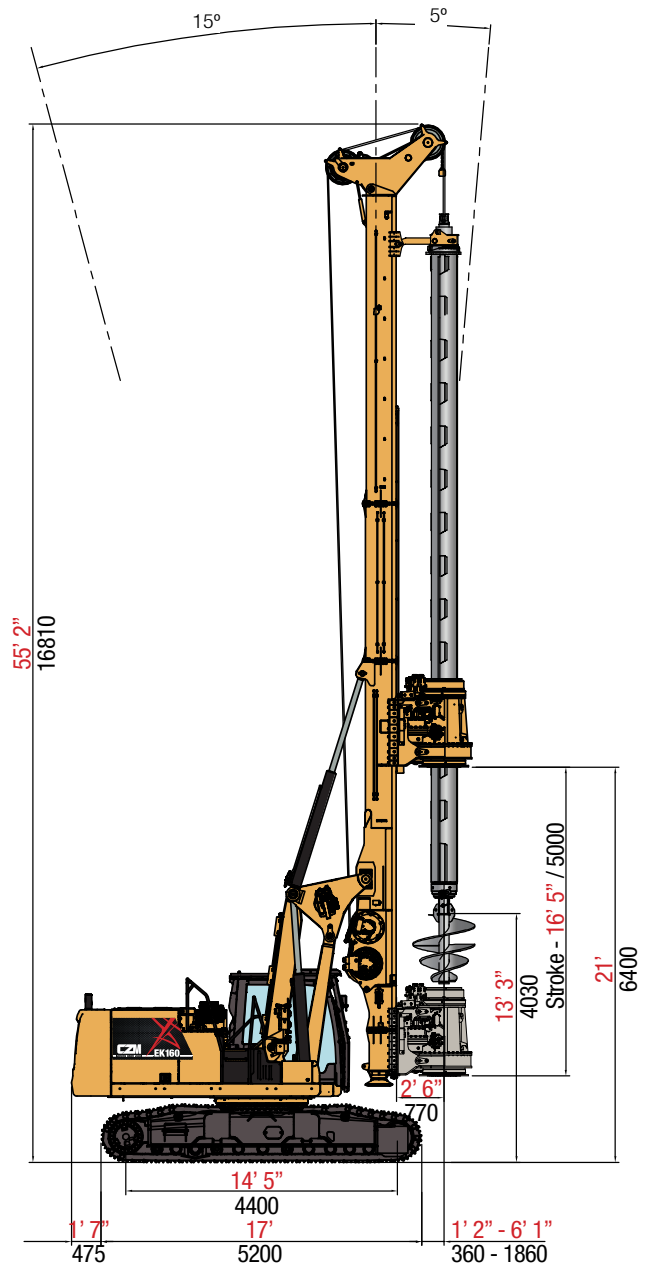


Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	193,360 lbf.ft	26,700 kgf.m
Maximum Diameter	11 ft	3,350 mm
Std. Depth Interlocking Kelly	76 ft	23,200 mm
Crowd Force	52,200 lbf	23,750 kgf
Crowd Cylinder Stroke	8 ft	2,450mm
Main Winch Line Pull	50,800 lbf	23,100 kgf
Min. Transport Weight	86,000 lb	39,100 kg
Operation Weight	127,200 lb	57,800 kg



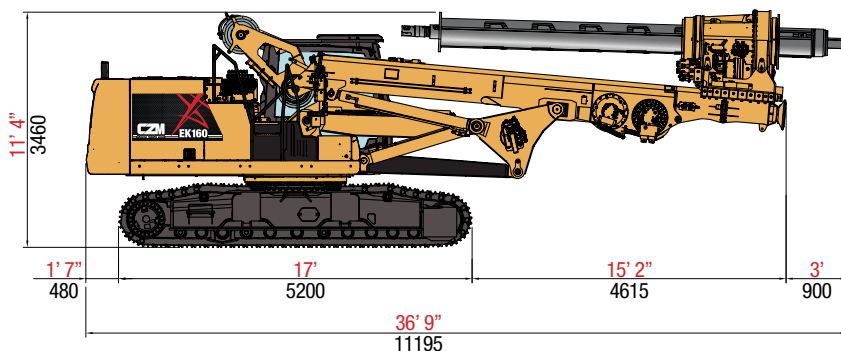
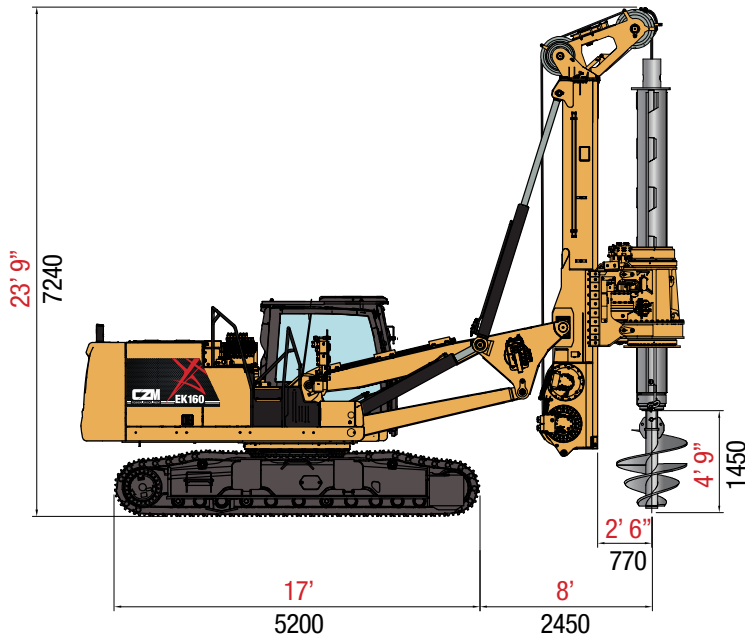
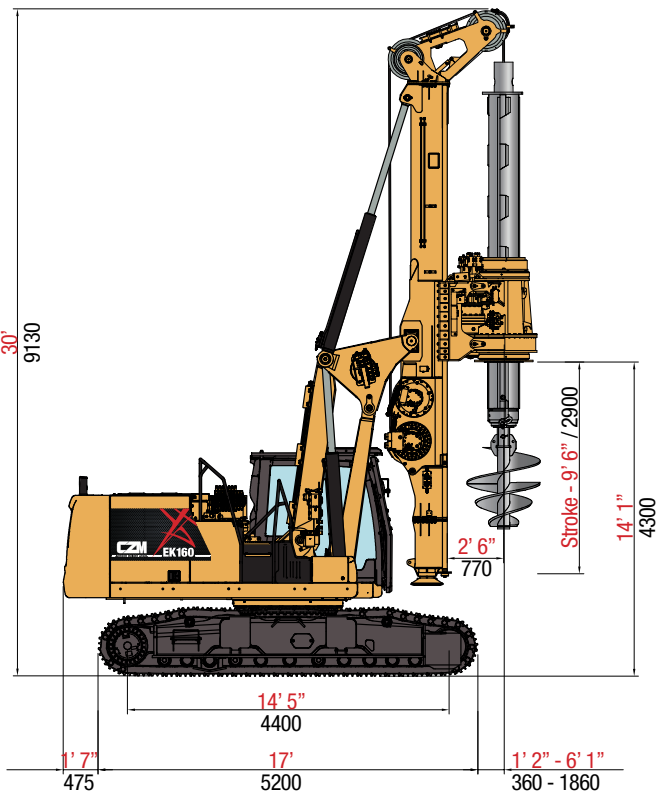
EK160

Standard Chassis	Cat® 330	
Installed Power	273 hp	204 kW
Maximum Torque (Std)	155,100 lb.ft	21,500 kgf.m
Maximum Torque (Opt)	134,000 lb.ft	18,000 kgf.m
Maximum Diameter	10 ft	3,050 mm
Std. Depth (Interlocking Kelly)	120 ft	36,600 mm
Crowd Force	44,220 lbf	20,100 kgf
Crowd Cylinder Stroke	16 ft 5 in	5,000 mm
Main Winch Pull Line	41,000 lbf	18,600 kgf
Min. Transport Weight	94,000 lb	41,400 kg
Std. Transport Weight	105,000 lb	47,800 kg



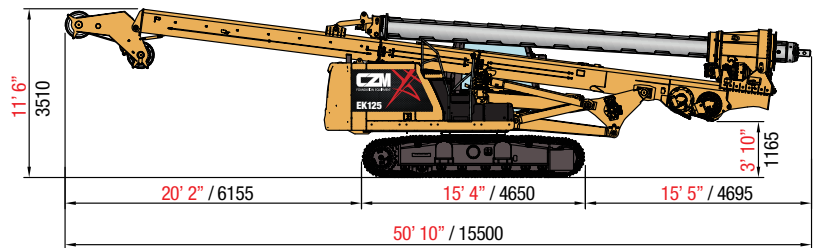
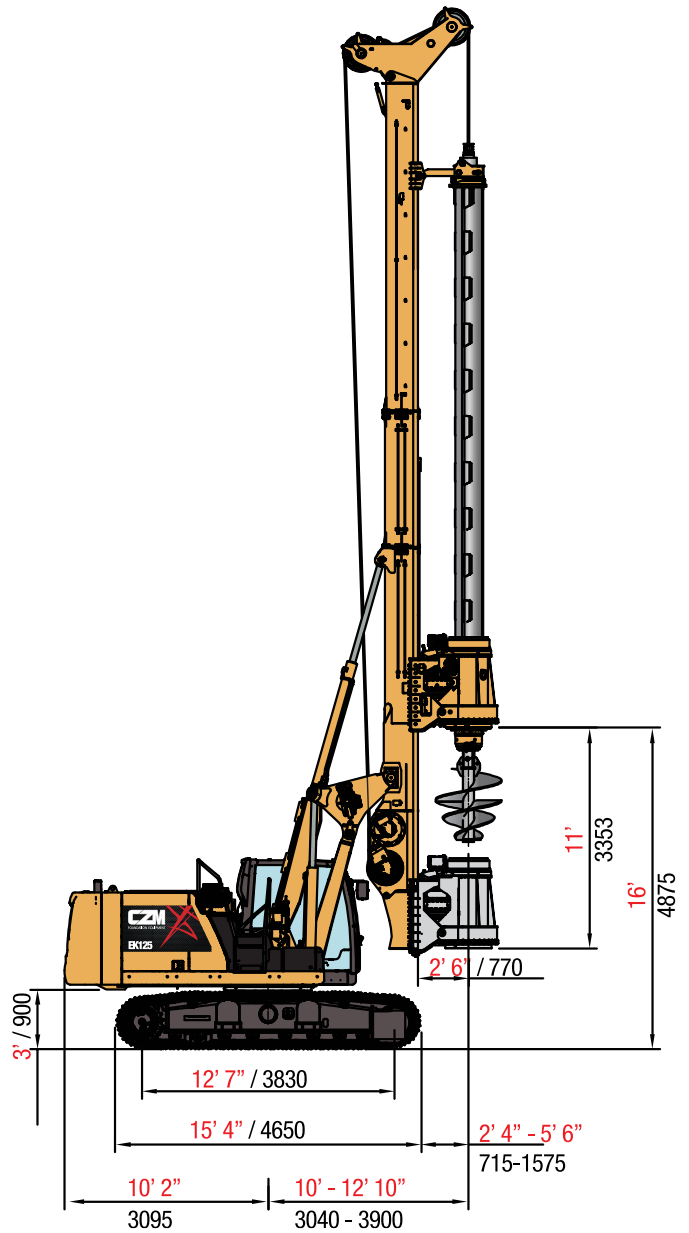
EK160SM

Standard Chassis	Cat® 330	
Installed Power	273 hp	204 kW
Maximum Torque (Std.)	155,100 lb.ft	21,500 kgf.m
Maximum Torque (Opt.)	134,000 lb.ft	18,000 kgf.m
Maximum Diameter	10 ft	3,050 mm
Std. Depth Interlocking Kelly	45 ft	13,700 m
Crowd Force	44,220 lbf	20,100 kgf
Crowd Cylinder Stroke	9 ft 6 in	2,900 mm
Main Winch Line Pull	41,000 lbf	18,600 kgf
Operation Weight	94,000 lb	41,400 kg

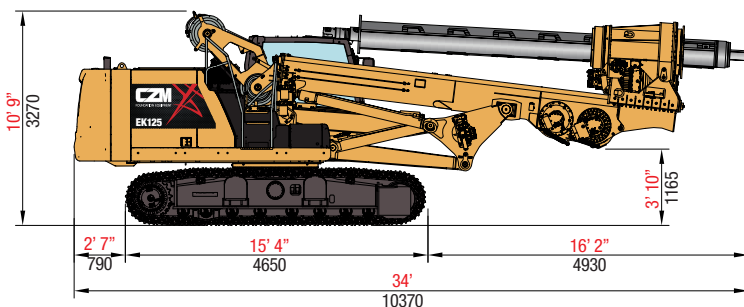
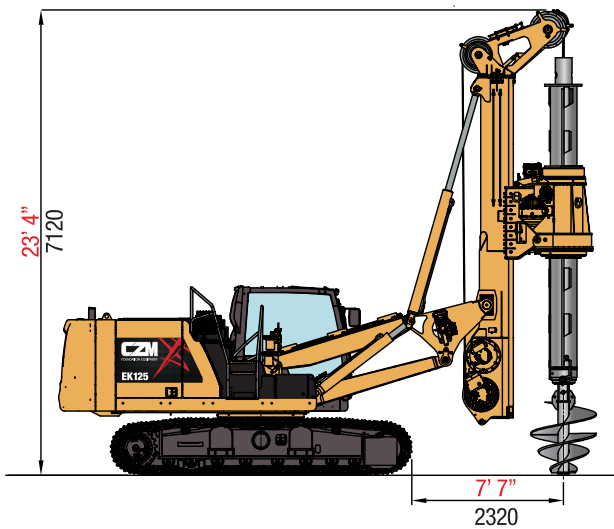
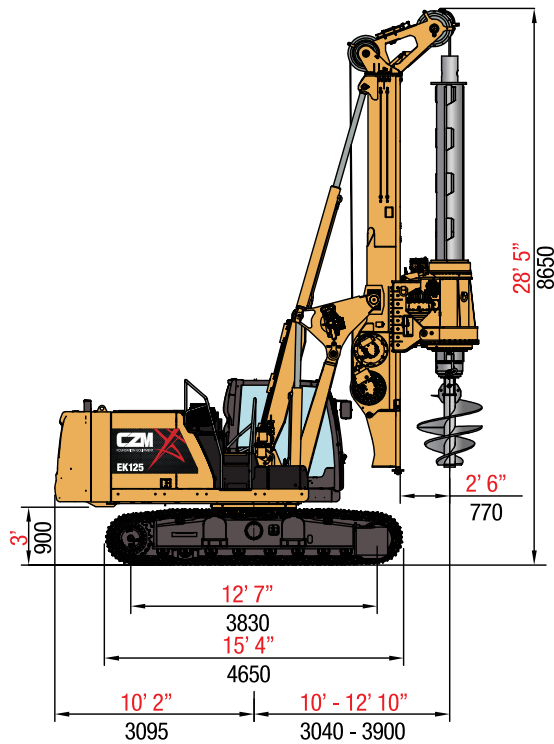


EK125

Standard Chassis	Cat® 323	
Installed Power	172 hp	129 kW
Maximum Torque	88,000 lb.ft	12,000 kgf.m
Maximum Diameter	8 ft	2,440 mm
Std. Depth (Interlocking Kelly)	120 ft	36,600 mm
Crowd Force	43,000 lbf	19,000 kgf
Crowd Cylinder Stroke	11 ft	3,350 mm
Main Winch Pull Line	41,000 lbf	18,600 kgf
Operation/Transport Weight	85,000 lb	38,560 kg



EK125SM

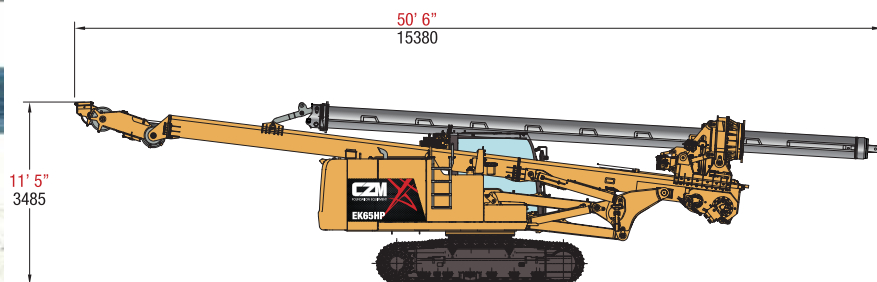
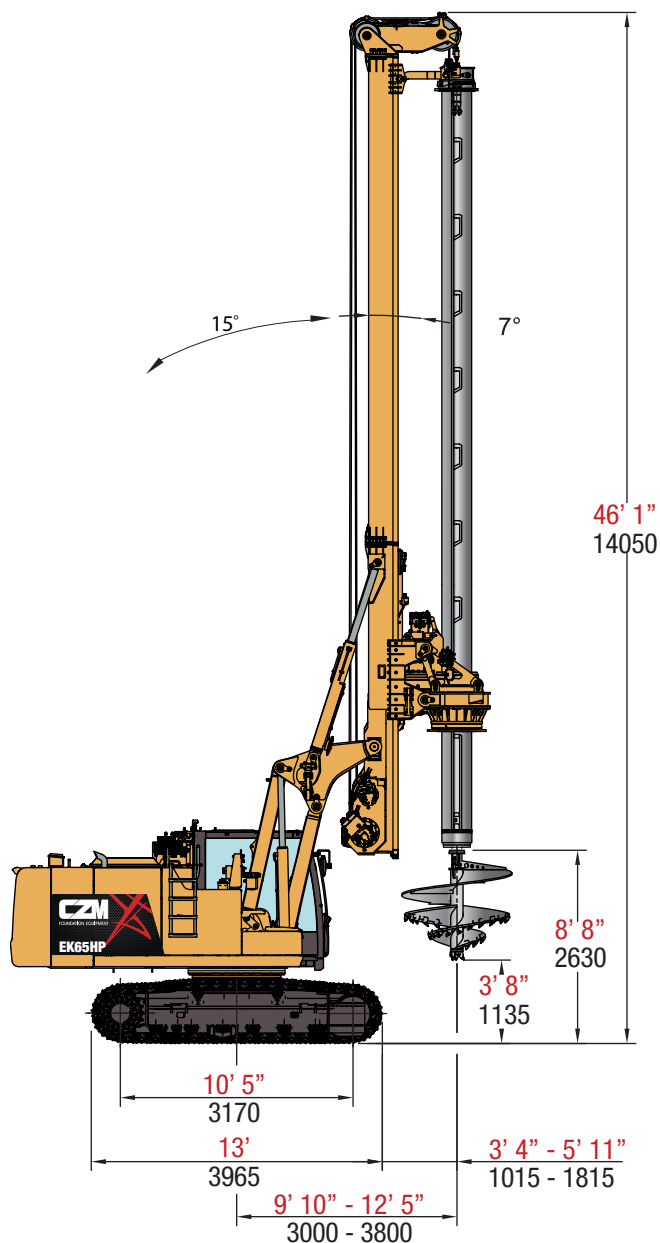


Standard Chassis	Cat® 323	
Installed Power	172 hp	129 kW
Maximum Torque	88,000 lb.ft	12,000 kgf.m
Maximum Diameter	8 ft	2,440 mm
Std. Depth (Interlocking Kelly)	55 ft	16,700 mm
Crowd Force	43,000 lbf	19,000 kgf
Crowd Cylinder Stroke	9 ft	2,750 mm
Main Winch Pull Line	41,000 lbf	18,600 kgf
Operation/Transport Weight	74,500 lb	33,850 kg

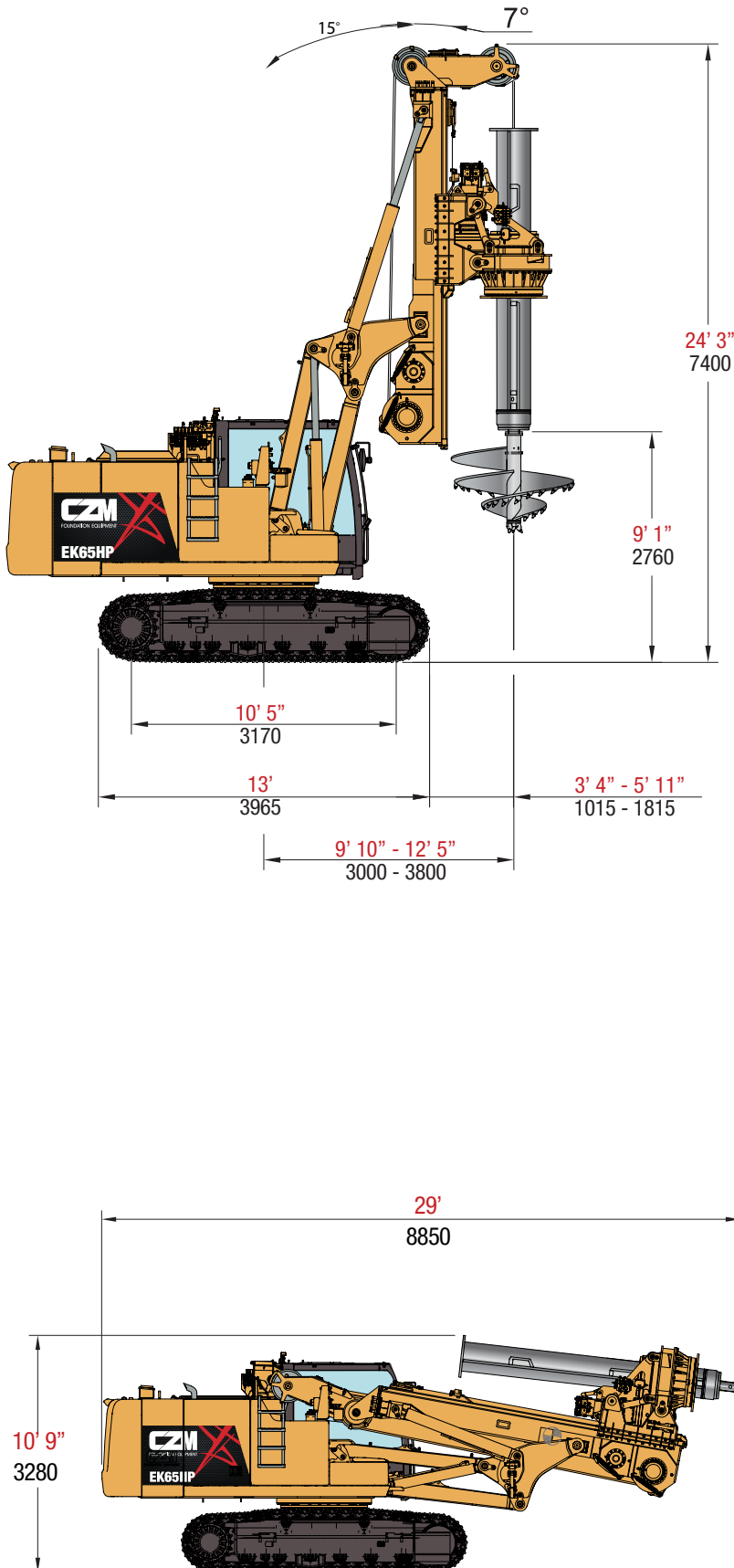


EK65HP

Standard Chassis	Cat® 317	
Installed Power	136 hp	102 kW
Maximum Torque	67,150 lb.ft	9,310 kgf.m
Maximum Diameter	5 ft 3 in	1,600 mm
Std. Depth (Interlocking Kelly)	80 ft	24,400 mm
Crowd Force	27,060 lbf	12,300 kgf
Crowd Cylinder Stroke	6 ft 3 in	1,920 mm
Main Winch Pull Line	27,120 lbf	12,330 kgf
Operation Weight	60,000 lb	27,125 lb
Transport Weight	55,000 lb	24,947 kg



EK65HPSM



Standard Chassis	Cat® 317	
Installed Power	136 hp	102 kW
Maximum Torque	67,150 lb.ft	9,310 kgf.m
Maximum Diameter	5 ft 3 in	1,600 mm
Std. Depth (Interlocking Kelly)	41 ft	12,500 mm
Crowd Force	27,060 lbf	12,300 kgf
Crowd Cylinder Stroke	6 ft 3 in	1,920 mm
Main Winch Pull Line	27,120 lbf	12,300 kgf
Operation Weight	60,000 lb	27,125 lb
Transport Weight	55,000 lb	24,947 kg

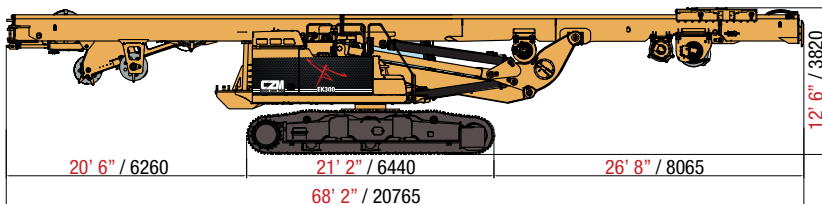
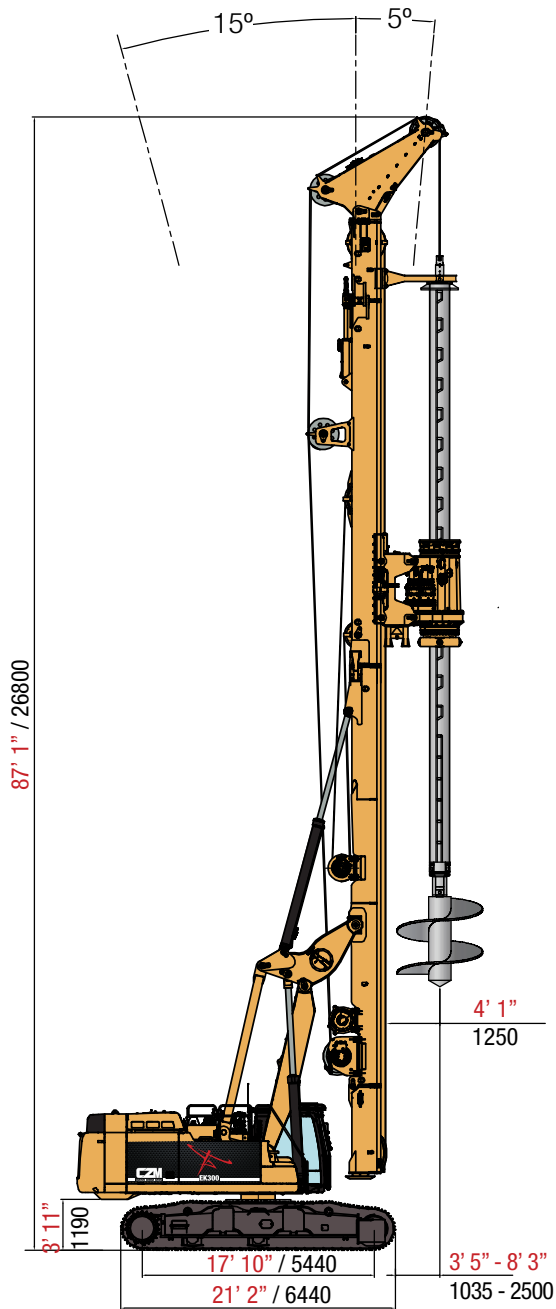


Cable Crowd

Our cable crowd series are ideal for working with segmented casing. The long stroke of the rotary allows the contractor to work with longer segments. They are also multi-purpose and can be easily converted to CFA, Displacement Piles, Cased CFA and Soilmixing.

EK300LS	21
EK270LS	22
EK260LS	23
EK240LS	24
EK160LS	25

EK300LS

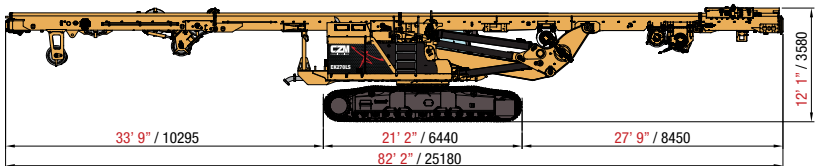
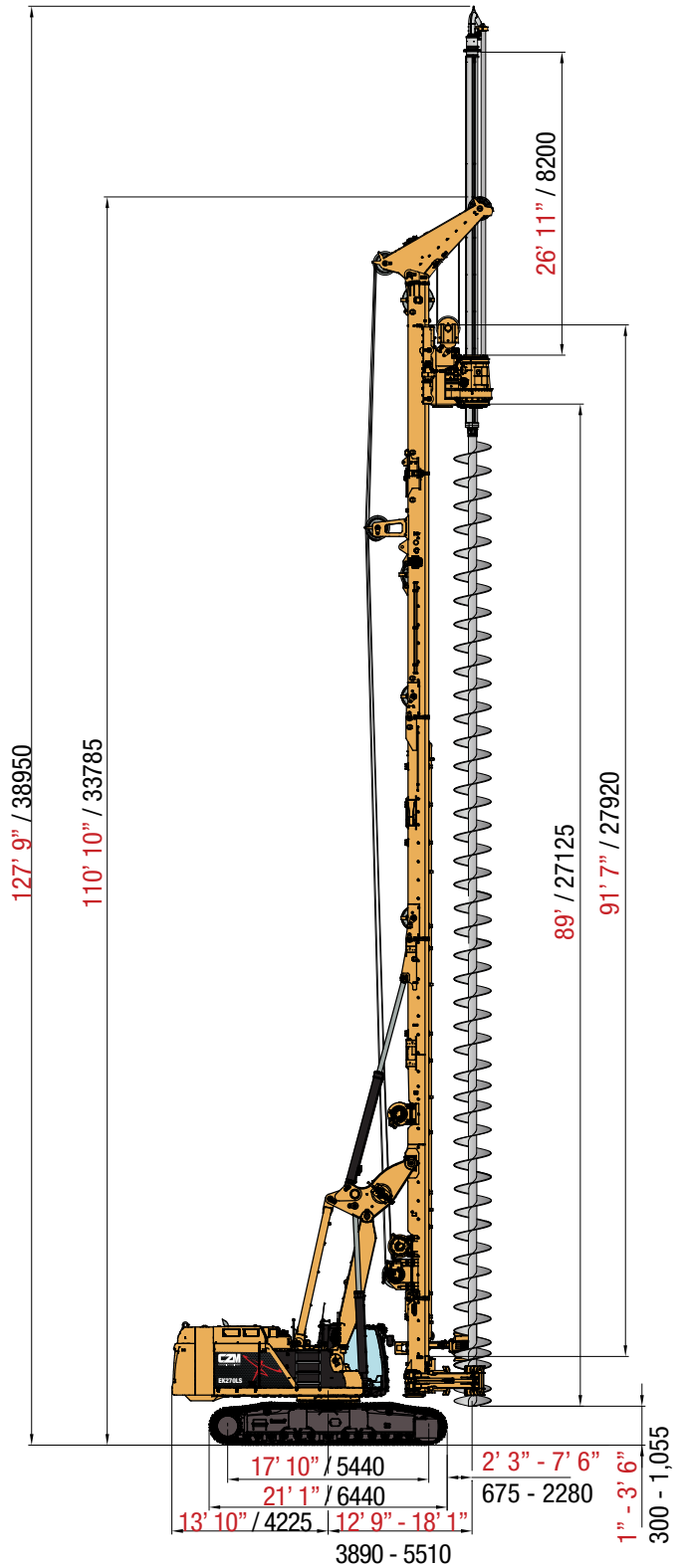


Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	252,000 lbf.ft	35,000 kgf.m
Maximum Diameter	12 ft	3,700 mm
Std. Drilling Depth	157 ft	48,000 mm
Crowd/Extraction Force	83,725 lbf	38,000 kgf
Maximum Rotary Stroke	67 ft 6 in	20,600 mm
Main Winch Pull Line	71,000 lbf	32,200 kgf
Std. Operation Weight	249,600 lb	113,216 kg
Min. Transport Weight	126,000 lb	57,150 kg

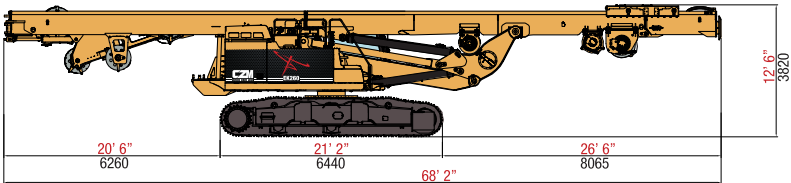


EK270LS

Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	209,800 lb.ft	29,085 kgf.m
Maximum Diameter	10 ft	3,050 mm
Std. Drilling Depth	110 ft	33,600 mm
Crowd/Extraction Force	83,725 lbf	38,000 kgf
Maximum Rotary Stroke	67 ft 6 in	20600 mm
Main Winch Pull Line	63,700 lbf	28,955 kgf
Min. Transport Weight	115,000 lb	52,160 kg
Std. Operation Weight	249,000 lb	131,216 kg



EK260LS

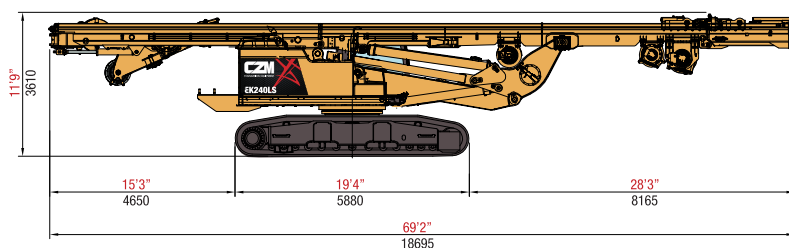
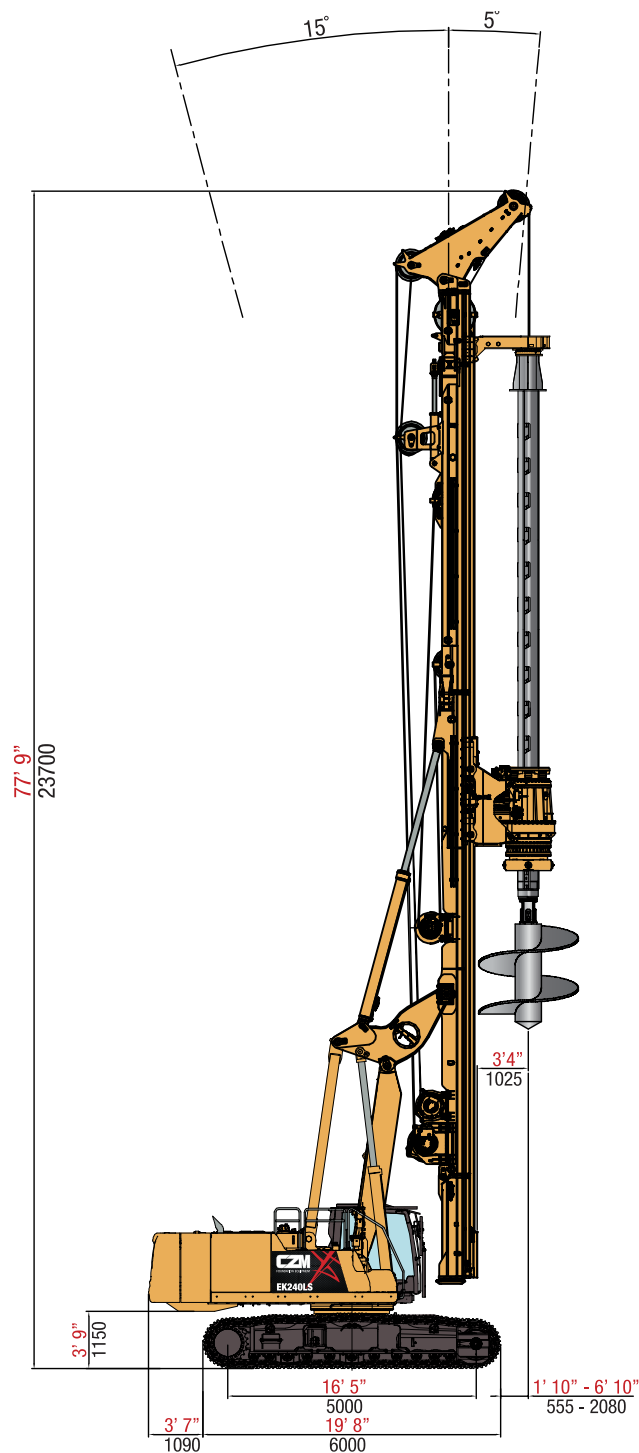


Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	209,800 lb.ft	29,085 kgf.m
Maximum Diameter	12 ft	3,700 mm
Std. Drilling Depth	130 ft	39,600 mm
Crowd/Extraction Force	83,725 lbf	38,000 kgf
Maximum Rotary Stroke	67 ft 6 in	20600 mm
Main Winch Pull Line	63,700 lbf	28,955 kgf
Min. Transport Weight	115,000 lb	52,160 kg

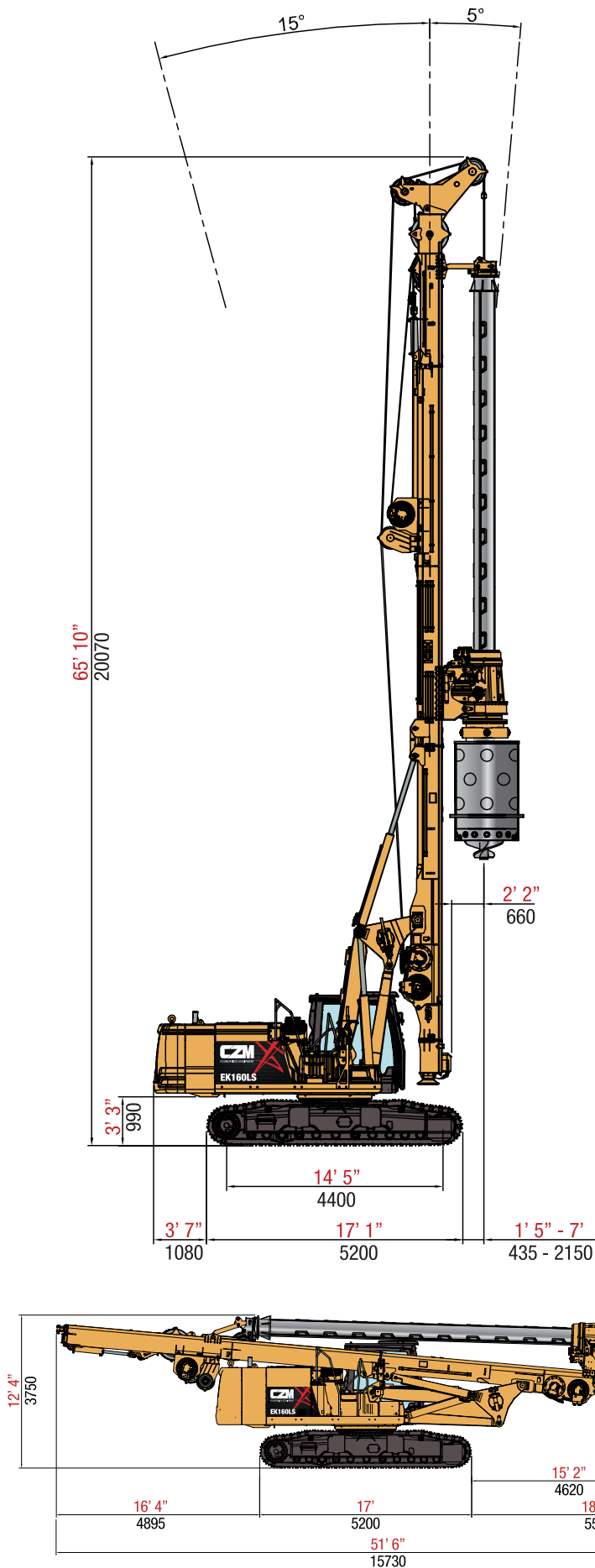


EK240LS

Standard Chassis	Cat® 340	
Installed Power	346 hp	258.3 kW
Maximum Torque	193,230 lb.ft	26,200 kgf.m
Maximum Diameter	12 ft	3,700 mm
Std. Drilling Depth	130 ft	39,600 mm
Crowd/Extraction Force	83,725 lbf	38,000 kgf
Maximum Rotary Stroke	67 ft 6 in	20,600 mm
Main Winch Pull Line	63,700 lbf	28,995 kgf
Min. Transport Weight	135,000 lb	61,234 kg
Std. Operation Weight	180,000 lb	81,800 kg



EK160LS



Standard Chassis	Cat® 330	
Installed Power	273 hp	204 kW
Maximum Torque	134,300 lb.ft	18,620 kgf.m
Maximum Diameter	8 ft	2,400 mm
Std. Drilling Depth	120 ft	36,600 mm
Crowd/Extraction Force	44,000 lbf	20,000 kgf
Maximum Rotary Stroke	48.9 ft	14,850 mm
Main Winch Pull Line	41,000 lbf	18,600 mm
Min. Transport Weight	95,000 lb	43,091 kg
Std. Operation Weight	118,000 lb	52,520 kg

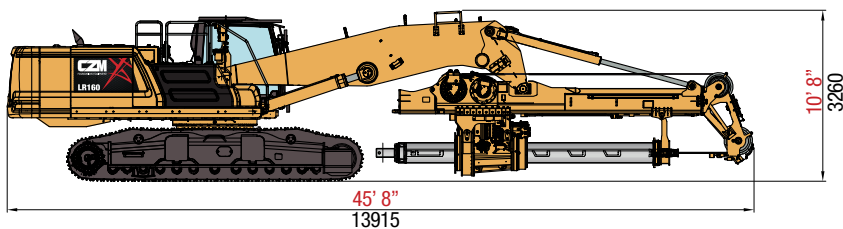
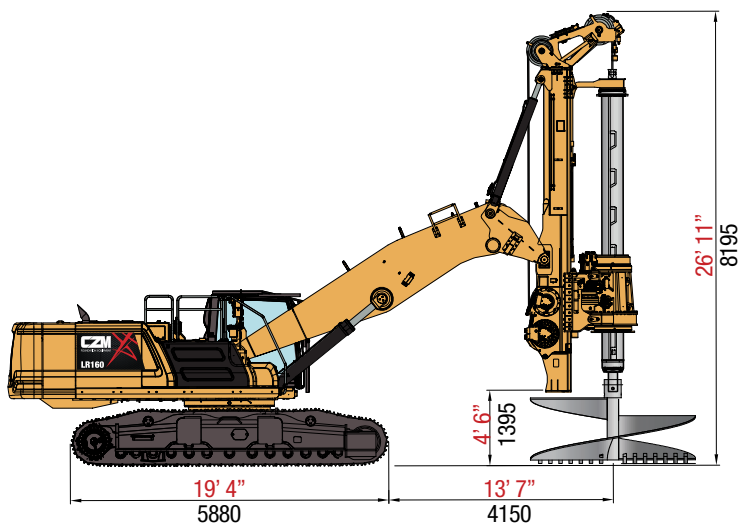
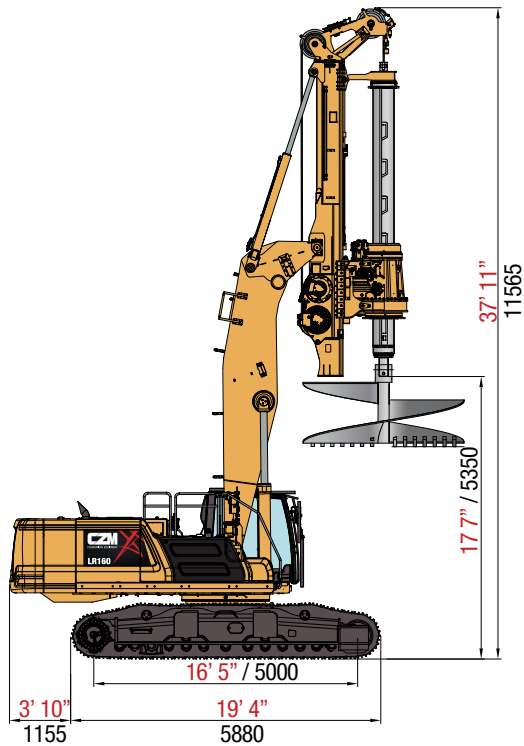


Long Reach

The Long Reach series of machines are equipped with a long boom instead of kinematics, allowing the contractor to reach out when drilling. Drilling off the side of a highway or on big slopes for transmission lines are prime examples of the applications for these machines. They are equipped with interlocking kelly bars, that allow you to drill even on hard rock. We have a full range of sizes, from an LR50 (75,000 lbs of operation weight) to an LR160 (130,000 lbs of operation weight).

LR160	27
LR125	28
LR95	29
LR75	30
LR65	31
LR50	32
LR40	33

LR160

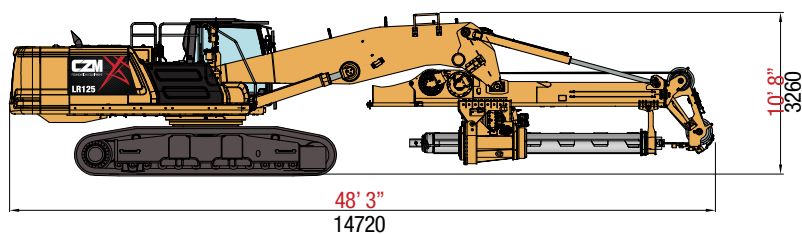
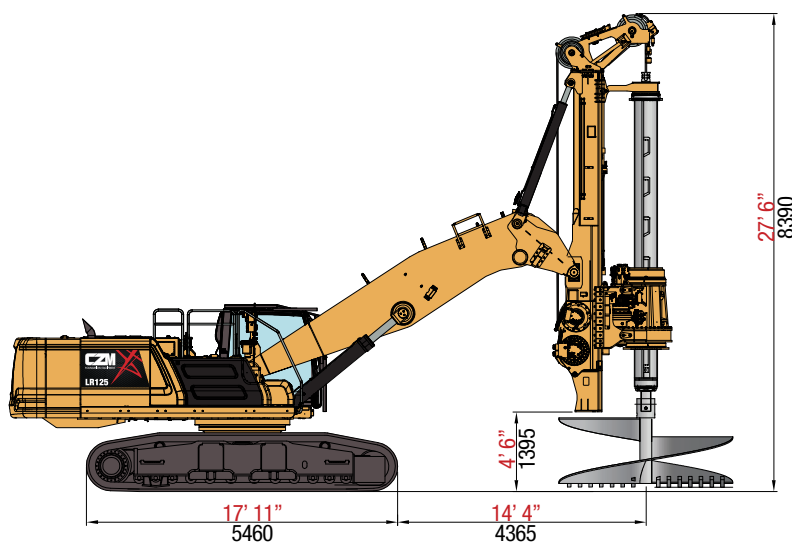
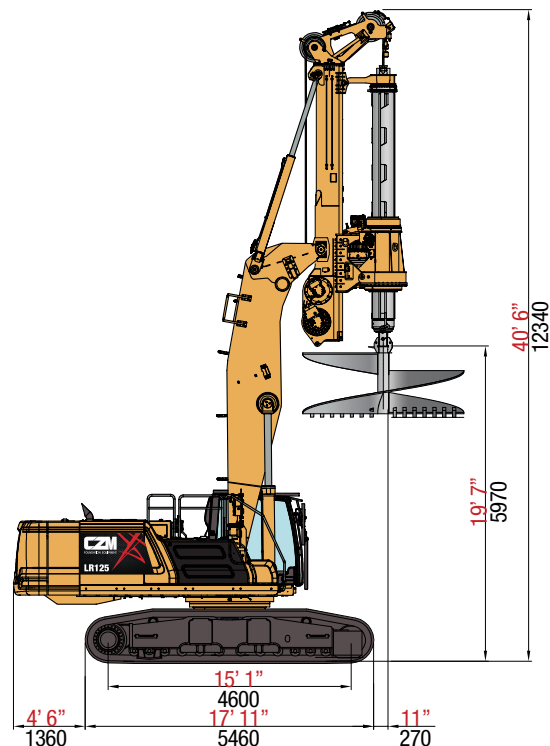


Standard Chassis	Cat® 340	
Installed Power	346 hp	258.3 kW
Maximum Torque	155,100 lbf.ft	21,500 kgf.m
Maximum Diameter	12 ft	3,650 mm
Std. Drilling Depth	53 ft	16,150 mm
Crowd Force	44,500 lbf	20,230 kgf
Cylinder Stroke	9 ft 6 in	2,900 mm
Main Winch Pull Line	41,270 lbf	18,760 kgf
Min. Transport Weight	98,300 lb	44,600 kg
Std. Operation Weight	133,500 lb	60,550 kg

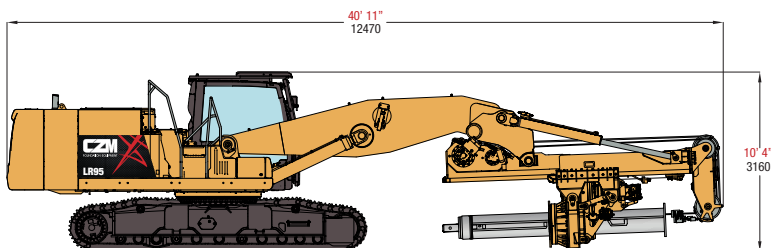
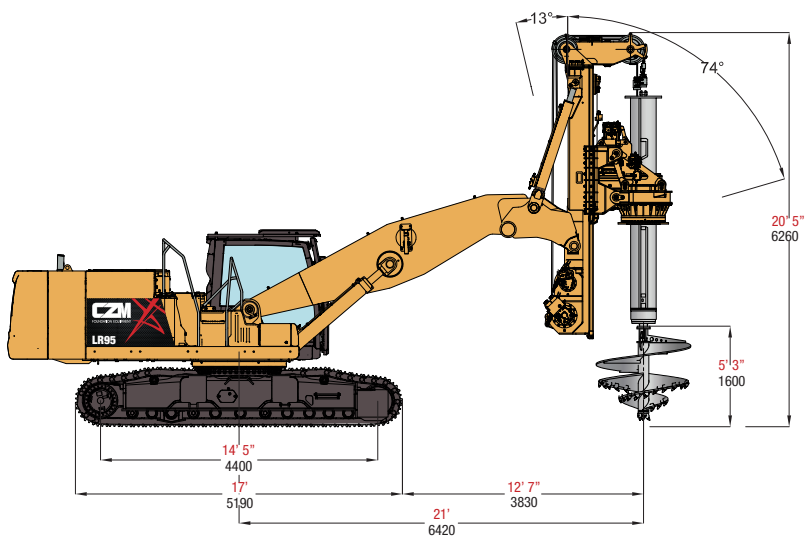
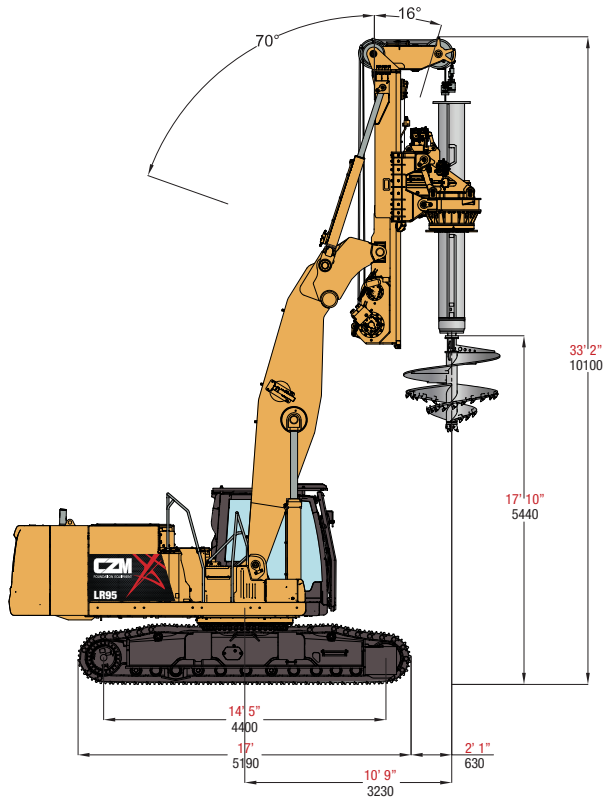


LR125

Standard Chassis	Cat® 340	
Installed Power	346 hp	258.3 kW
Maximum Torque	101,400 lb.ft	14,060 kgf.m
Maximum Diameter	12 ft	3,650 mm
Std. Drilling Depth	55 ft	16,764 mm
Crowd Force	44,500 lbf	20,230 kgf
Cylinder Stroke	9 ft	2,750mm
Main Winch Pull Line	41,270 lbf	18,760 mm
Min. Transport Weight	91,000 lb	41,276 kg
Std. Operation Weight	105,000 lb	47,627 kg



LR95

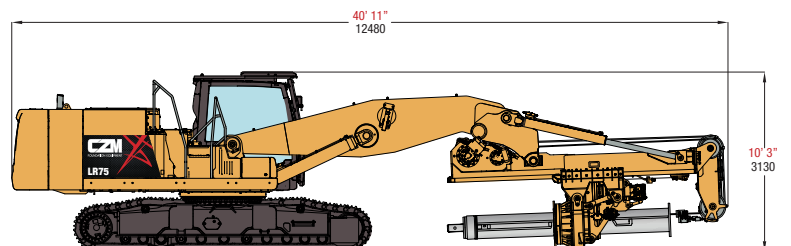
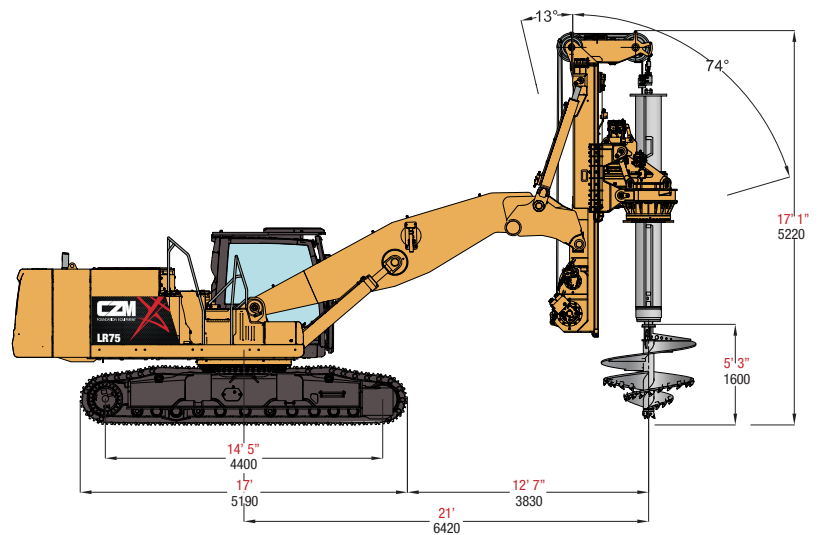
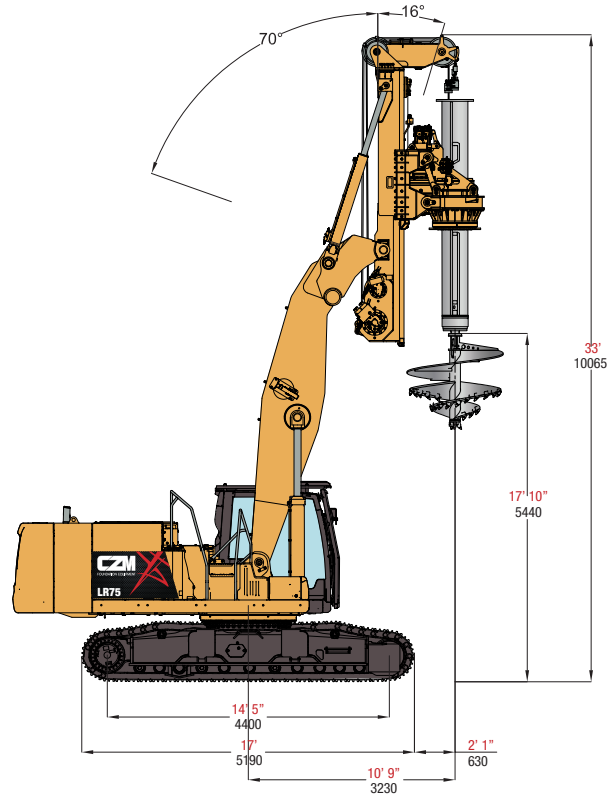


Standard Chassis	Cat® 330	
Installed Power	273 hp	204 kW
Maximum Torque	105,530 lb.ft	14,630 kgf.m
Maximum Diameter	12 ft	3,650 mm
Std. Drilling Depth	53 ft	16,150 mm
Crowd Force	27,000 lbf	12,300 kgf
Cylinder Stroke	6 ft 3 in	1,920 mm
Main Winch Pull Line	27,120 lbf	12,330 kgf
Min. Transport Weight	100,000 lb	45,500 kg
Std. Operation Weight	100,000 lb	45,500 kg

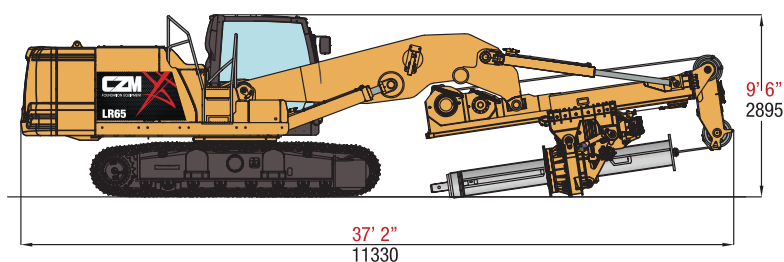
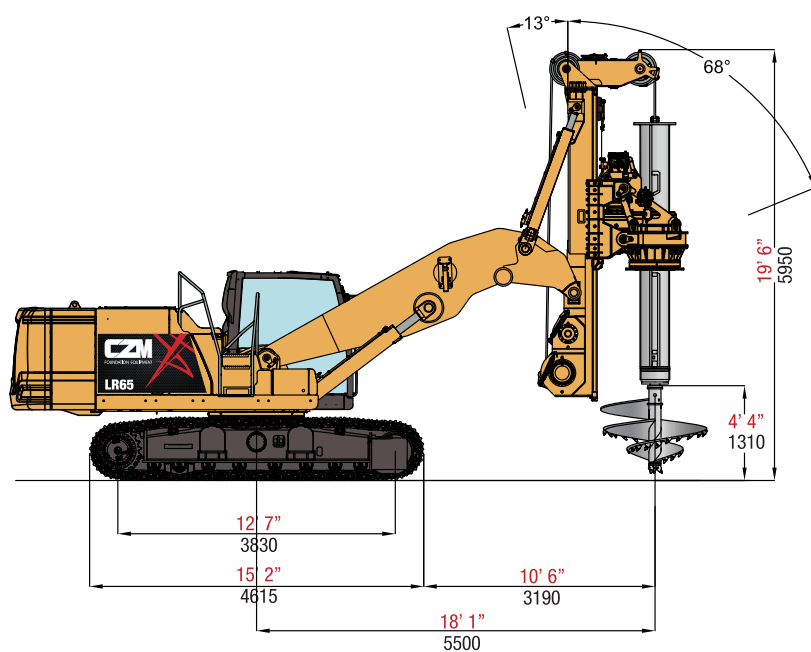
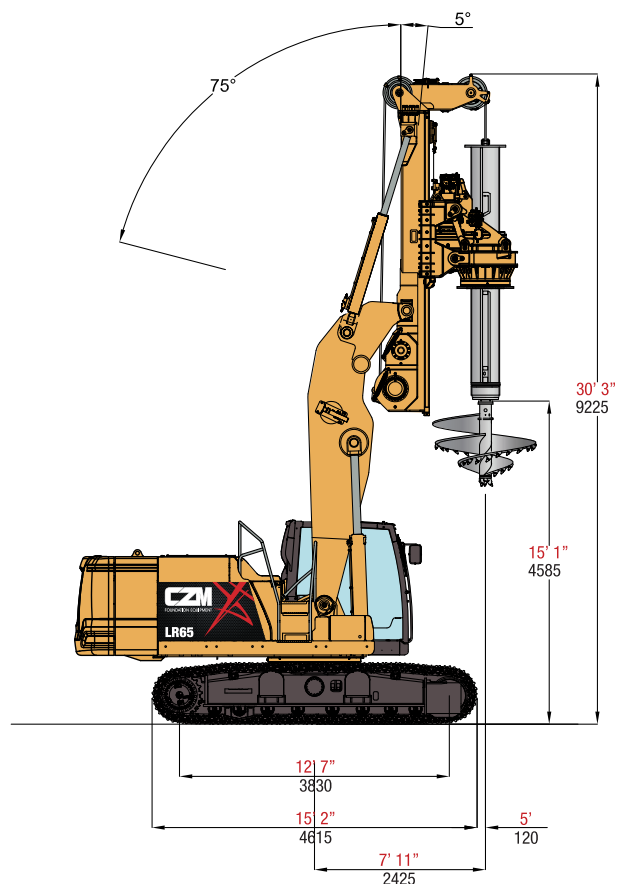


LR75

Standard Chassis	Cat® 330	
Installed Power	273 hp	204 kW
Maximum Torque	77,530 lb.ft	10,750 kgf.m
Maximum Diameter	11 ft	3,350 mm
Std. Drilling Depth	55 ft	16,760 mm
Crowd Force	27,000 lbf	12,300 kgf
Cylinder Stroke	6 ft 3 in	1,920 mm
Main Winch Pull Line	27,120 lbf	12,330 kgf
Min. Transport Weight	75,700 lb	34,336 kg
Std. Operation Weight	97,000 lb	44,000 kg



LR65

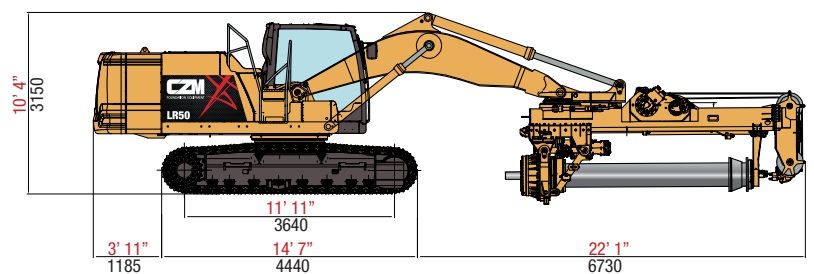
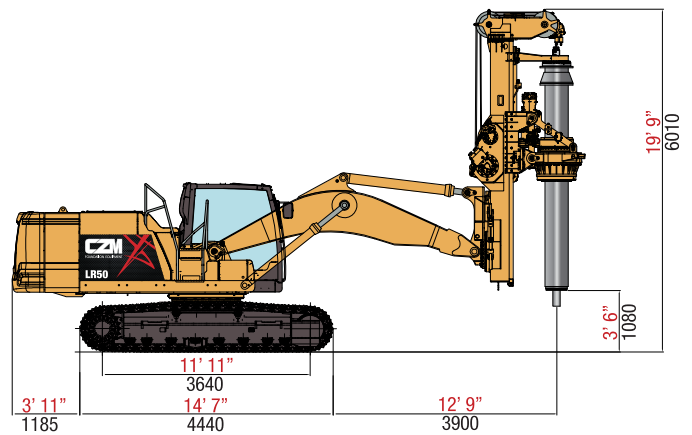
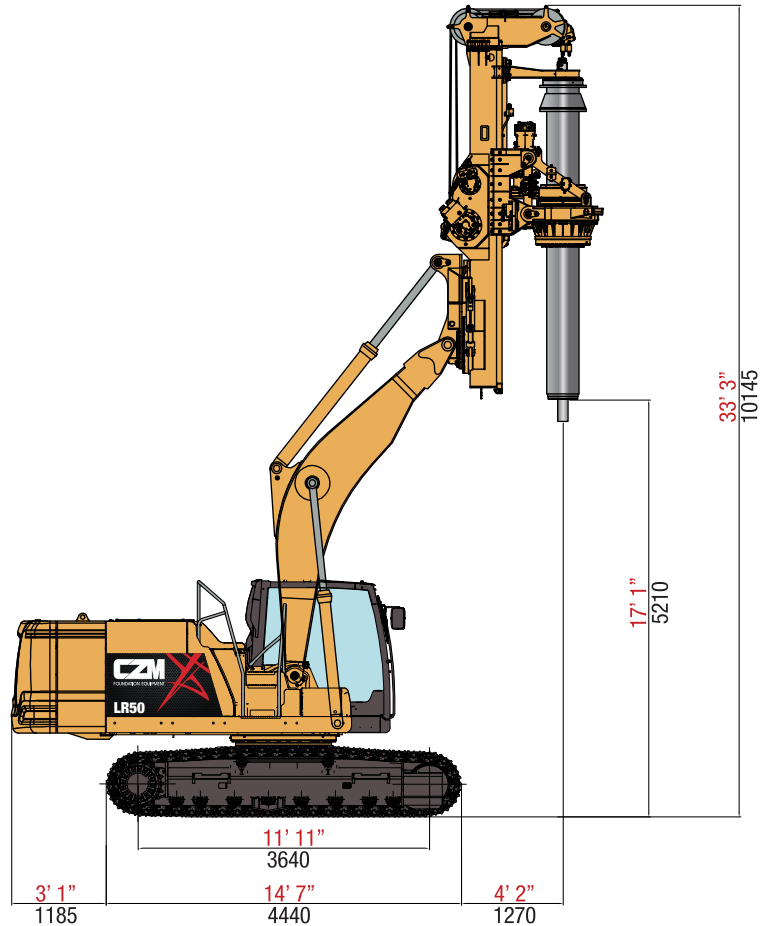


Standard Chassis	Cat® 323	
Installed Power	172 hp	128 kW
Maximum Torque	67,150 lb.ft	9,310 kgf.m
Maximum Diameter	9 ft	2,750 mm
Std. Drilling Depth	55 ft	16,760 mm
Crowd Force	27,000 lbf	12,300 kgf
Cylinder Stroke	6 ft 3 in	1,920 mm
Main Winch Pull Line	27,120 lbf	12,330 kgf
Min. Transport Weight	80,000 lb	36,300 kg
Std. Operation Weight	80,000 lb	36,300 kg

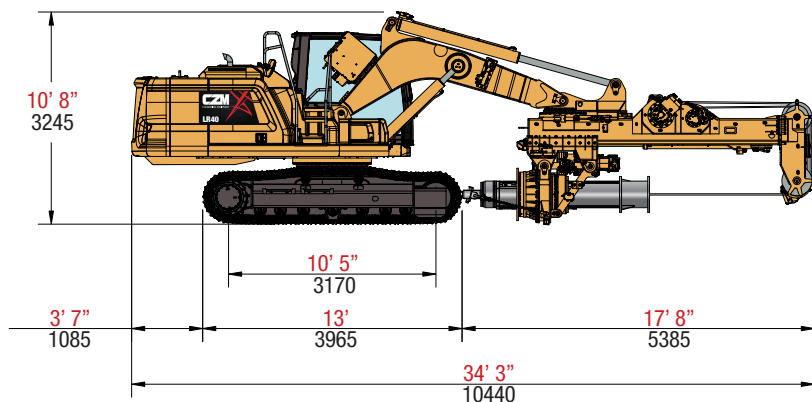
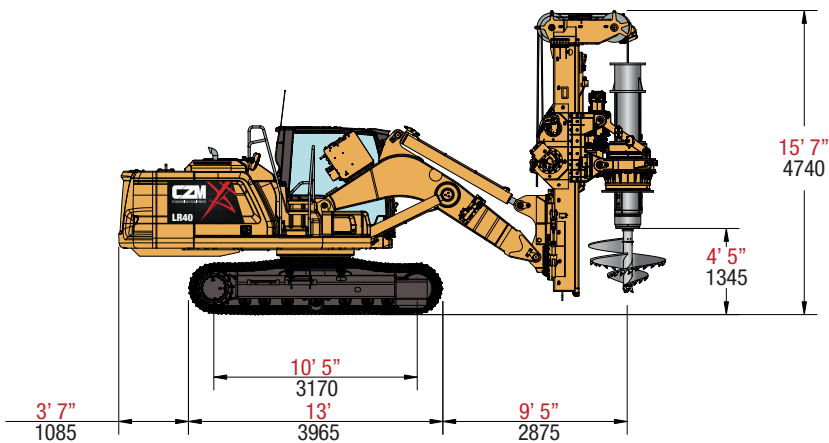
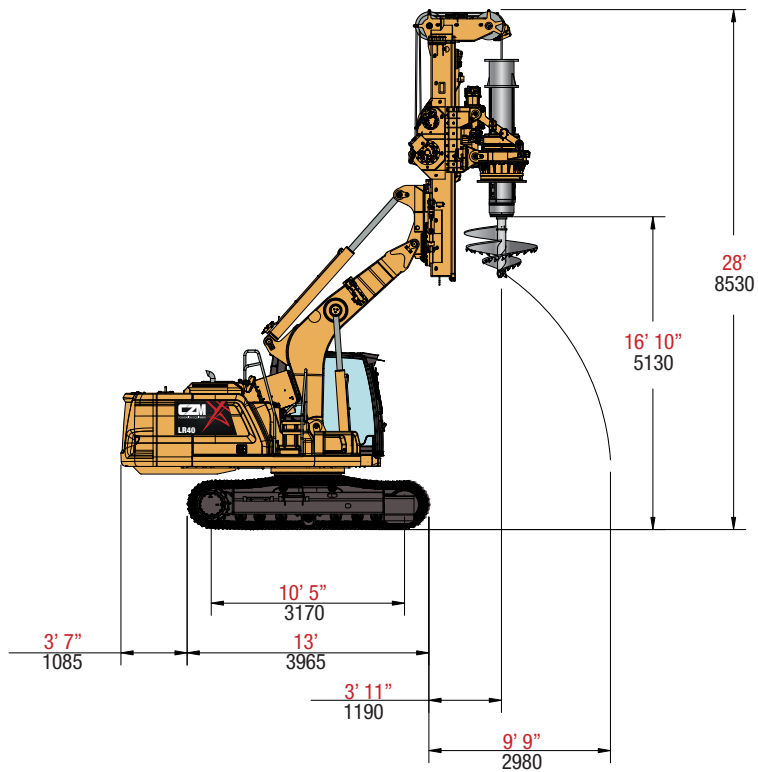


LR50

Standard Chassis	Cat® 323	
Installed Power	172 hp	128 kW
Maximum Torque	52,900 ft.lbs	7,340 kg.m
Maximum Diameter	8 ft	2,500 mm
Std. Drilling Depth	40 ft	12,200 mm
Crowd Force	27,000 lbf	12,300 kgf
Cylinder Stroke	6 ft 3 in	1,920 mm
Main Winch Pull Line	27,200 lbf	12,337 kgf
Min. Transport Weight	73,600 lb	33,400 kg
Std. Operation Weight	74,900 lb	34,200 kg



LR40



Standard Chassis	Cat® 317	
Installed Power	136 hp	102 kW
Maximum Torque	53,200 lb.ft	7,300 kgf.m
Maximum Diameter (below mast)	6 ft	1,830 mm
Std. Drilling Depth	55 ft	16,800 mm
Crowd Force	15,430 lbf	7,000 kgf
Cylinder Stroke	5 ft	1,720 mm
Main Winch Pull Line	27,200 lbf	12,337 kgf
Std. Operation Weight	65,300 lb	29,600 kg



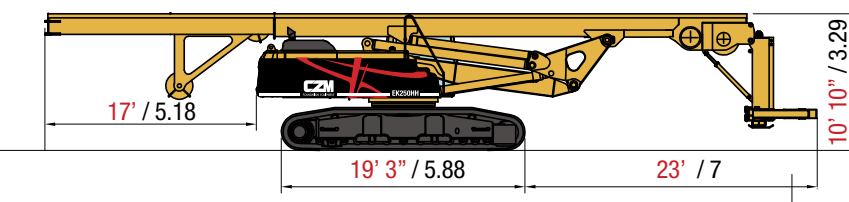
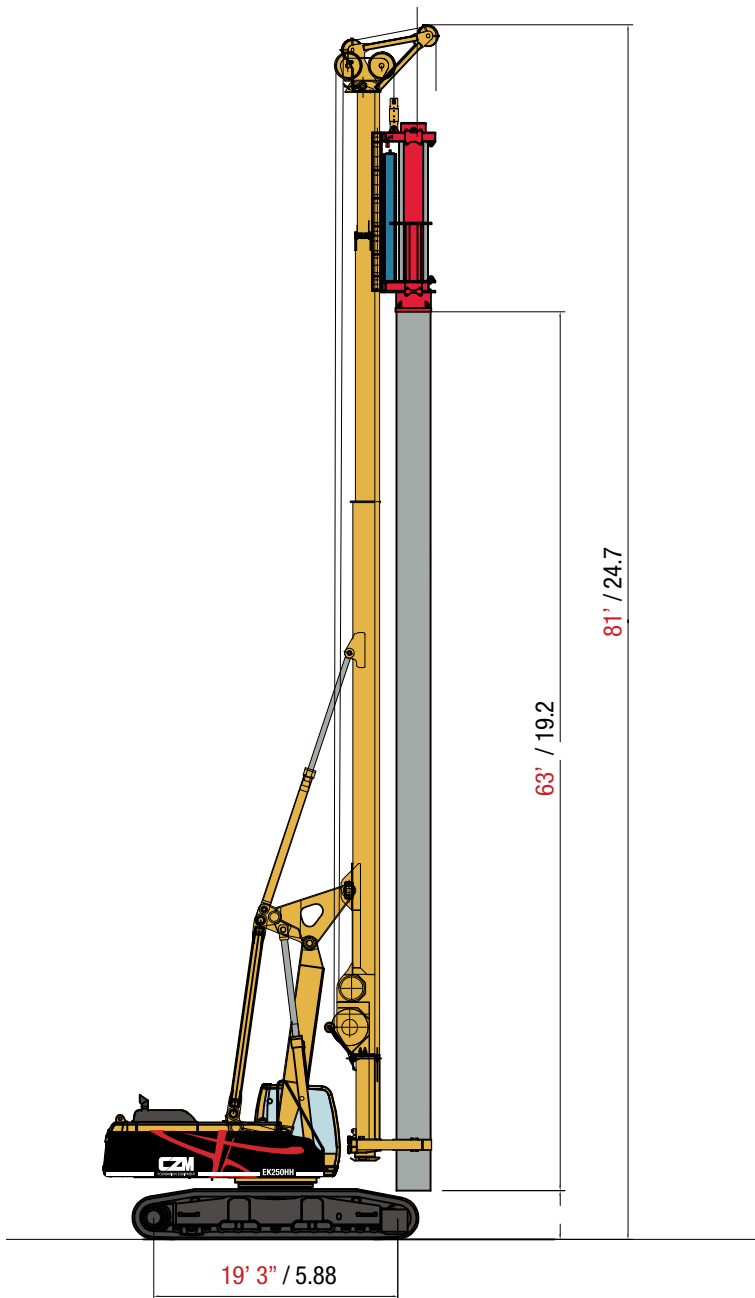
Pile Driving

CZM also manufactures pile driving machines with a hydraulic impact hammer. Hydraulic hammers are more effective and eco friendly than diesel and air hammers. With a high frequency and high efficiency you can drive piles faster. It is also a self contained machine, easy to set up, brake down and transport.

EK250HH	35
EK125HH	36
SP25	37

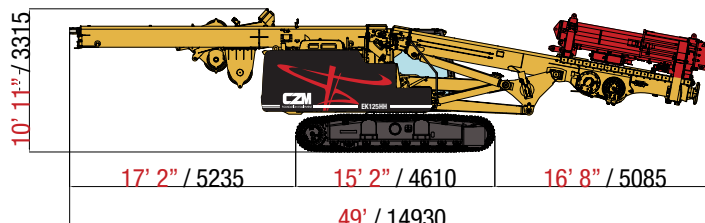
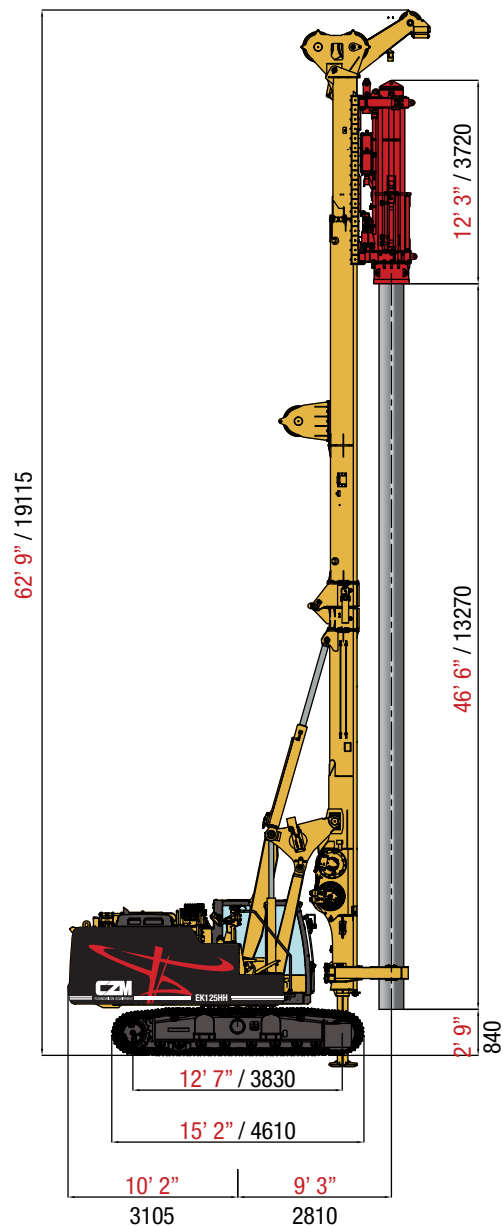
EK250HH

Standard Chassis	Cat® 340	
Energy per Blow (max)	44,000 ft.lbs	58,800 Nm
Hammer Frequency (max)	85 blows/min	85 blows/min
Drop Height (max)	4 ft	1,200 mm
Piston Weight	11,000 lb	5,000 kg
Hammer Total Weight	15,000 lb	6,800 kg
Max Cap Diameter	24 in	600 mm
Pile Length (max)	60 ft	18,300 mm
Min. Transport Weight	154,000 lb	70,000 kg
Std. Transport Weight	170,000 lb	77,110 kg

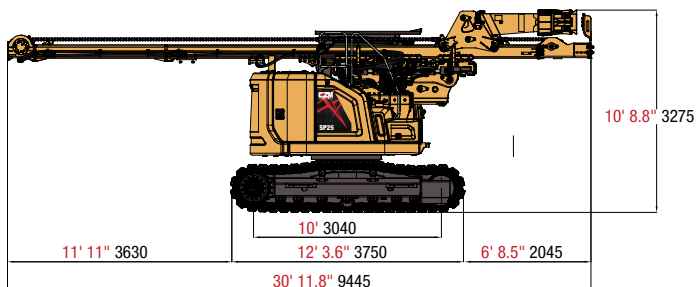
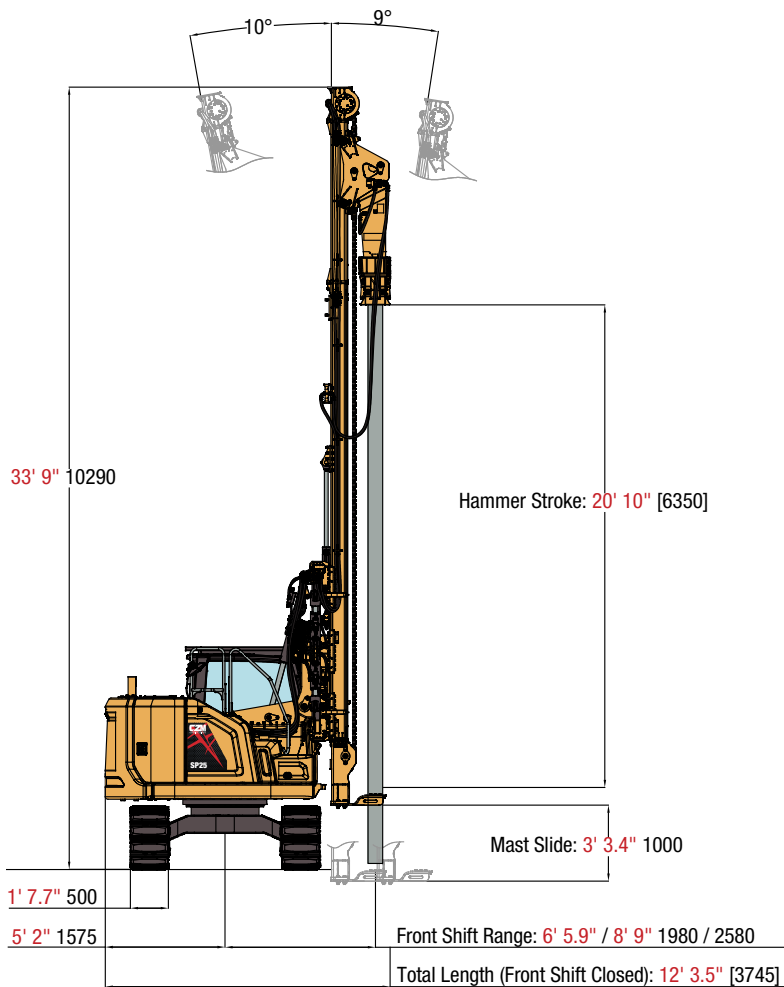


EK125HH

Standard Chassis	Cat® 323	
Energy per Blow (max)	32,000 ft.lbs	43,386 Nm
Hammer Frequency (max)	85 blows/min	85 blows/min
Drop Height (max)	4 ft	1,200 mm
Piston Weight	8,000 lb	3,600 kg
Hammer Total Weight	14,600 lb	6,600 kg
Max Cap Diameter	24 in	600 mm
Pile Length (max)	50 ft	15,000 mm
Min. Transport Weight	75,400 lb	34,400 kg
Std. Transport Weight	90,000 lb	41,000 kg



SP25



Standard Chassis	Cat® 315	
Installed Power	110 hp	82 kW
Hammer Energy Class	1,500 lb.ft	2,040 J
Pile Length (max)	24 ft	7,300 mm
Crowd Force	14,330 lbf	6,500 kgf
Extraction Force	22,050 lbf	10,000 kgf
Min. Transport Weight	41,050 lb	18,620 kg
Std. Operating Weight	41,050 lb	18,620 kg



Ultra Short Mast

The Ultra Short Mast is a version of our machines with “reversed” kinematics, allowing the contractor to drill under 20ft of over headroom to a depth of 60ft, with a 10ft tool in front of the mast. A unique machine that cannot be matched in the market.

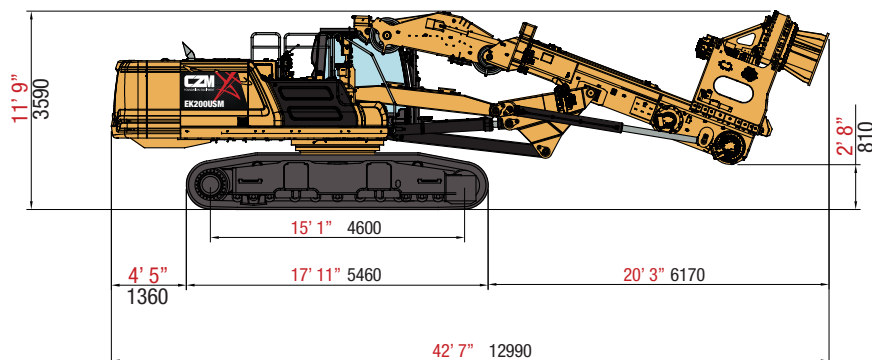
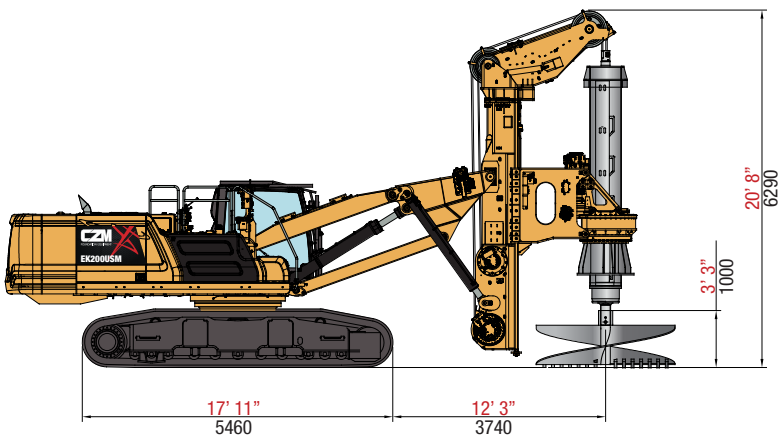
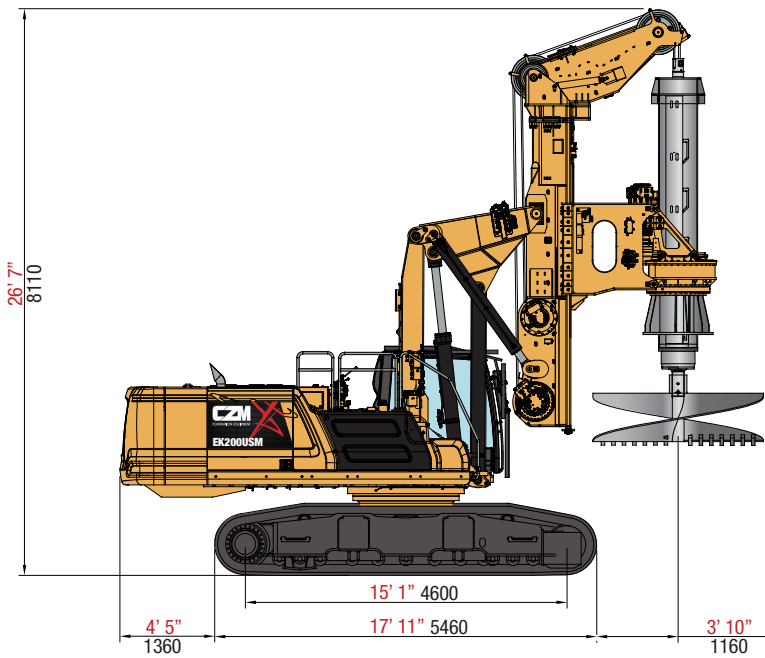
EK200USM

39

EK160USM

40

EK200USM

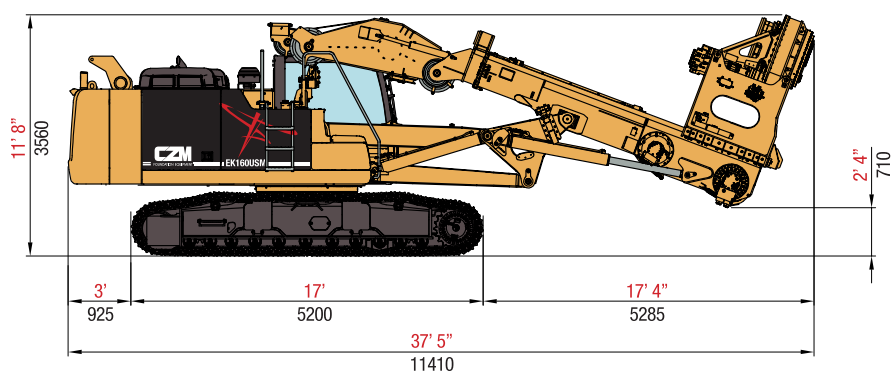
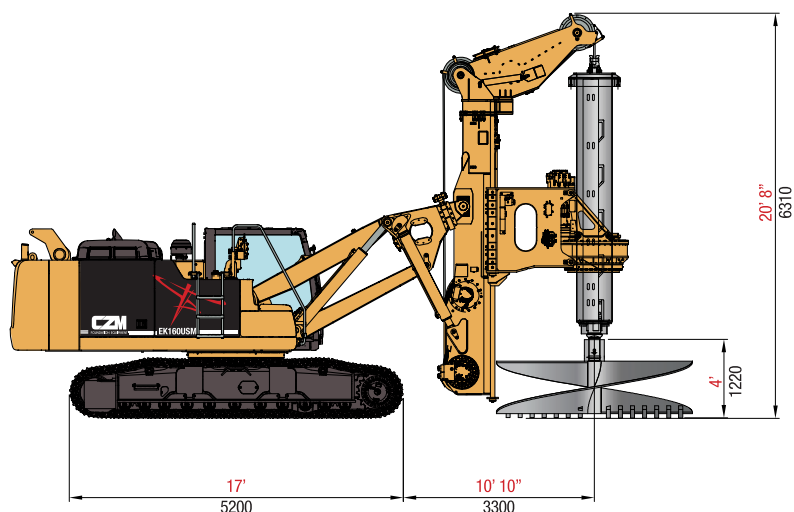
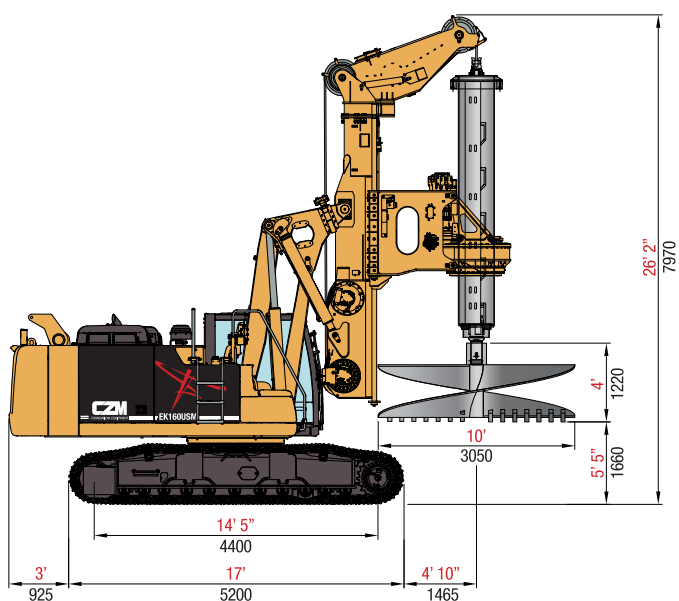


Standard Chassis	Cat® 340	
Installed Power	346 hp	258 kW
Maximum Torque	193,360 lbf.ft	27,600 kgf.m
Maximum Diameter	10 ft	3,050 m
Max. Std. Depth	55 ft	16,760 mm
Crowd Force	55,000 lbf	25,000 kgf
Crowd Cylinder Stroke	6 ft 6 in	1,930 mm
Main Winch Pull Line	50,800 lbf	23,000 kgf
Std. Operation Weight	140,000 lb	63,500 kg
Min. Transport Weight	102,000 lb	46,300 kg
Std. Transport Weight	122,000 lb	55,530 kg



EK160USM

Standard Chassis	Cat® 330	
Installed Power	273 hp	204 kW
Maximum Torque	167,340 lbf.ft	23,200 kgf.m
Maximum Diameter	10 ft	3,050 mm
Max. Std. Depth	55 ft	16,760 mm
Crowd Force	55,000 lbf	25,000 kgf
Crowd Cylinder Stroke	6 ft 6 in	1,930 mm
Main Winch Pull Line	51,400 lbf	23,380 kgf
Std. Operation Weight	103,500 lb	46,950 kg
Min. Transport Weight	83,000 lb	37,650 kg
Std. Transport Weight	96,000 lb	43,500 kg



Micropile

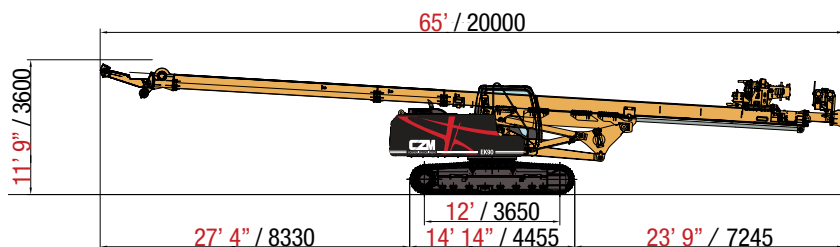
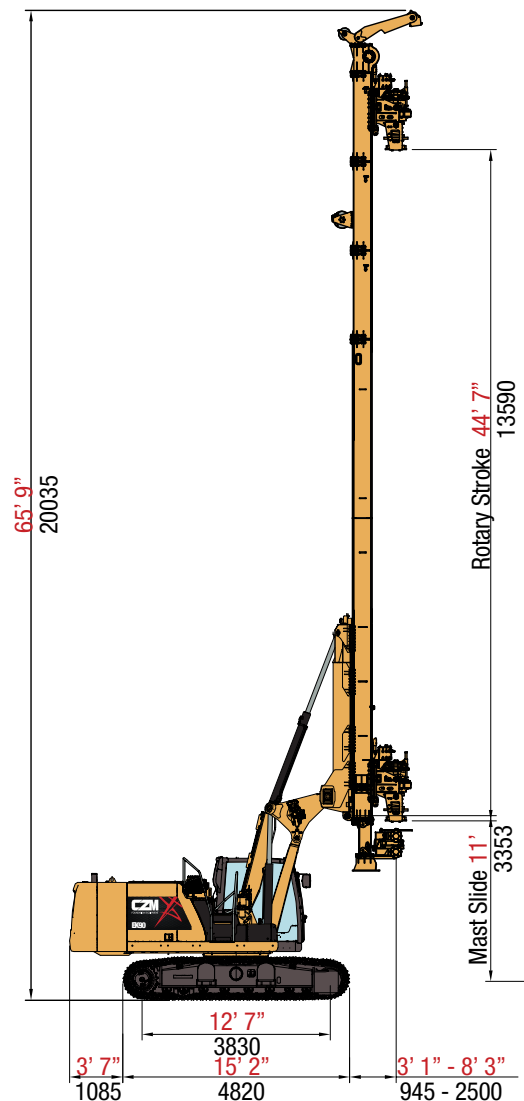
These machines are set up for drilling micro piles with a long stroke. The EK90, has 50ft of rotary travel, making it a very productive machine in this configuration. Equipped with either a single or double rotary, with 18in or 24in clamps, radio remote it is very versatile and can also be converted to CFA and Jet Grouting.

EK90M	42
CR25	43
CR18	44

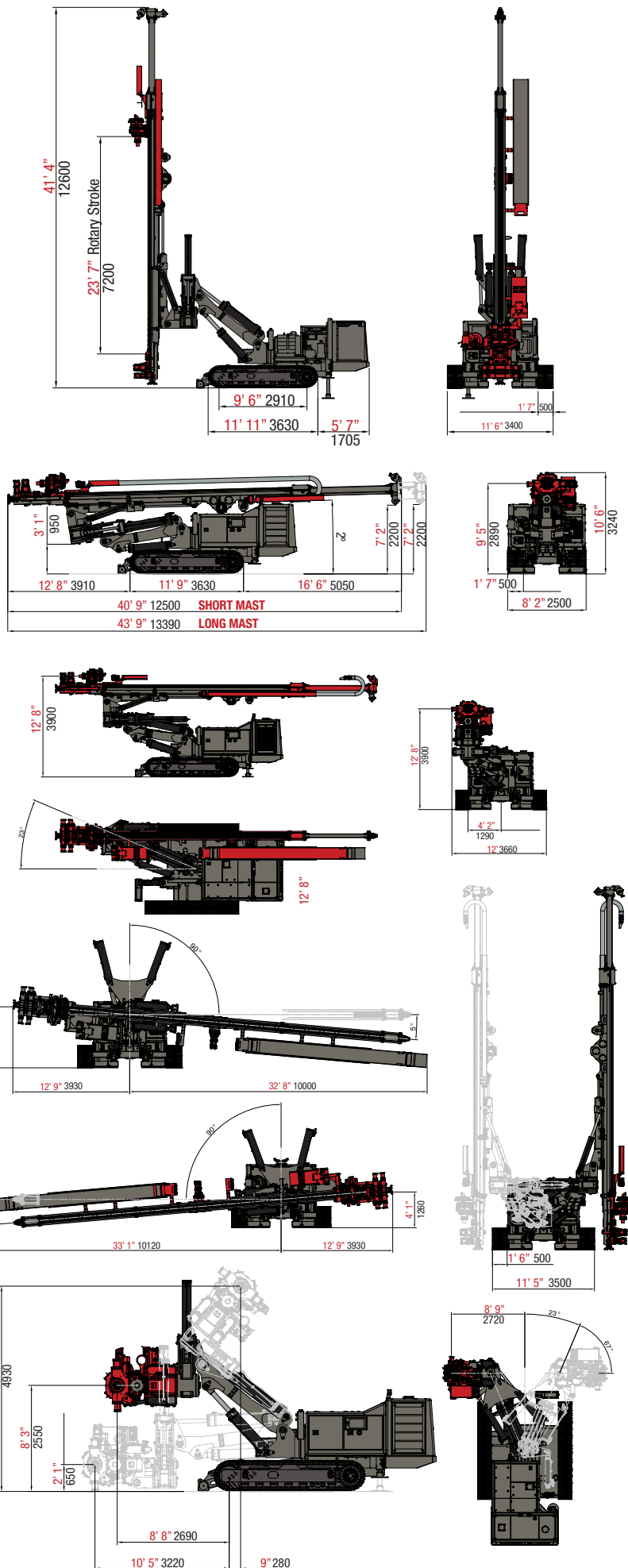


EK90M

Standard Chassis	Cat® 323	
Double Clamp Max. Diameter	18 in	457 mm
Installed Power	172 HP	128 kW
Single Pass Stroke	53 ft 2 in	16,200 mm
Maximum RPM	118	120
Feed / Extraction Force	44,000 lbf	20,000 kgf
Slide Stroke	11 ft	3,355 mm
Control	Radio Control	and Cabin
Standard Operation Weight	72,500 lb	33,000 kg
Minimum Transport Weight	72,500 lb	33,000 kg



CR25

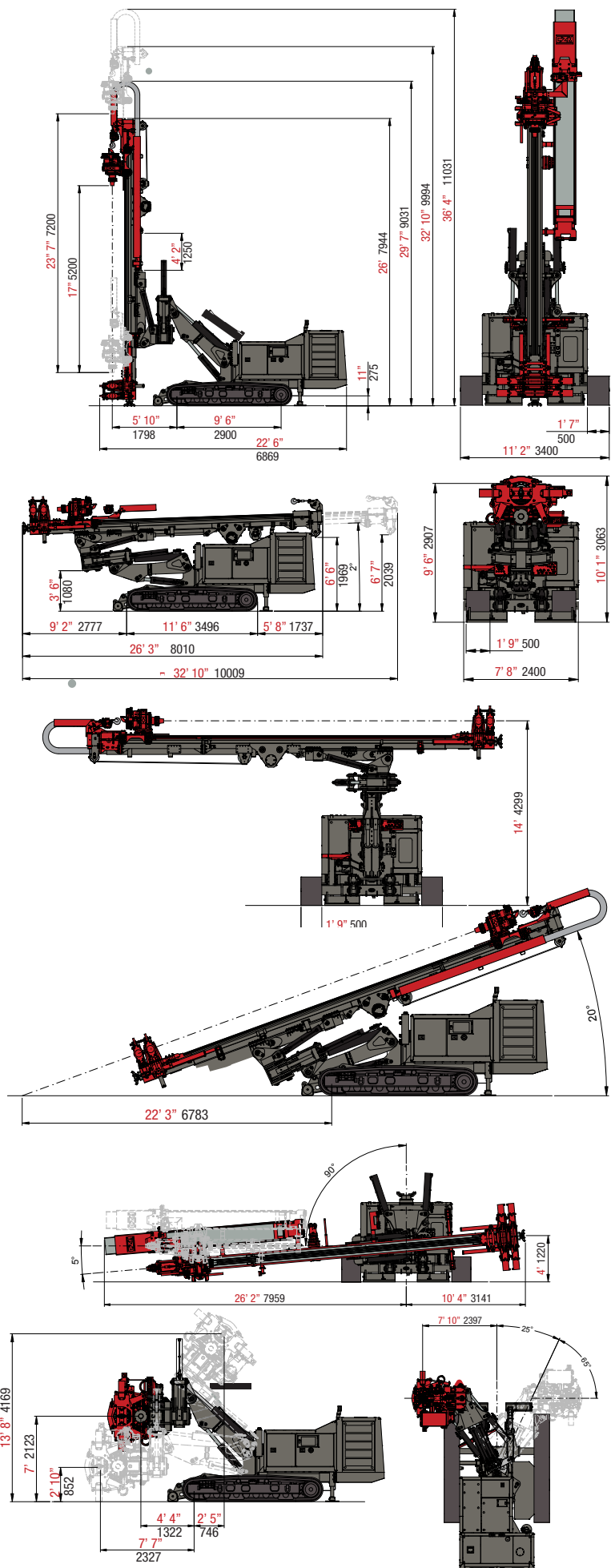


Standard Engine	Cummins B6.7	Cummins B6.7
Installed Power	310 HP	231 kW
Standard Rotary Torque	23,600 ft.lbs	32,000 kN
Rotary Speed	82-168 rpm	
Single Pass Stroke	34 ft 5 in	10,490 mm
Feed / Extraction Force	39,680 lbf	18,000 kgf
Double Clamp Sizes	9.4 in; 14 in; 18.5 in; 24.2 in	238 mm; 335.6 mm; 469.9 mm; 614.7 mm
Control	Radio Control	
Standard Operation Weight	78,000 lb	34,200 kg



CR18

Standard Engine	Cummins B6.7	Cummins B6.7
Installed Power	310 HP	231 kW
Standard Rotary Torque	23,600 ft.lbs	32,000 kN
Rotary Speed	82-168 rpm	
Single Pass Stroke	23 ft 6 in	7,200 mm
Feed / Extraction Force	27,000 lbf	12,250 kgf
Double Clamp Sizes	9.4 in; 14 in; 18.5 in; 24.2 in	238 mm; 335.6 mm; 469.9 mm; 614.7 mm
Control	Radio Control	
Standard Operation Weight	53,000 lb	24,000 kg



Special Applications

CFA

46

CFA (Continuous Flight Auger) is a single pass piling method, where a continuous flight auger is used to drill to depth. We offer machines in two different CFA Configurations. Our cylinder crowd models can be converted to Bottom Drive CFA, which is a patented system by CZM. Our Cable Crowd models can be converted to Top Drive CFA.

Bottom Drive CFA

50

Displacement Pile

52

Displacement piles are a single pass method similar to CFA, but no soil spoils are removed. Instead of removing the soil while drilling, the tool is designed to push the soil, densifying it, and consequently increasing the skin friction of the pile.

Cased CFA

54

The main application for drilling with a Cased CFA is to build Secant Walls using a single pass method. When the conditions are right many piles can be built in a day, being more productive than doing secant walls with Kelly bar drilling and segmented casing or diaphragm walls.

Jet Grouting

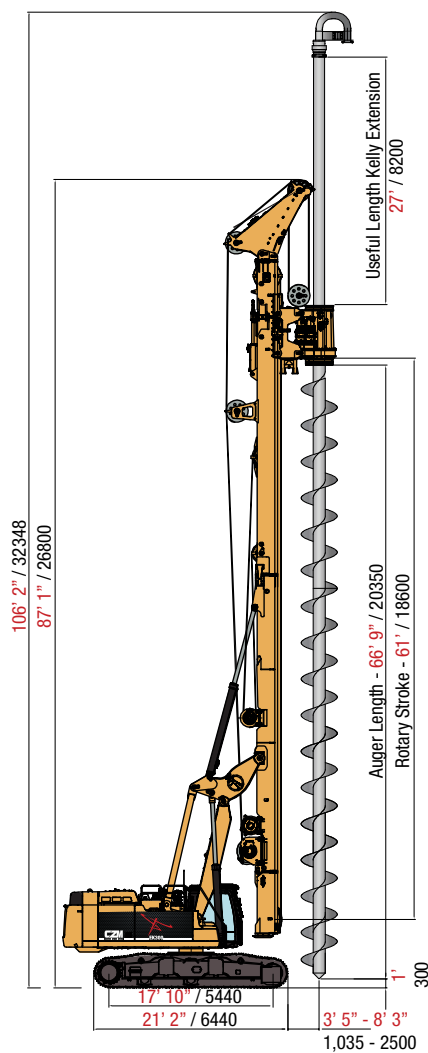
56

Jet Grouting is a soil improvement technique that consists of drilling to depth with a pipe and then injecting grout at a high pressure (up to 11,600 psi) that is then mixed with the soil creating a column. It can be performed around underground structures and is valuable to stabilize soils, seal underground, underpinning and excavation support.

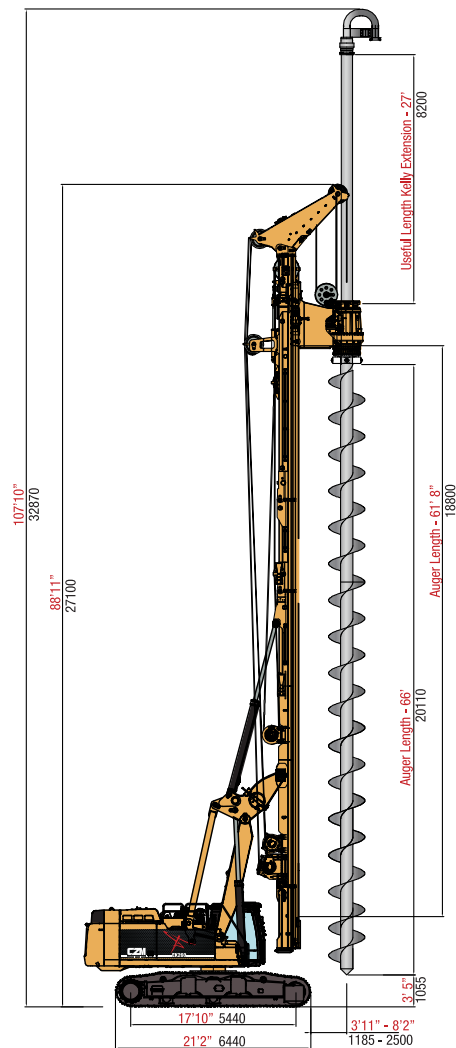
Soilmixing

57

Deep soil mixing is a process that can be executed for improving soil in detrimental conditions. The method consists of mixing self-hardening cement mixture with the soil on-site. The machine drill mixes the tool into the ground at the same time it injects a mixture of cement. Once the desired depth has been reached, the tool can be extracted while the rotary continues the mixing process. The result of this process is a soil with improved load capacities.

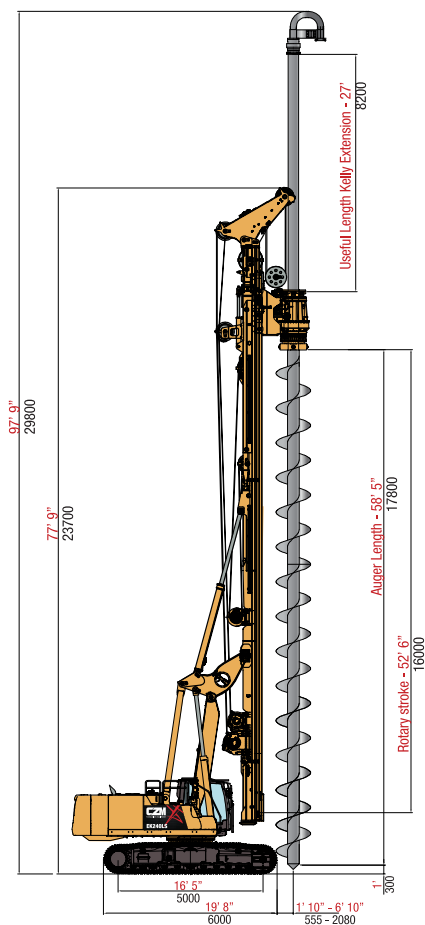


EK300LS CFA

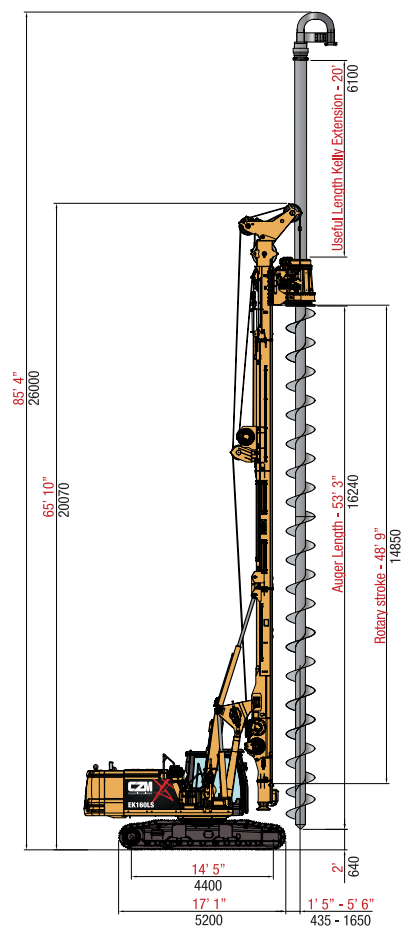


EK260LS CFA

Standard Chassis	Cat® 352		Cat® 352	
Installed Power	424 hp	316 kW	424 hp	316 kW
Maximum Torque	252,000 ft.lbs	35,000 kg.m	209,700 ft.lbs	28,445 kg.m
Maximum Diameter	48 in	1,200 mm	48 in	1,200 mm
Drilling Depth	93 ft	28,500 mm	93 ft	28,500 mm
Operation Weight	249,600 lb	113,200 kg	200,000 lb	90,900 kg

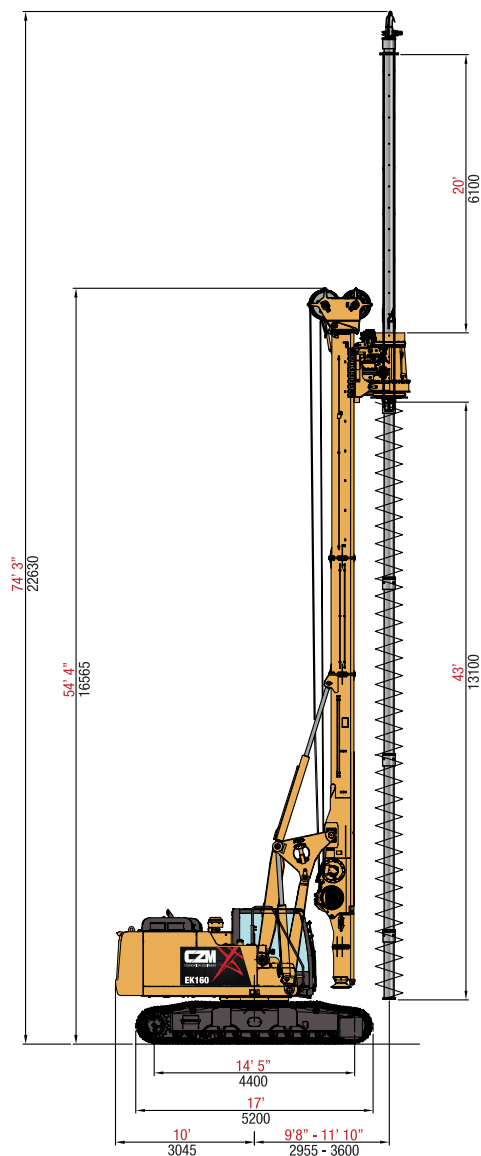


EK240LS CFA

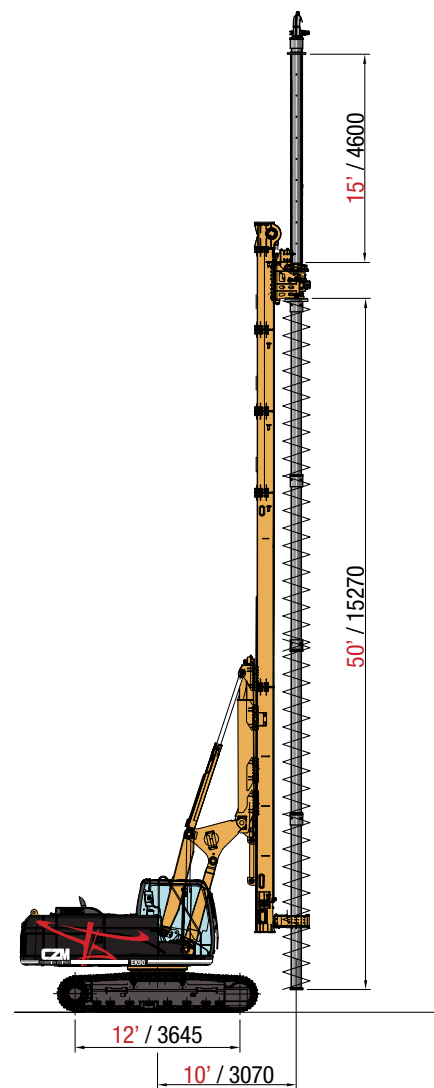


EK160LS CFA

Cat® 340		Cat® 330	
346 hp	258.3 kW	273 hp	204 kW
193,230 ft.lbs	26,200 kg.m	134,300 ft.lbs	18,620 kg.m
48 in	1,200 mm	36 in	900 mm
93 ft	28,500 mm	67 ft	20,300 mm
180,000 lb	81,800 kg	118,000 lb	52,520 kg

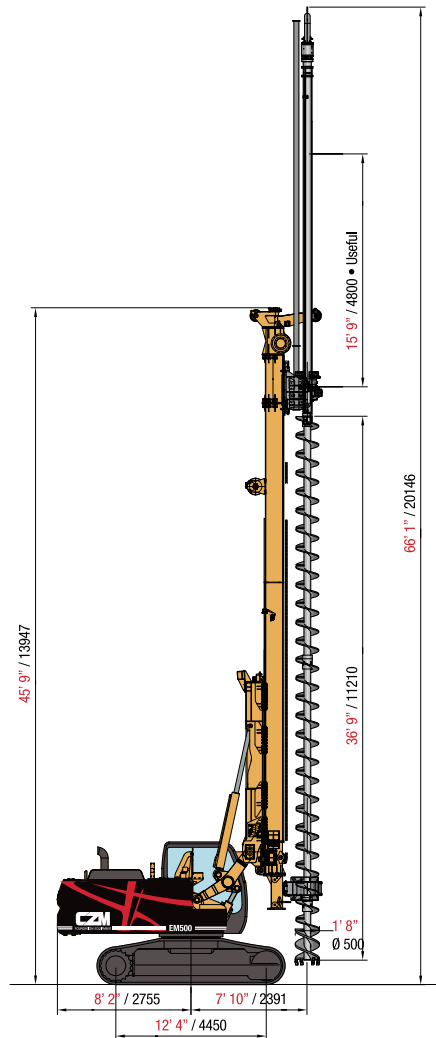


EK160 CFA



EK90 CFA

Standard Chassis	Cat® 330		Cat® 323	
Installed Power	273 hp	204 kW	172 hp	128 kW
Maximum Torque	151,100 ft.lbs	21,500 kg.m	34,000 ft.lbs	4,700 kg.m
Maximum Diameter	32 in	800 mm	24 in	600 mm
Drilling Depth	60 ft	18,300 mm	60 ft	18,200 mm
Operation Weight	105,000 lb	47,800 kg	72,500 lb	33,000 kg



EM500

Cat® 317

130 hp

97 kW

36,165 ft.lbs

4,700 kg.m

20 in

508 mm

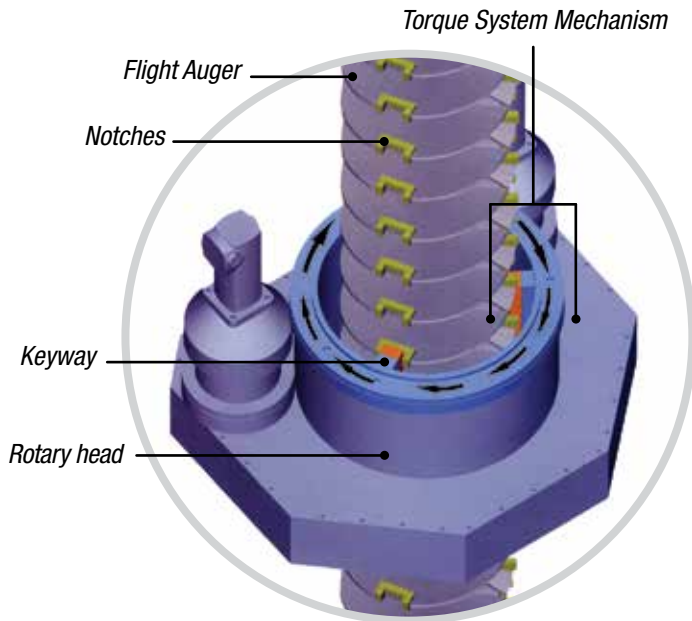
52 ft 6 in

16,000 mm

60,000 lb

27,215 kg

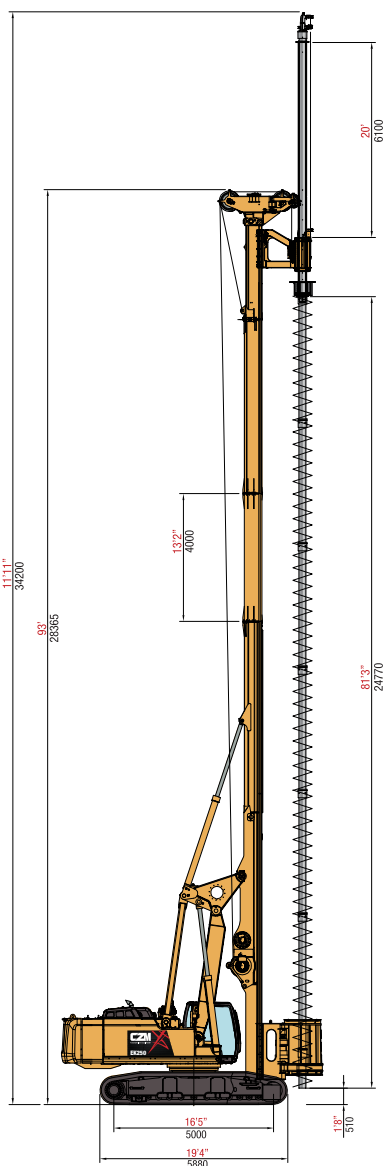
Bottom Drive CFA



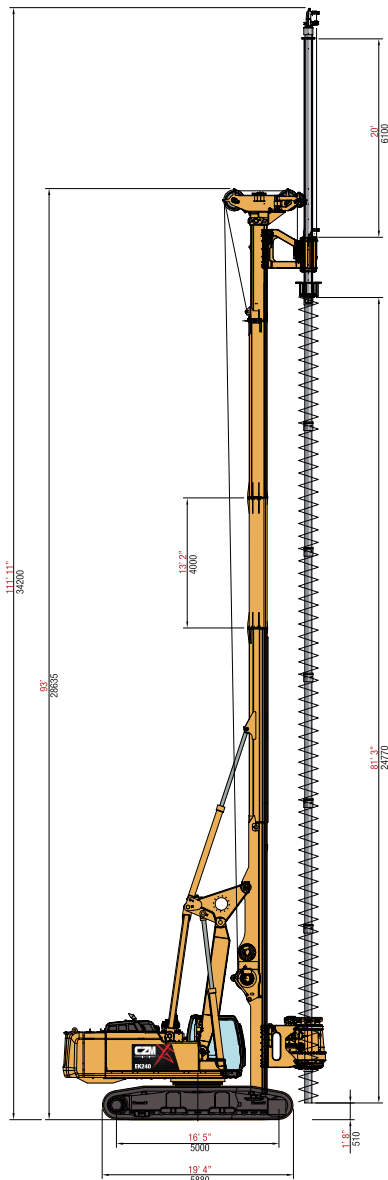
Bottom Drive CFA allows for deeper depths and higher torque. The revolutionary patented system Bottom Drive CFA applies to the execution of continuous flight auger piles. The position of the rotary head at the foot of the drilling rig displaces the entire center of gravity of the equipment downwards, allowing a better use of the drill in reaching greater depths and drilling diameters. In this system, the drilling tool – auger – is part of the mechanism of torque transmission, so that notches are opened aligned along its full length. These notches fit the keyways connected to the rotary head which allow for the drilling when the auger is rotated. The Bottom Drive CFA equipment, when compared to those using the traditional system, has the advantage of being much lighter and more balanced, resulting in lower investment with superior performance. Other advantages are the use of friction pull-down for better penetration in hard soil and easy adaptation for the application of telescopic rod while executing excavated piles.

- Significant improvement of stability, providing greater security in the operation of CFA
- Optimal ratio of drilling depth x equipment weight due to lower center of gravity, enabling lower transport weight and lower transportation costs.
- Hydraulic pull-down on the rotary, centered to the drilling auger, improving the penetration in hard soils.
- Highly effective drilling torques due to the robust drilling head.
- Better efficiency of power due to the short length of hydraulic hoses that feed the drilling head, resulting in lower pressure loss.
- Lighter drilling masts as a result of there being no need to resist high drilling torque at the top.
- Higher Extraction force, resulting from the addition of push-up of the cylinder to the winch extraction force.

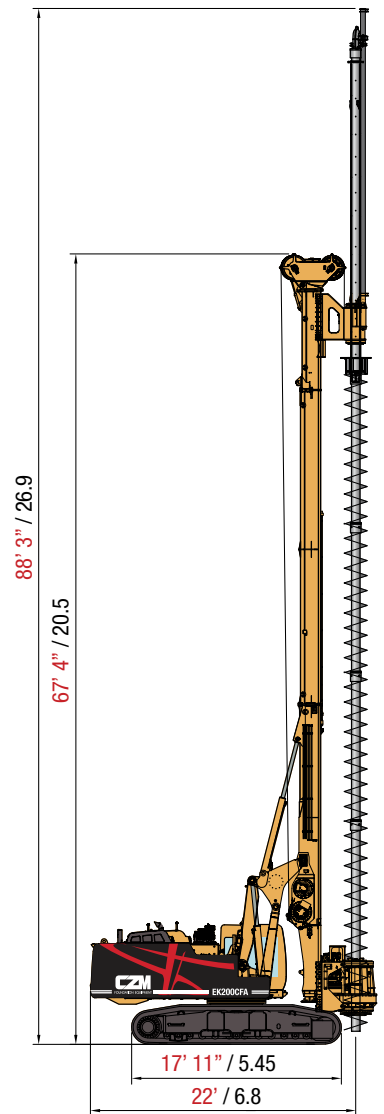




EK250 Bottom Drive CFA



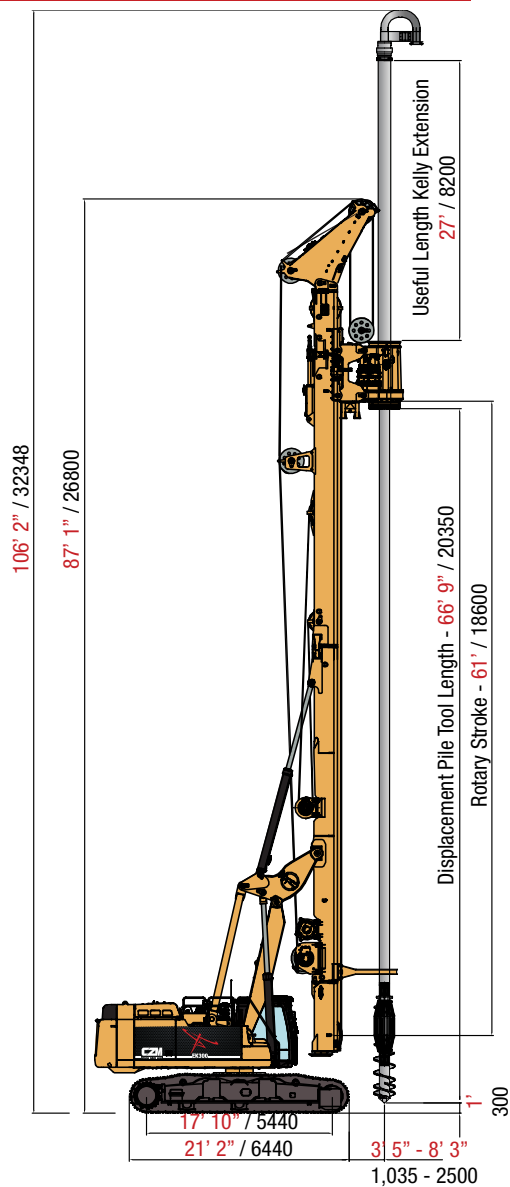
EK240 Bottom Drive CFA



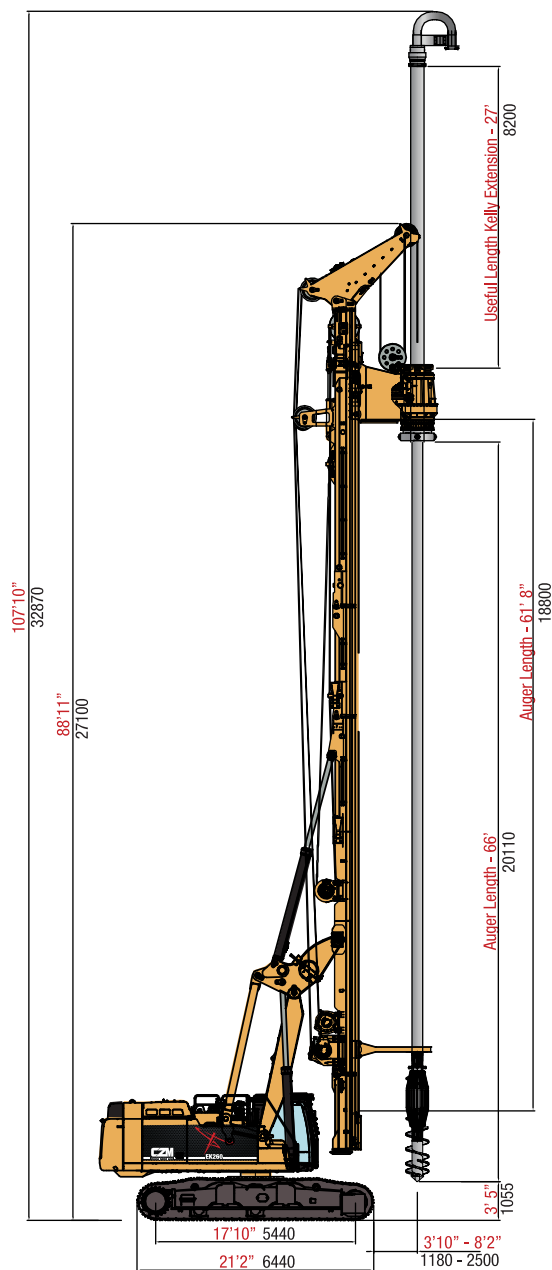
EK200 Bottom Drive CFA

Standard Chassis	Cat® 340		Cat® 340		Cat® 340	
Installed Power	346 hp	258.3 kW	346 hp	258.3 kW	346 hp	258.3 kW
Maximum Torque	234,100 ft.lbs	31,800 kg.m	193,360 ft.lbs	26,700 kg.m	193,360 ft.lbs	18,620 kg.m
Maximum Diameter	32 in	800 mm	24 in	600 mm	24 in	600 mm
Drilling Depth	102 ft	31,000 mm	102 ft	31,000 mm	83 ft	25,600 mm
Operation Weight	190,000 lb	86,400 kg	180,000 lb	81,800 kg	138,000 lb	62,700 kg

Displacement Pile



EK300LS DP



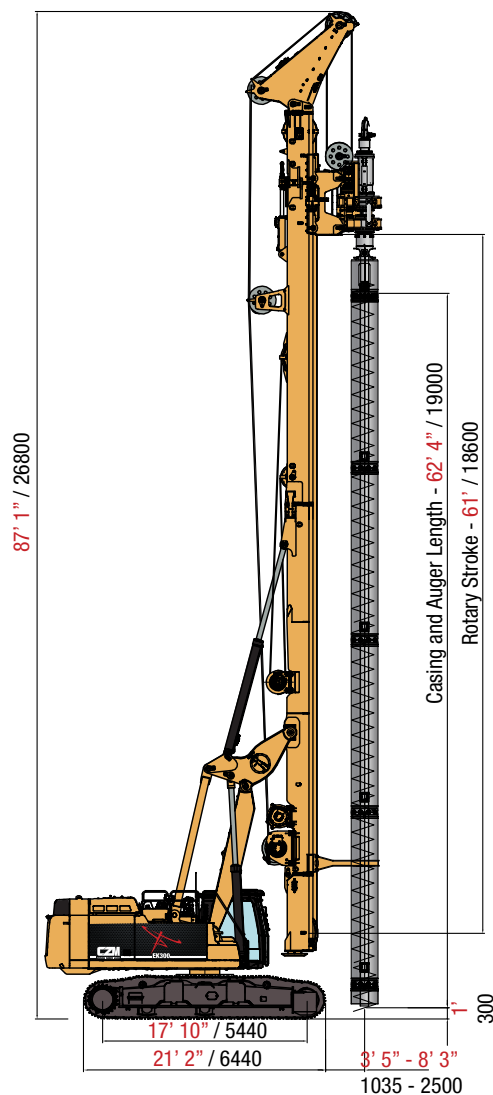
EK260LS DP

Standard Chassis	Cat® 352		Cat® 352	
Installed Power	424 hp	316 kW	424 hp	316 kW
Maximum Torque	252,000 ft.lbs	35,000 kg.m	209,800 ft.lbs	29,085 kg.m
Maximum Diameter	24 in	620 mm	24 in	620 mm
Drilling Depth	93 ft	28,500 mm	93 ft	28,500 mm
Operation Weight	249,600 lb	113,200 kg	200,000 lb	90,900 kg

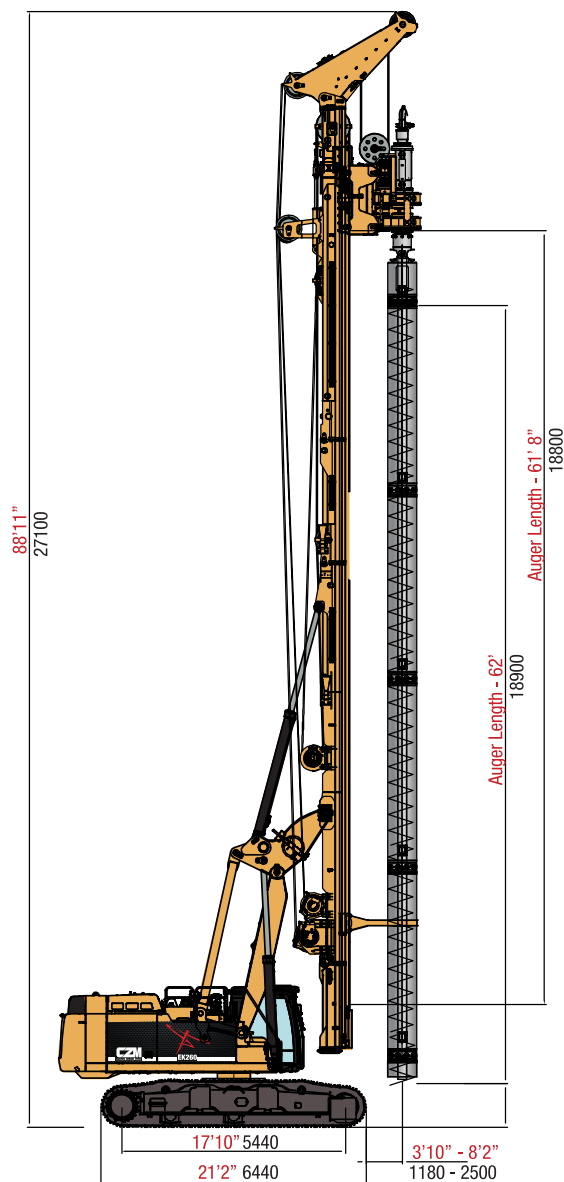


CZM FOUNDATION EQUIPMENT

Cased CFA

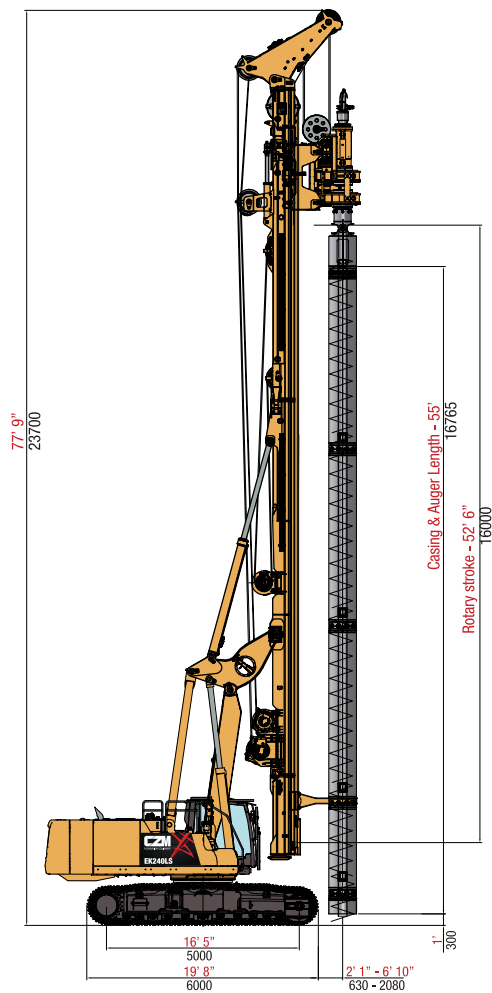


EK300LS



EK260LS

Standard Chassis	Cat® 352		Cat® 352	
Installed Power	424 hp	316 kW	424 hp	316 kW
Maximum Diameter	36 in	920 mm	36 in	920 mm
Drilling Depth	66 ft	20,200 mm	60 ft	18,200 mm
Maximum Torque (Casing Rotary Head)	155,080 ft.lbs	21,500 kg.m	155,080 ft.lbs	21,500 kg.m
Maximum Torque (Auger Rotary Head)	101,400 ft.lbs	14,000 kg.m	101,400 ft.lbs	14,000 kg.m
Operation Weight	249,600 lb	113,200 kg	200,000 lb	90,900 kg



EK240LS

Cat® 340

346 hp 258.3 kW

36 in 920 mm

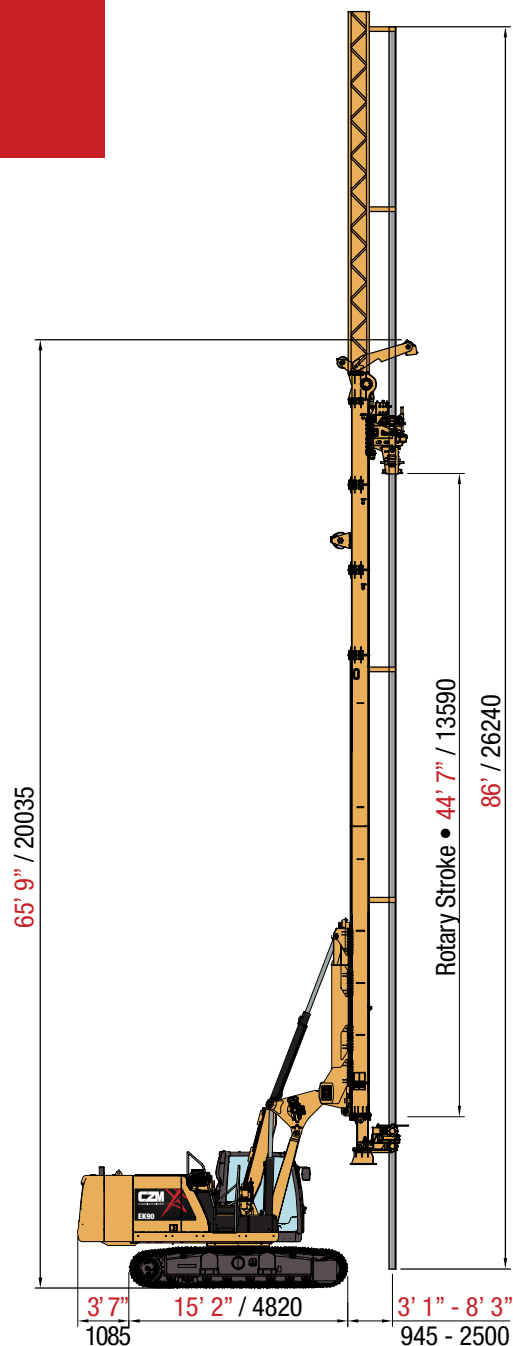
66 ft 20,200 mm

155,080 ft.lbs 155,080 ft.lbs

101,400 ft.lbs 101,400 ft.lbs

180,000 lb 81,800 kg

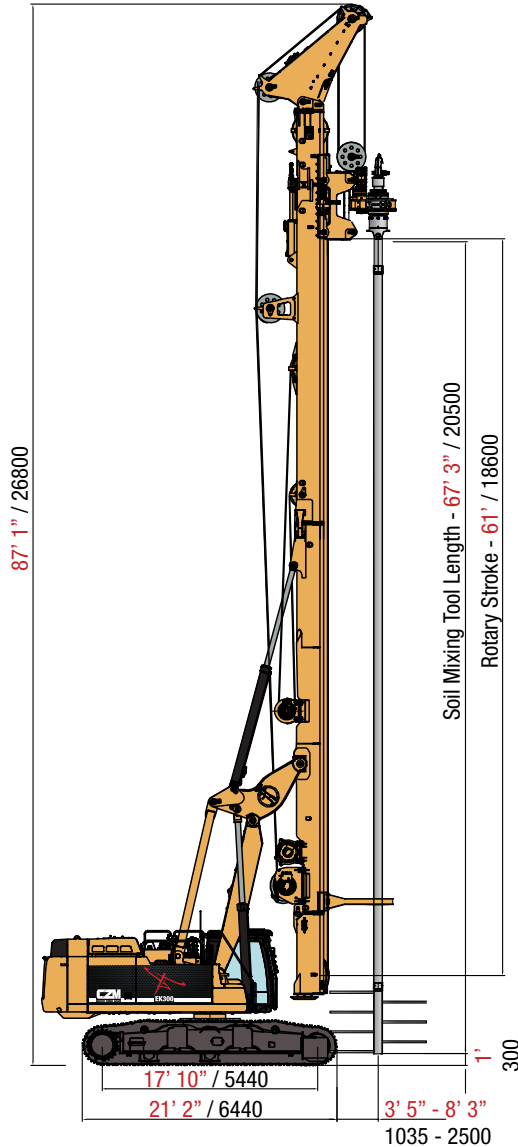
Jet Grouting



EK90M

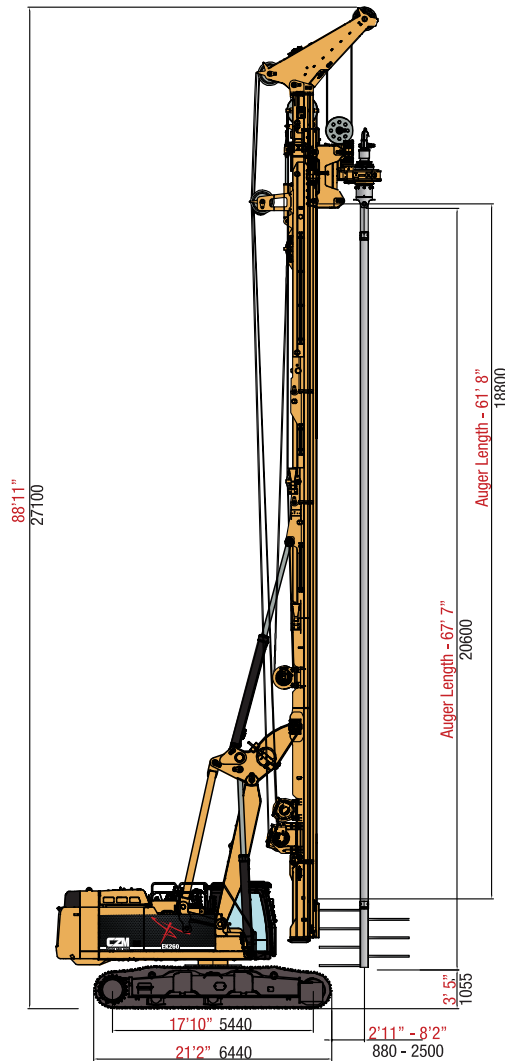
Standard Chassis	Cat® 323	
Installed Power	172 hp	128 kW
Maximum Torque	34,000 ft.lbs	4,700 kg.m
Maximum Depth	86 ft	26,200 mm
Operation Weight	72,500 lb	33,000 kg

Soilmixing



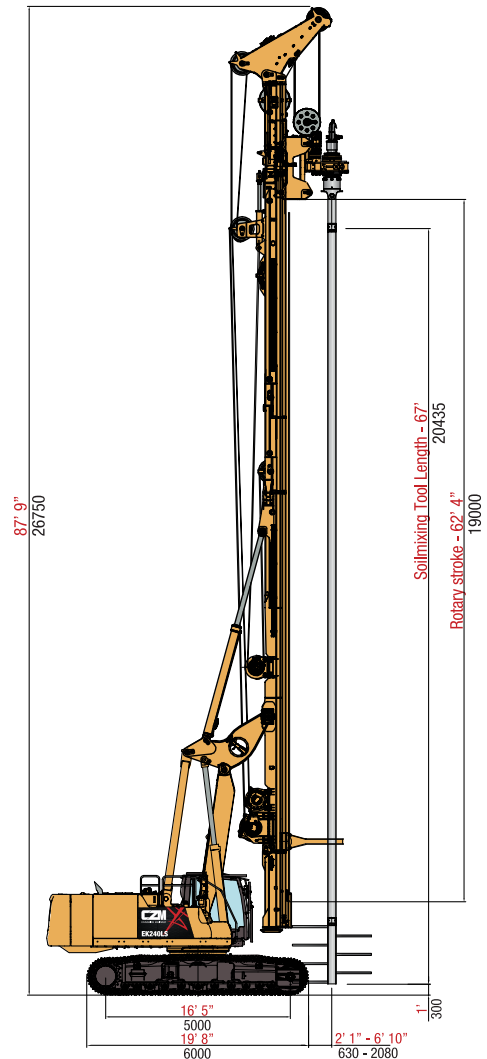
EK300LS

Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	155,080 ft.lbs	21,500 kg.m
Maximum Diameter	10 ft	3,050 mm
Drilling Depth	66 ft	20,200 mm
Operation Weight	249,600 lb	113,200 kg



EK260LS

Standard Chassis	Cat® 352	
Installed Power	424 hp	316 kW
Maximum Torque	155,080 ft.lbs	21,500 kg.m
Maximum Diameter	10 ft	3,050 mm
Drilling Depth	60 ft	18,200 mm
Operation Weight	200,000 lb	90,900 kg



EK240LS

Standard Chassis	Cat® 340	
Installed Power	346 hp	258.3 kW
Maximum Torque	134,300 ft.lbs	18,620 kg.m
Maximum Diameter	8 ft	2,440 mm
Drilling Depth	66 ft	20,200 mm
Operation Weight	180,000 lb	81,800 kg

Cat® OEM



Caterpillar OEM Solutions offers partial Cat® machines, technologies, systems, and components to Original Equipment Manufacturers (OEMs) to create specialty solutions for various applications. These offerings allow OEMs to leverage Caterpillar's robust designs with support from the vast Cat® Dealer Network for parts and service around the world.





After Sales

CZM Foundation Equipment offers service plans based on either hours of usage or length of time, whichever occurs first. For customers who prefer not to manage scheduling maintenance, we offer service packages that send CZM technicians to perform inspections and preventative maintenance at regular intervals at the very machine site.

Our ability to monitor machines through GPS and sim cards allows us to determine where your machine is,

its hourly usage, and whether any defects or faults are occurring, so we can schedule maintenance and suggest repairs.

In addition to preventative maintenance, we also offer Kelly bar refurbishing and Kelly bar rental.

CZM machines are supported in North America by Service Centers located in Georgia, Texas, California, Kentucky, and Eastern Canada.



Service Centers

Georgia – HEADQUARTERS

912.200.7654
962 Interstate Centre Blvd
Ellabell, GA 31308

Georgia

912.200.7656
145 E. Industrial Blvd.
Pembroke, GA 31321

Texas

817.232.8053
2501 Blue Mound Rd. W
Haslet, TX 76052

California

805.667.8416
1720 N. Ventura Avenue
Ventura, CA 93001

Kentucky

912.320.2699
2001 W. Hal Rogers Pkwy
London, KY 40741



FOUNDATION EQUIPMENT

THE COMPANY

CZM is headquartered in Savannah, Georgia, USA. For over 40 years, we have specialized in manufacturing foundation equipment. We design and customize models for many different drilling applications including Drill shafts, CFA/cased CFA, Micropile and anchoring, driven pile and hydraulic hammers and soil improvements. We are a Caterpillar OEM (Original Equipment Manufacturer).

HEADQUARTERS

962 Interstate Centre Boulevard
Ellabell • Georgia • 31308
United States • Phone: (912) 200-7654

WWW.CZM-US.COM

