



EK125

EK125 CAT323F R00

Courtesy of Crane.Market



SAVANNAH • GEORGIA • USA

THE COMPANY

- CZM has over 40 years of foundation equipment manufacturing experience with a wide range of models for multiple applications: drilled shafts, CFA, driven piles with hydraulic hammers, secant piles, micro piles, and anchoring, among others.
- CZM Foundation Equipment's USA manufacturing facility is located in Savannah, Georgia.
- CZM Foundation Equipment has designed their models with the after sales being priority. Quality and service are the main ingredients to a quality machine, this is one of the direct reasons CZM uses Caterpillar as a base, the Caterpillar bases are not only operator and maintenance friendly but by using Caterpillar it enables the customer access to the large and already nationally established Caterpillar Network.
- CZM is the world's largest manufacturer of CFA drilling rigs, featuring the revolutionary torque mechanism "Bottom Drive CFA", an internationally recognized CZM patent.



EK125

Mounted on a
CAT 323F L TIER IV FINAL „



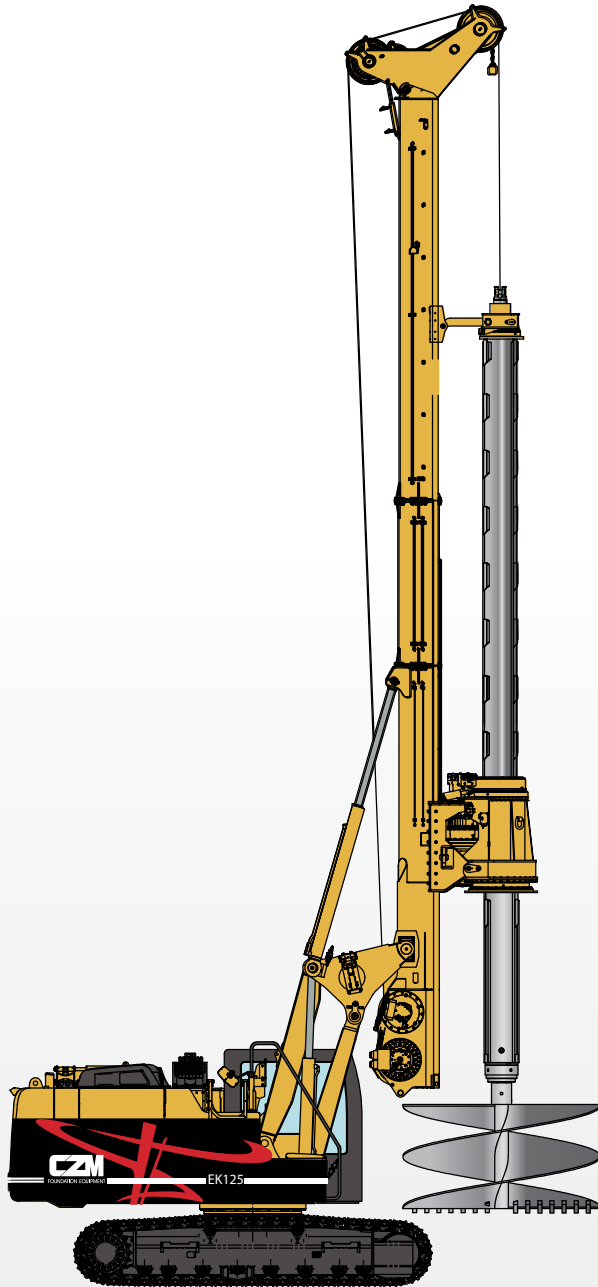
APPLICATION

The EK125 from CZM has been designed for high performance and to have the fastest and easiest setup for operation and transport mode. It is a reliable drilling rig mounted on a CAT base, keeping the operation and maintenance extremely friendly and efficient.

This model is a very compact drill rig and the hydraulic functions in the cabin also allow the Kelly bar to follow the raising and lowering of the mast due to positioning hydraulic cylinders for rotary head and A frame. Therefore the Kelly bar travels with the machine in a fast, easy and economic way.

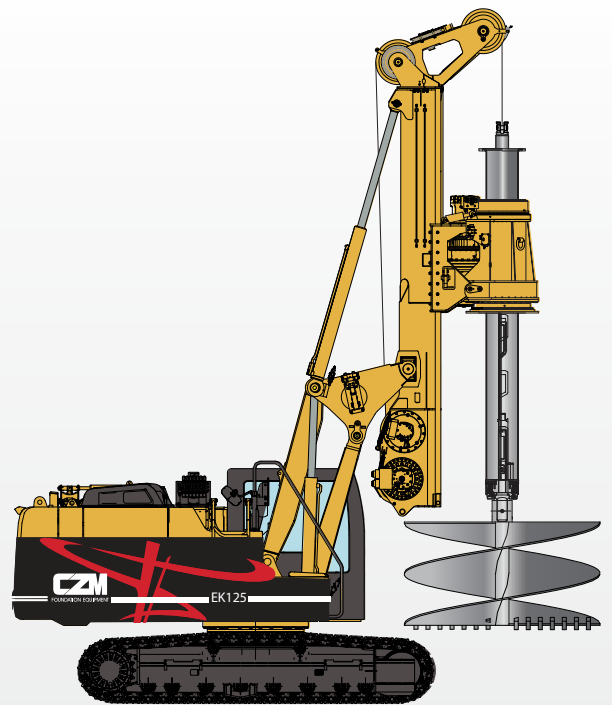
The EK125 also has the versatility to be easily converted from standard to short mast by simply replacing the top mast assembly, crowd cylinder and Kelly bar.

Hydraulic extendable crawlers, additional counterweight and a mast manufactured in "Weldox" steel (light weight – high yield strength) give the EK125 excellent stability.



DRILLED SHAFT PILE (STANDARD VERSION)

Depth: 80ft (24,5m) / 120ft (37m) / 150ft (46m) / friction 180ft (55m)
Diameter (max.): with lower mast: 60in (1,500mm)
Diameter (max.): without lower mast: 96in (2,440mm)



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) | 80 ft | 24.5 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 |

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 CAT323F L TIER IV (CAT® C7.1 ACERT™)

| | | |
|-----------------------|---------|--------|
| Net Power – SAE J1349 | 161 hp | 120 kW |
| Displacement | 433 in3 | 7.1 L |
| Fuel Tank | 108 gal | 410L |

HYDRAULIC SYSTEM (CAT320E L TIER IV)

| | | |
|-------------------------------|--------------|-------------|
| Hydraulic pressure | 5,076 psi | 350 bar |
| Flow rate (main circuit) | 2x49 gal/min | 2x185 L/min |
| Flow rate (auxiliary circuit) | 14.3 gal/min | 54 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 | 4,665 mm |
| Length to Center of rollers | 12 ft 8 in | 3,860 mm |
| Transport position width (retracted) | 8 ft 4 in | 2,540 mm |
| Working position width (extended) | 11 ft 11 in | 3,640 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

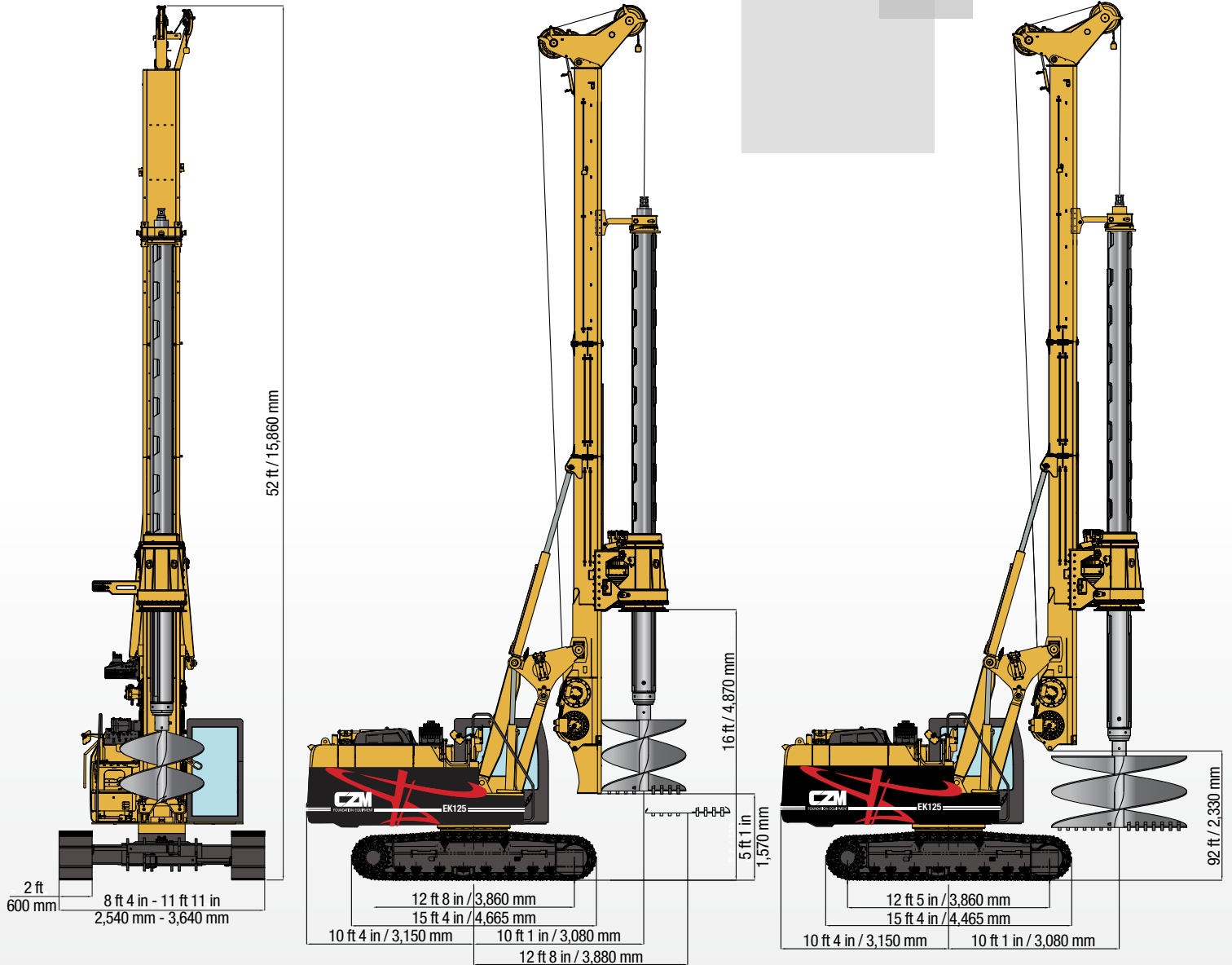
| | | |
|---|------------|-----------|
| Transport height | 11 ft 9 in | 3,600 mm |
| Length | 48 ft 5 in | 14,800 mm |
| Transport width | 9 ft | 2,750 mm |
| Transport weight (standard kelly 4 / 120 ft) | 82,500 lb | 37,500 kg |
| Transport weight (with kelly 3 / 80 ft) | 79,500 lb | 36,150 kg |
| Transport weight (with kelly 5 / 155 ft) | 85,000 lb | 38,600 kg |
| Transport weight (short mast-kelly 5 / 53 ft) | 74,500 lb | 33,850 kg |

GENERAL DATA

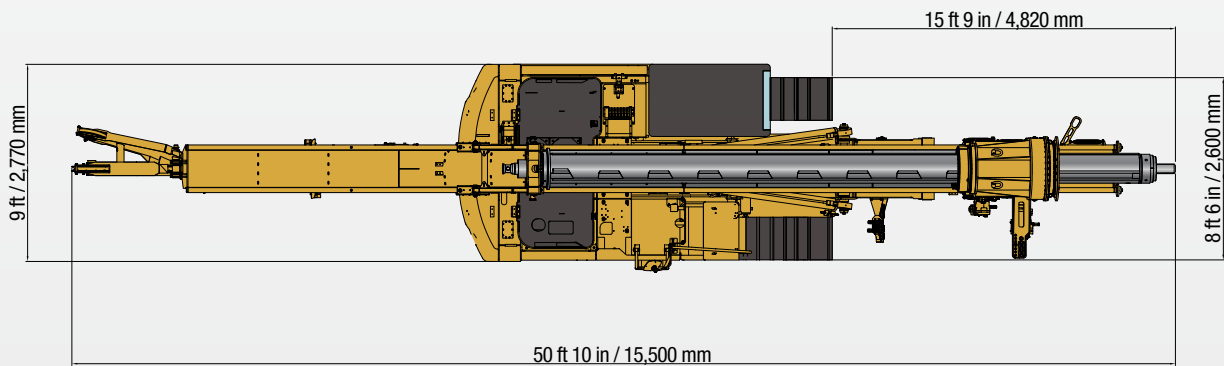
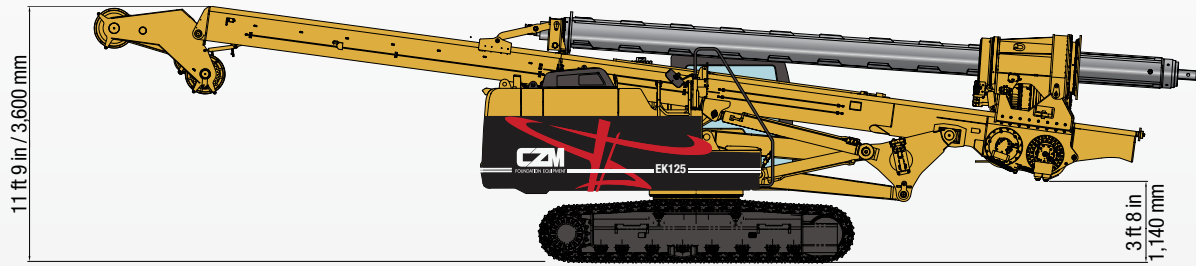
| | | |
|---|------------|-----------|
| Overall height (standard mast) | 52 ft | 15,800 mm |
| Overall height (short mast application) | 28 ft 7 in | 8,700 mm |



GENERAL DIMENSIONS



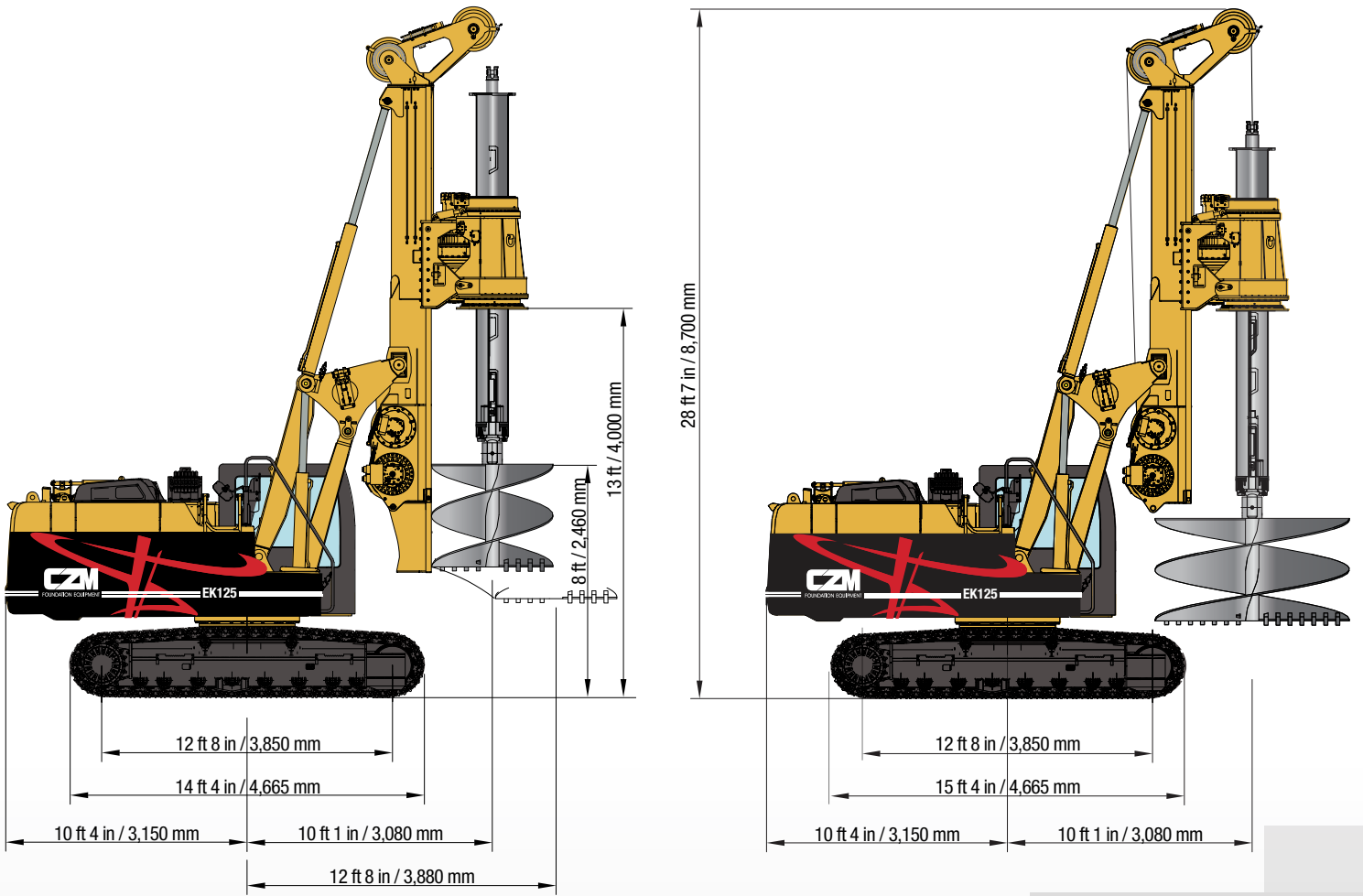
TRANSPORT POSITION



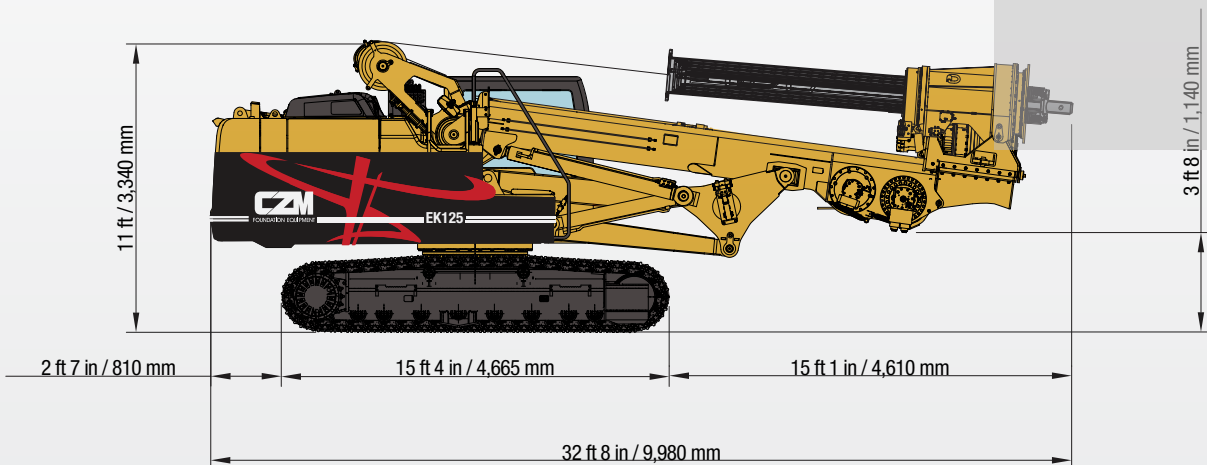
Weight: 79,500 lb / 36,150 kg (3 / 80 ft kelly)
 Weight: 82,500 lb / 37,500 kg (4 / 120 ft kelly)
 Weight: 85,000 lb / 38,600 kg (5 / 155 ft kelly)



GENERAL DIMENSIONS SHORT MAST

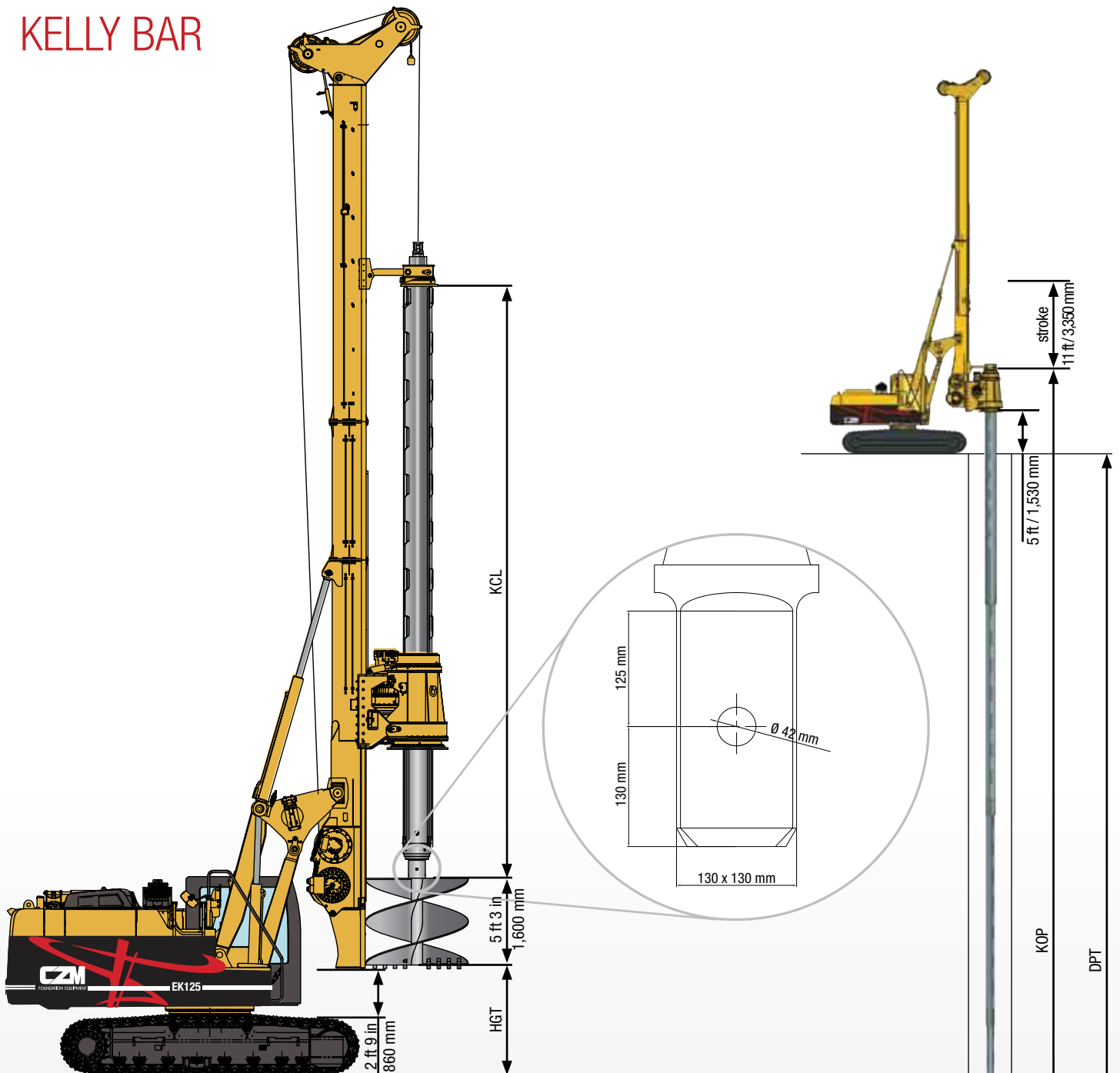


TRANSPORT POSITION SHORT MAST



Weight: 74,500 lb / 33,850 kg

KELLY BAR



KELLY BAR CHOICES FOR STANDARD MAST

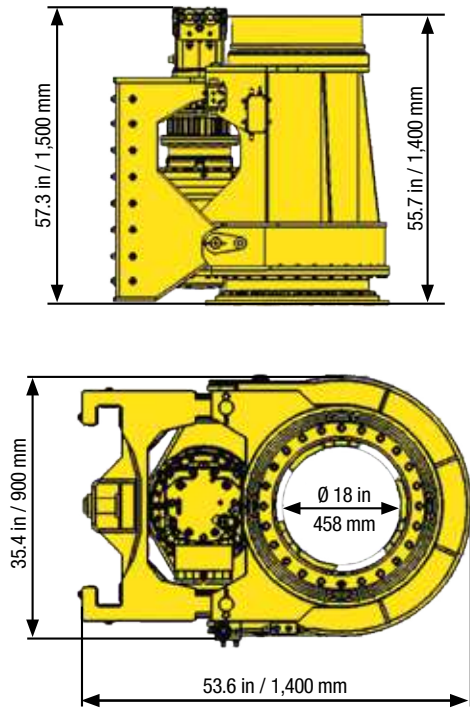
| | NUMBER OF ELEMENTS | DEPTH - DPT | TRANSPORT - KCL | HGT | KOP | WEIGHT |
|--------------------------|--------------------|-------------|-----------------|----------------|--------------------|--------------------|
| Standard 4/120 Interlock | 4 | 120ft (37m) | 37ft (11.3m) | 8ft 2in (2.5m) | 126ft 11in (38.7m) | 10,780lb (4,900kg) |
| 3/80 Interlock | 3 | 80ft (24m) | 34ft (10.3m) | 8ft 2in (2.5m) | 74ft 9in (22.8m) | 8,150lb (3,700kg) |
| 5/150 Interlock | 5 | 150ft (46m) | 37ft (11.3m) | 8ft 2in (2.5m) | 157ft 5in (48m) | 13,640lb (6,200kg) |
| 6/180 Friction | 6 | 180ft (55m) | 37ft (11.3m) | 8ft 2in (2.5m) | 190ft 3in (58m) | 15,540lb (7,000kg) |

KELLY BAR CHOICES FOR SHORT MAST

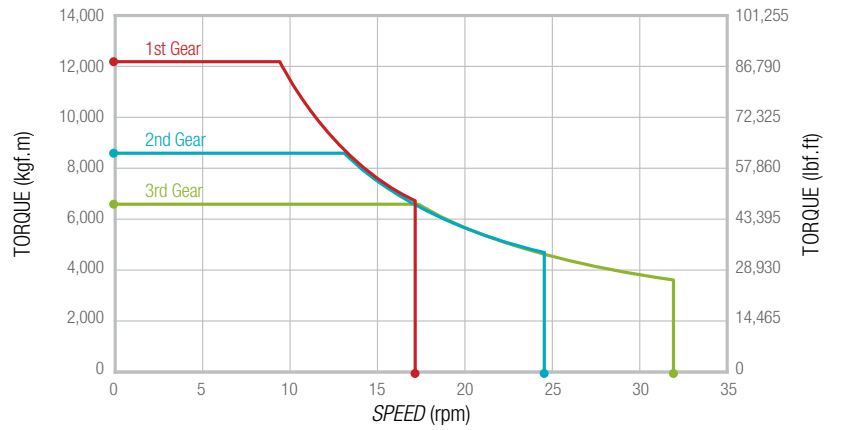
| | NUMBER OF ELEMENTS | DEPTH - DPT | TRANSPORT - KCL | HGT | KOP | WEIGHT |
|-------------------------|--------------------|-------------|-----------------|----------------|-------------------|--------------------|
| Standard 5/53 Interlock | 5 | 53ft (16m) | 15ft 2in (4.6m) | 5ft 2in (1.6m) | 46ft 10in (14.8m) | 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) |

ROTARY HEAD

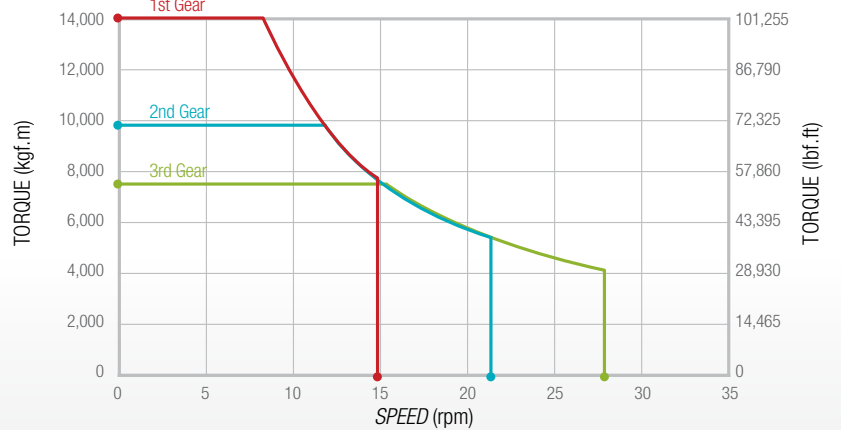
TORQUE DIAGRAM



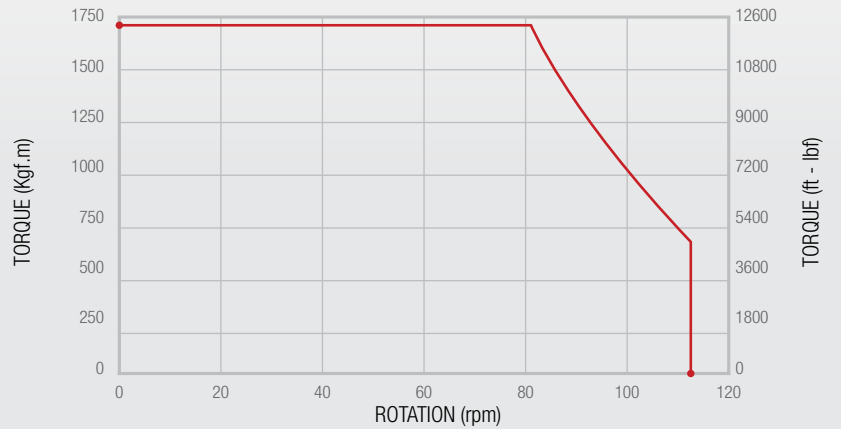
TORQUE DIAGRAM EK125 - ROTARY RD460-12 (STANDARD)
Torque x Working Speed (Nominal)



TORQUE DIAGRAM EK125 - ROTARY RD460-14 (OPTIONAL)
Torque x Working Speed (Nominal)

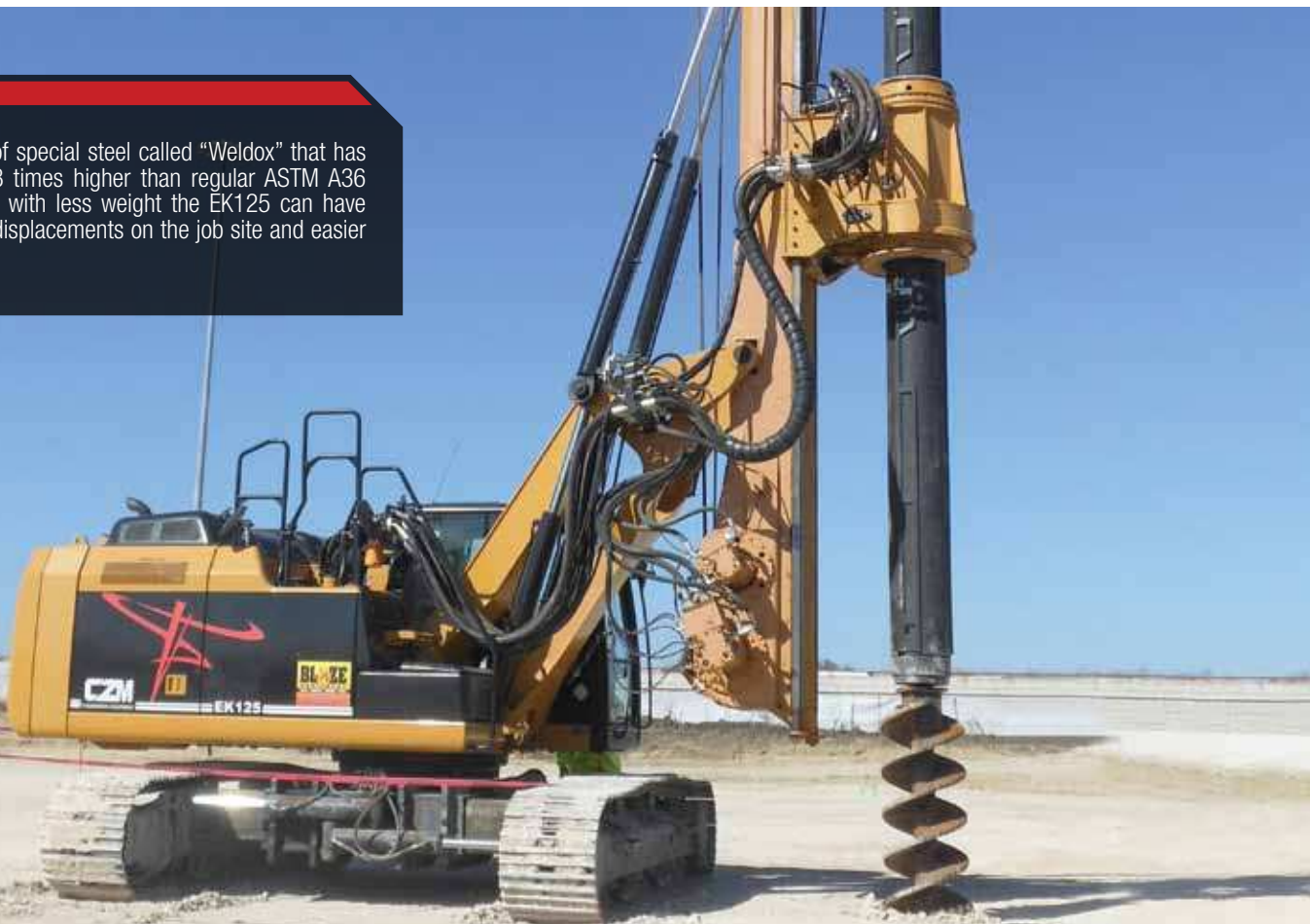


SPIN-OFF SPEED





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





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Specifications are subject to change without notice.