



FOUNDATION EQUIPMENT



# EK125

ON CAT323  
(NEXT GEN)



The mast is made of special steel called "Weldox" that has a yield strength 2.8 times higher than regular ASTM A36 steel. It means that with less weight the EK125 can have better stability and displacements on the job site and easier transport handlings

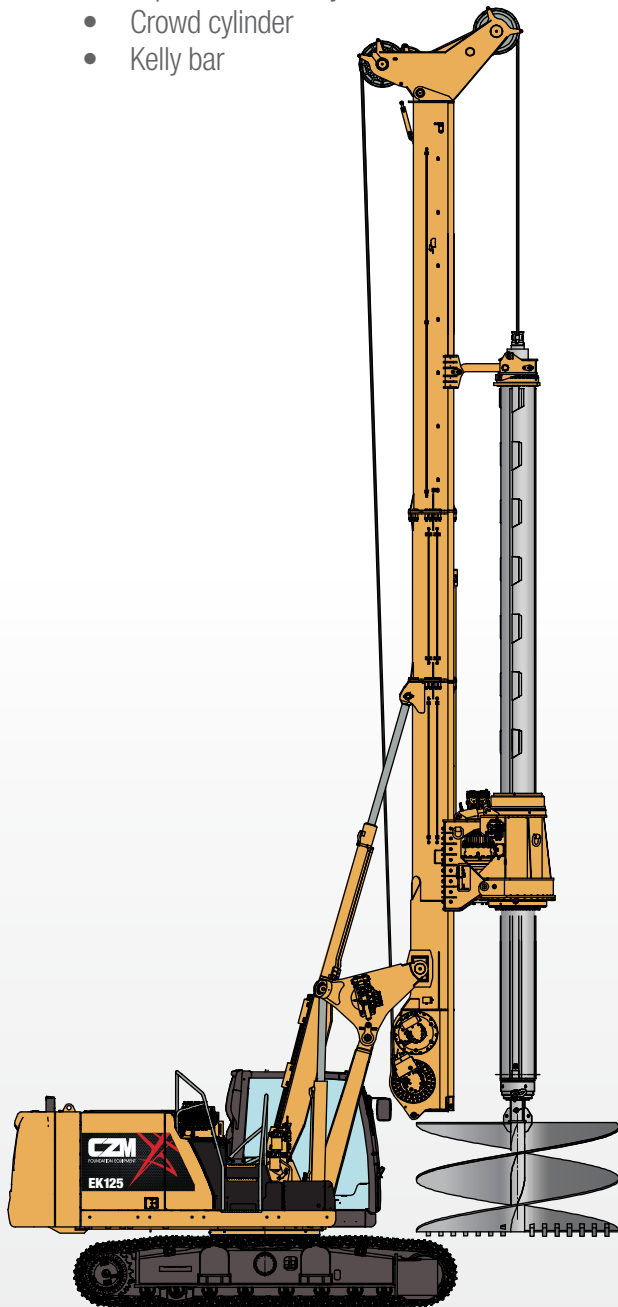


# EK125

Mounted on a  
CAT 323 ”  
(NEXT GEN)

# APPLICATION

- 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 versions standard and short mast by replacing:
  - Top mast assembly
  - Crowd cylinder
  - Kelly bar



**DRILLED SHAFT PILE (STANDARD VERSION)**

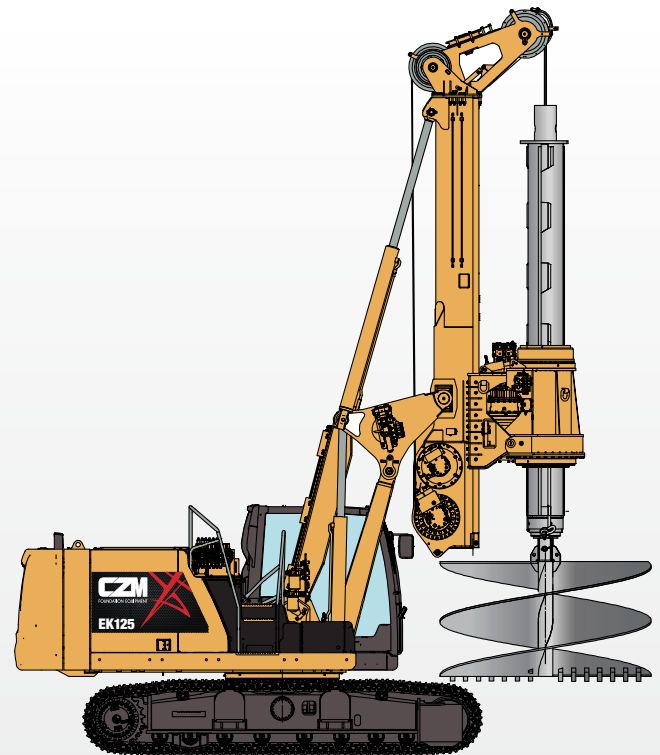
**Depth:** 90ft (27.4m) / 120ft (37m) / 150ft (46m) / friction 180ft (55m)  
**Diameter (max.):** with lower mast: 60in (1,500mm)  
**Diameter (max.):** without lower mast: 96in (2,440mm)

## STANDARD FEATURES

### 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 machine can be monitored remotely, for faults and maintenance data.



**DRILLED SHAFT PILE (SHORT MAST VERSION)**

**Depth:** 55ft (16.7m) / friction 65ft (20m)  
**Diameter (max.):** with lower mast: 60in (1,500mm)  
**Diameter (max.):** without lower mast: 96in (2,440mm)

# TECHNICAL SPECIFICATIONS

## KELLY BAR STANDARD MAST APPLICATION

|                                                             |        |          |
|-------------------------------------------------------------|--------|----------|
| Drilling Depth (standard - 4 elements; interlock kelly bar) | 120 ft | 37 m     |
| Drilling Depth (3 elements; interlock kelly bar)            | 90 ft  | 24.7 m   |
| Drilling Depth (5 elements; interlock kelly bar)            | 150 ft | 46 m     |
| Drilling Depth (6 elements; friction kelly bar)             | 180 ft | 55 m     |
| Drilling Diameter with lower mast (max.)                    | 60 in  | 1,500 mm |
| Drilling Diameter without lower mast (max.)                 | 96 in  | 2,440 mm |

Other kelly bars available upon request.

## KELLY BAR SHORT MAST APPLICATION

|                                                             |       |          |
|-------------------------------------------------------------|-------|----------|
| Drilling Depth (standard - 5 elements; interlock kelly bar) | 55 ft | 16.7 m   |
| Drilling Depth (6 elements; friction kelly bar)             | 65 ft | 20 m     |
| Drilling Diameter with lower mast (max.)                    | 60 in | 1,500 mm |
| Drilling Diameter without lower mast (max.)                 | 96 in | 2,440 mm |

## ROTARY HEAD - RT 460 - 12 (STANDARD)

|                           |               |              |
|---------------------------|---------------|--------------|
| Max. torque (nominal)     | 88,000 lbf.ft | 12,000 kgf.m |
| Working speed of rotation | 9-32 rpm      | 9-32 rpm     |
| Spin-off rotation         | 74-118 rpm    | 74-118 rpm   |

## ROTARY HEAD - RT 460 - 14 (OPTIONAL. FOR 3 AND 4 ELEMENTS KELLY ONLY)

|                           |                |              |
|---------------------------|----------------|--------------|
| Max. torque (nominal)     | 101,700 lbf.ft | 14,000 kgf.m |
| Working speed of rotation | 8-28 rpm       | 8-28 rpm     |
| Spin-off rotation         | 74-118 rpm     | 74-118 rpm   |

## CROWD SYSTEM

|                                 |            |            |
|---------------------------------|------------|------------|
| Cylinder stroke - standard mast | 11 ft      | 3,350 mm   |
| Cylinder stroke - short mast    | 9 ft       | 2,750 mm   |
| Cylinder push force             | 43,000 lbf | 19,000 kgf |
| Cylinder push speed             | 56 ft/min  | 17 m/min   |
| Cylinder pull force             | 53,000 lbf | 24,000 kgf |
| Cylinder pull speed             | 51 ft/min  | 16 m/min   |

## MAIN WINCH

|                                                     |            |            |
|-----------------------------------------------------|------------|------------|
| Max. pull-force - 1st Layer (effective)             | 41,000 lbf | 18,600 kgf |
| Max. pull-force - 1st Layer - 2nd Speed (effective) | 33,600 lbf | 15,300 kgf |
| Line speed - 1st Layer                              | 200 ft/min | 60 m/min   |
| Max. line speed - 1st Layer - 2nd Speed             | 245 ft/min | 75 m/min   |
| Cable diameter                                      | -          | 24 mm      |
| Drum diameter - 1st Layer                           | 18.5 in    | 473 mm     |

## AUXILIARY WINCH

|                                         |            |            |
|-----------------------------------------|------------|------------|
| Max. pull-force - 1st Layer (effective) | 22,000 lbf | 10,000 kgf |
| Line speed - 1st Layer                  | 180 ft/min | 55 m/min   |
| Cable diameter                          | 3/4 in     | 19 mm      |
| Drum diameter - 1st Layer               | 16.5 in    | 420 mm     |

## MAST INCLINATION

|          |         |         |
|----------|---------|---------|
| Backward | 15°     | 15°     |
| Forward  | 9°      | 9°      |
| Sideways | 9° / 9° | 9° / 9° |

## DIESEL ENGINE CAT323 (CAT® C7.1 ACERT™)

|                       |         |        |
|-----------------------|---------|--------|
| Net Power – SAE J1349 | 164 hp  | 122 kW |
| Displacement          | 433 in3 | 7.1 L  |
| Fuel Tank             | 86 gal  | 345L   |

## HYDRAULIC SYSTEM (CAT323)

|                               |              |             |
|-------------------------------|--------------|-------------|
| Hydraulic pressure            | 5,076 psi    | 350 bar     |
| Flow rate (main circuit)      | 2x49 gal/min | 2x185 L/min |
| Flow rate (auxiliary circuit) | 26.5 gal/min | 100 L/min   |
| Pilot circuit pressure        | 569 psi      | 40 bar      |
| Pilot circuit flow            | 6.4 gal/min  | 24.3 L/min  |
| Hydraulic oil tank capacity   | 37.8 gal     | 143 L       |

## UNDERCARRIAGE

|                                      |            |            |
|--------------------------------------|------------|------------|
| Track length                         | 15 ft 4 in | 4,650 mm   |
| Length to Center of rollers          | 12 ft 7 in | 3,830 mm   |
| Transport position width (retracted) | 8 ft 4 in  | 2,540 mm   |
| Working position width (extended)    | 12 ft 1 in | 3,675 mm   |
| Shoes width                          | 23.6 in    | 600 mm     |
| Max. drawbar pull                    | 46,085 lbf | 20,500 kgf |
| Max. travel speed                    | 1.93 mph   | 3.1 km/h   |

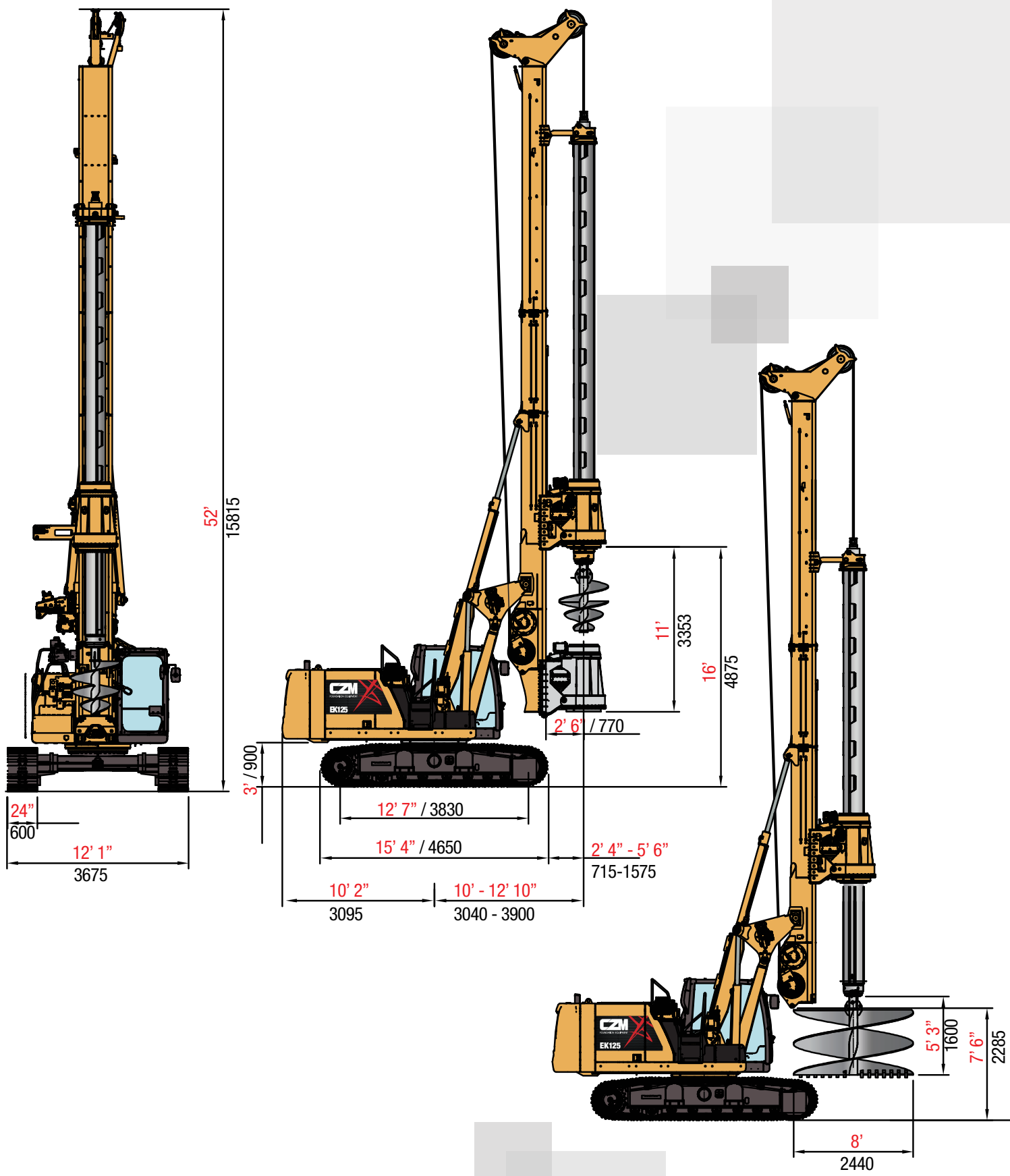
## TRANSPORT

|                                               |             |           |
|-----------------------------------------------|-------------|-----------|
| Transport height                              | 11 ft 6 in  | 3,510 mm  |
| Length                                        | 50 ft 10 in | 15,500 mm |
| Transport width                               | 9 ft        | 2,750 mm  |
| Transport weight (standard kelly 4 / 120 ft)  | 82,500 lb   | 37,500 kg |
| Transport weight (with kelly 3 / 80 ft)       | 79,500 lb   | 36,150 kg |
| Transport weight (with kelly 5 / 155 ft)      | 85,000 lb   | 38,600 kg |
| Transport weight (short mast-kelly 5 / 55 ft) | 74,500 lb   | 33,850 kg |

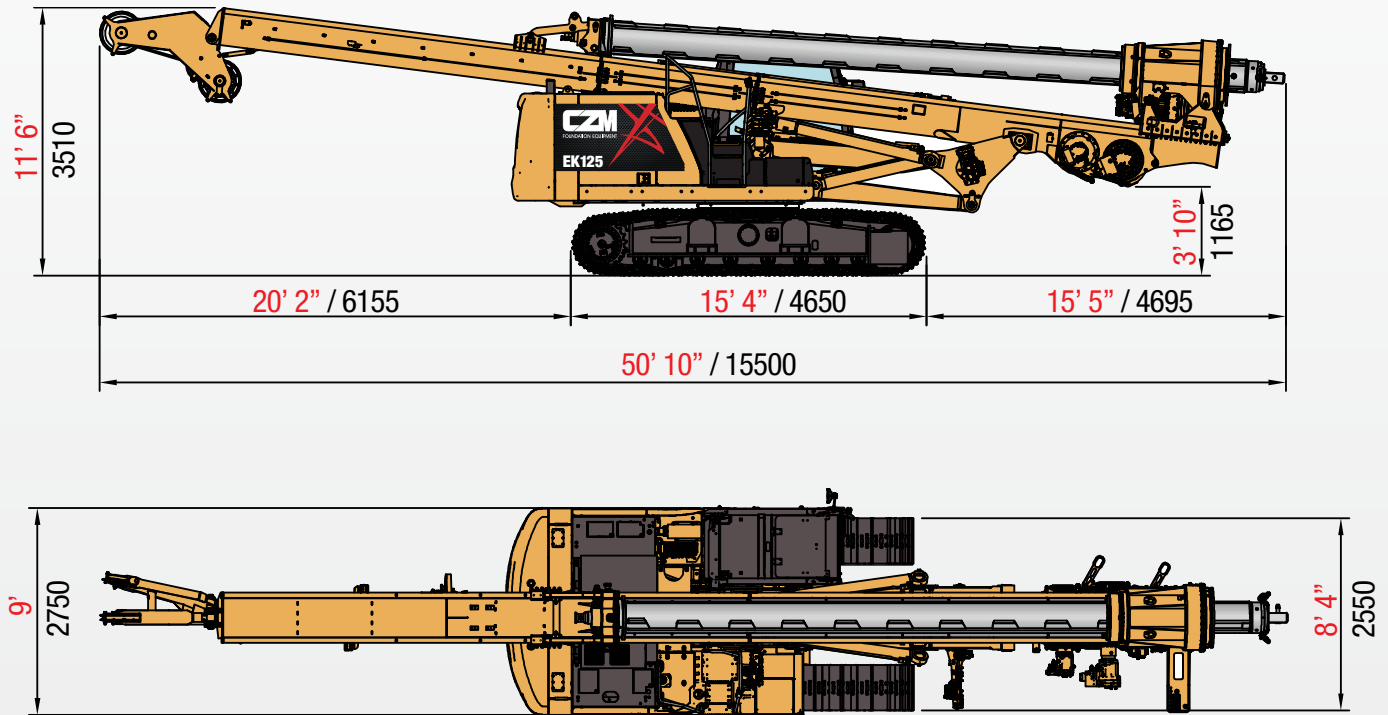
## GENERAL DATA

|                                         |            |           |
|-----------------------------------------|------------|-----------|
| Overall height (standard mast)          | 52 ft      | 15,815 mm |
| Overall height (short mast application) | 28 ft 5 in | 8,650 mm  |

# GENERAL DIMENSIONS



# TRANSPORT POSITION GENERAL DIMENSIONS



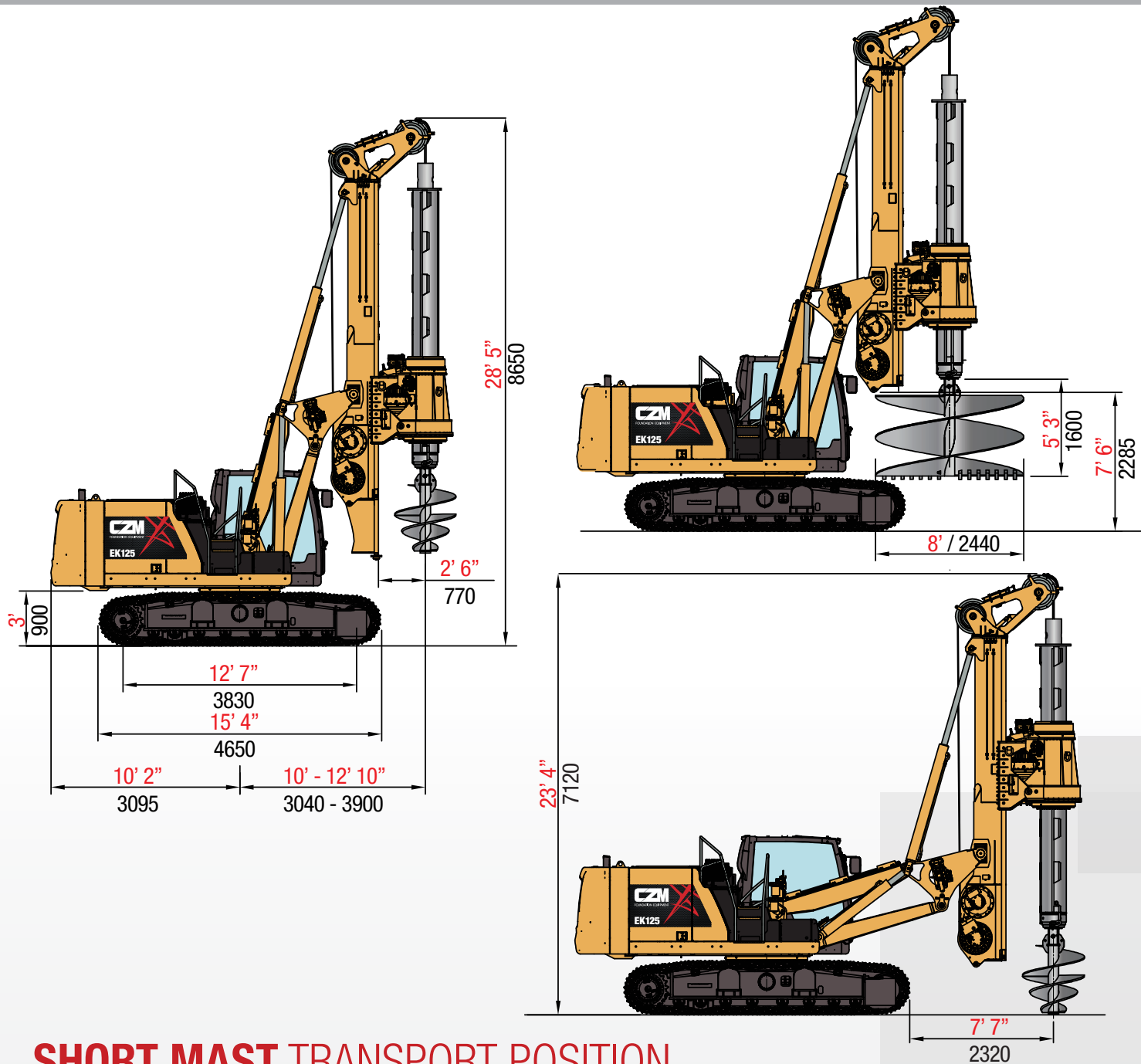
Weight: 82,500 lb / 37,500 kg (with standard kelly bar 4/120 ft)

## MAJOR COMPONENT WEIGHTS

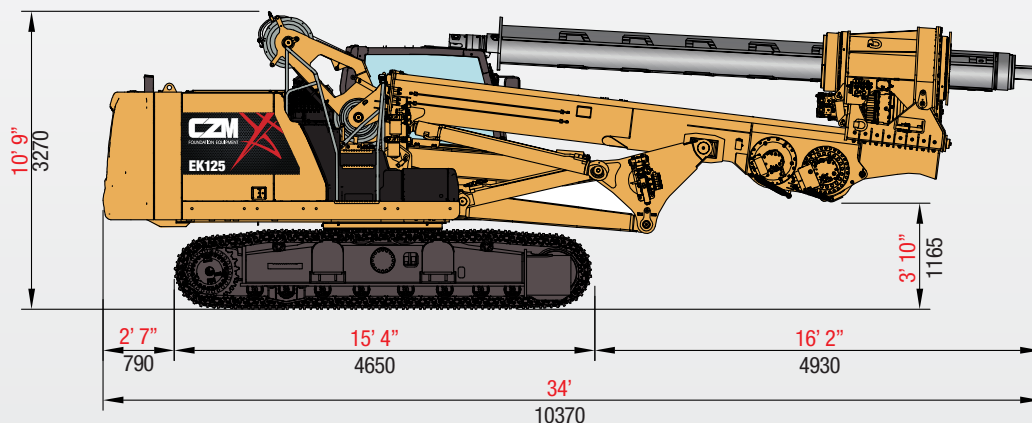
|                            |                       |
|----------------------------|-----------------------|
| Standard Kelly bar 4/120ft | 10,780 lbs / 4,900 kg |
| Rotary                     | 6,000 lbs / 2,730 kg  |
| Counter weight             | 9,040 lbs / 4,100 kg  |



# SHORT MAST GENERAL DIMENSIONS



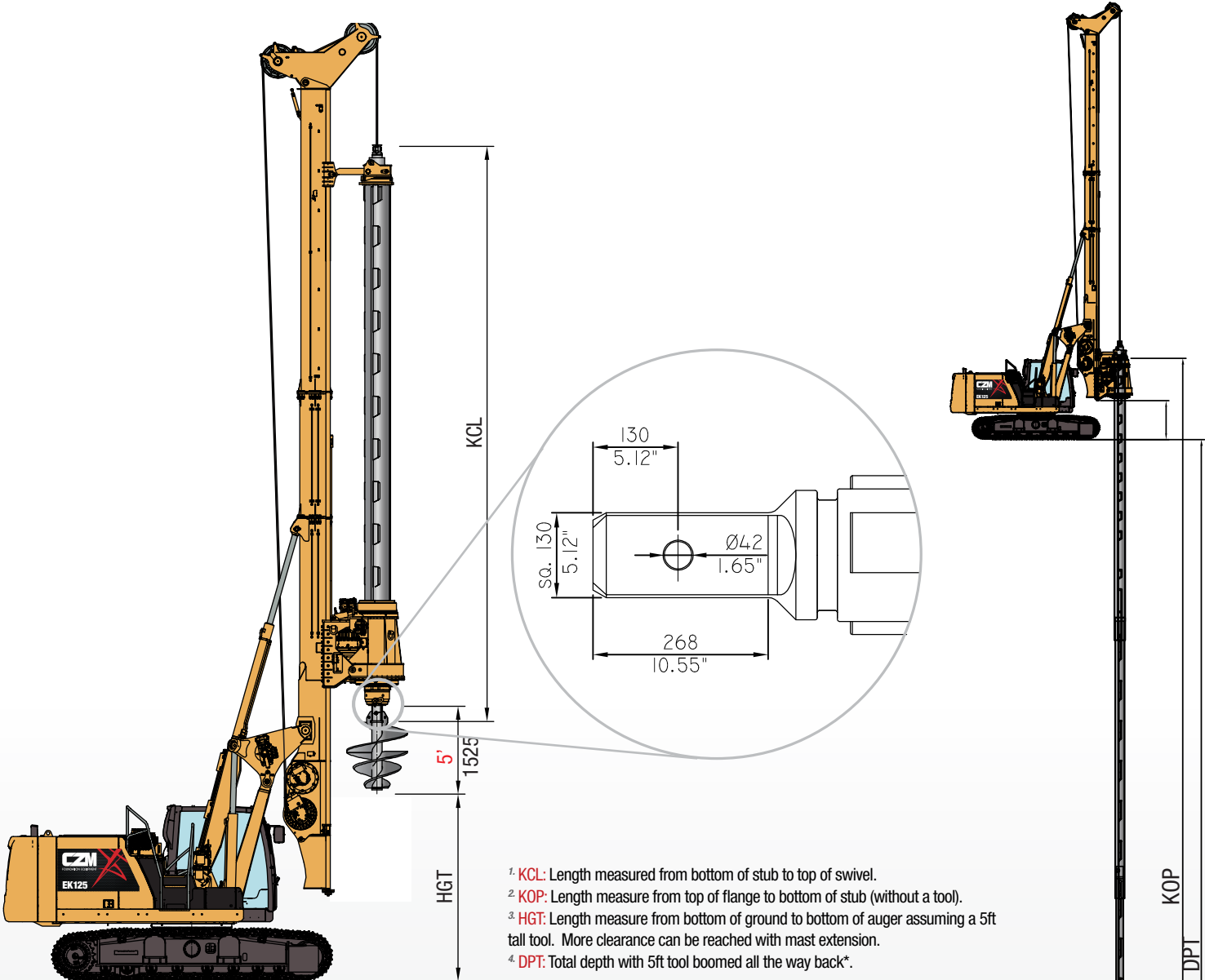
## SHORT MAST TRANSPORT POSITION



Weight: 74,500 lb / 33,850 kg  
(with standard kelly bar 5/55ft)



# KELLY BAR GENERAL DIMENSIONS



## KELLY BAR OPTIONS FOR STANDARD MAST

|                          | NUMBER OF ELEMENTS | DEPTH - DPT <sup>4</sup> | TRANSPORT - KCL <sup>1</sup> | HGT <sup>2</sup> | KOP <sup>3</sup>   | WEIGHT             |
|--------------------------|--------------------|--------------------------|------------------------------|------------------|--------------------|--------------------|
| Standard 4/120 Interlock | 4                  | 120ft (37m)              | 37ft (11.3m)                 | 6ft 9in (2m)     | 126ft 11in (38.7m) | 10,780lb (4,900kg) |
| 3/90 Interlock           | 3                  | 90ft (27m)               | 37ft 8in (11.4m)             | 6ft 9in (2m)     | 97ft 1in (22.8m)   | 8,150lb (3,700kg)  |
| 5/150 Interlock          | 5                  | 150ft (46m)              | 37ft 10in (11.5m)            | 6ft 9in (2m)     | 157ft 5in (48m)    | 13,640lb (6,200kg) |
| 6/180 Friction           | 6                  | 180ft (55m)              | 37ft (11.3m)                 | 6ft 9in (2m)     | 190ft 3in (58m)    | 15,540lb (7,000kg) |

## KELLY BAR OPTIONS FOR SHORT MAST

|                         | NUMBER OF ELEMENTS | DEPTH - DPT <sup>4</sup> | TRANSPORT - KCL <sup>1</sup> | HGT <sup>2</sup> | KOP <sup>3</sup>  | WEIGHT             |
|-------------------------|--------------------|--------------------------|------------------------------|------------------|-------------------|--------------------|
| Standard 5/55 Interlock | 5                  | 55ft (16.7m)             | 15ft 2in (4.6m)              | 5ft 2in (1.6m)   | 56ft 10in (17.3m) | 5,070 lb (2,300kg) |
| 6/65 Friction           | 6                  | 65ft (20m)               | 15ft 2in (4.6m)              | 5ft 2in (1.6m)   | 59ft 4in (18.1m)  | 8,300lb (3,800kg)  |

\*Boomed all the way out it gains another 5 ft and 1 in of total depth.





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, piledrive and hydraulic hammers and soil improvements. We are a Caterpillar OEM (Original Equipment Manufacturer).

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