



EK125

EK125 CAT323F R00



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
CAT323F L TIER IV FINAL



APPLICATION

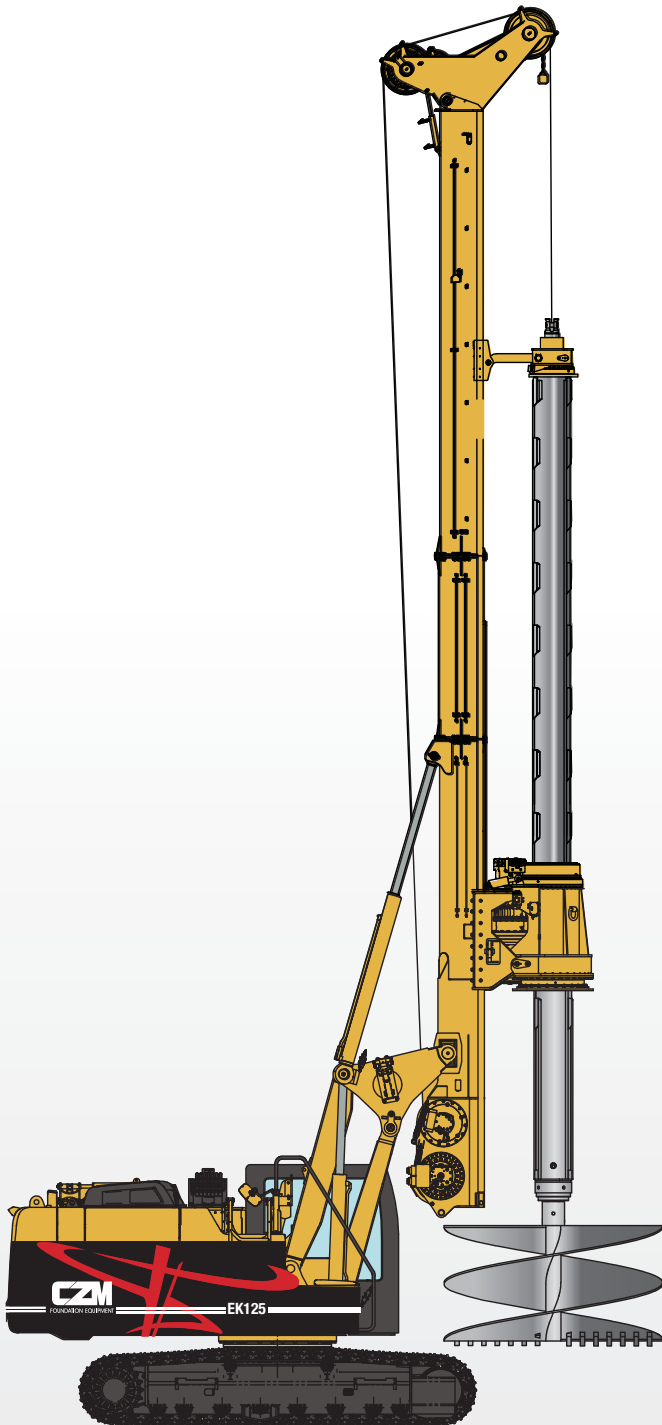
The EK125 from CZM has been designed for high performance and to have the fastest and easiest setup for operation and transport mode. It is a reliable drilling rig mounted on a CAT base, keeping the operation and maintenance extremely friendly and efficient.

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.

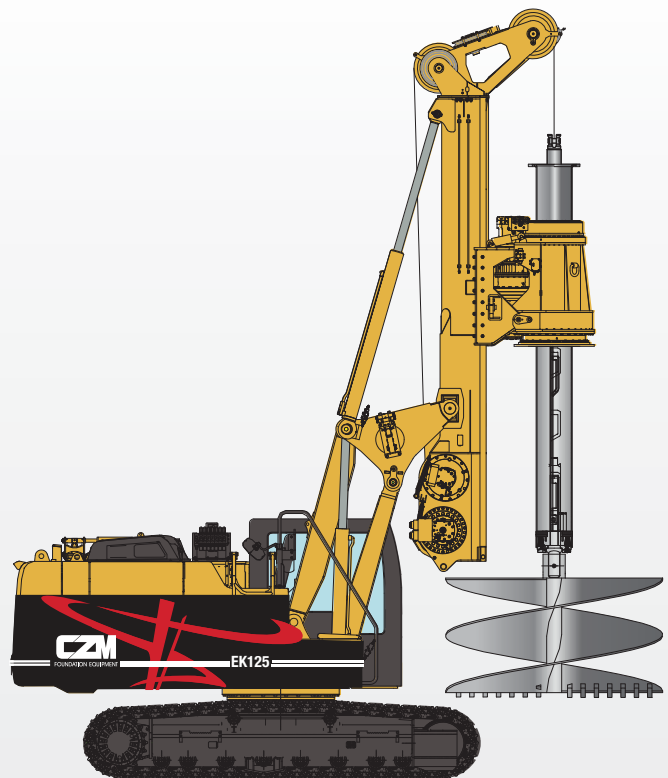
The EK125 also has the versatility to be easily converted from standard to short mast by simply replacing the top mast assembly, crowd cylinder and Kelly bar.

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

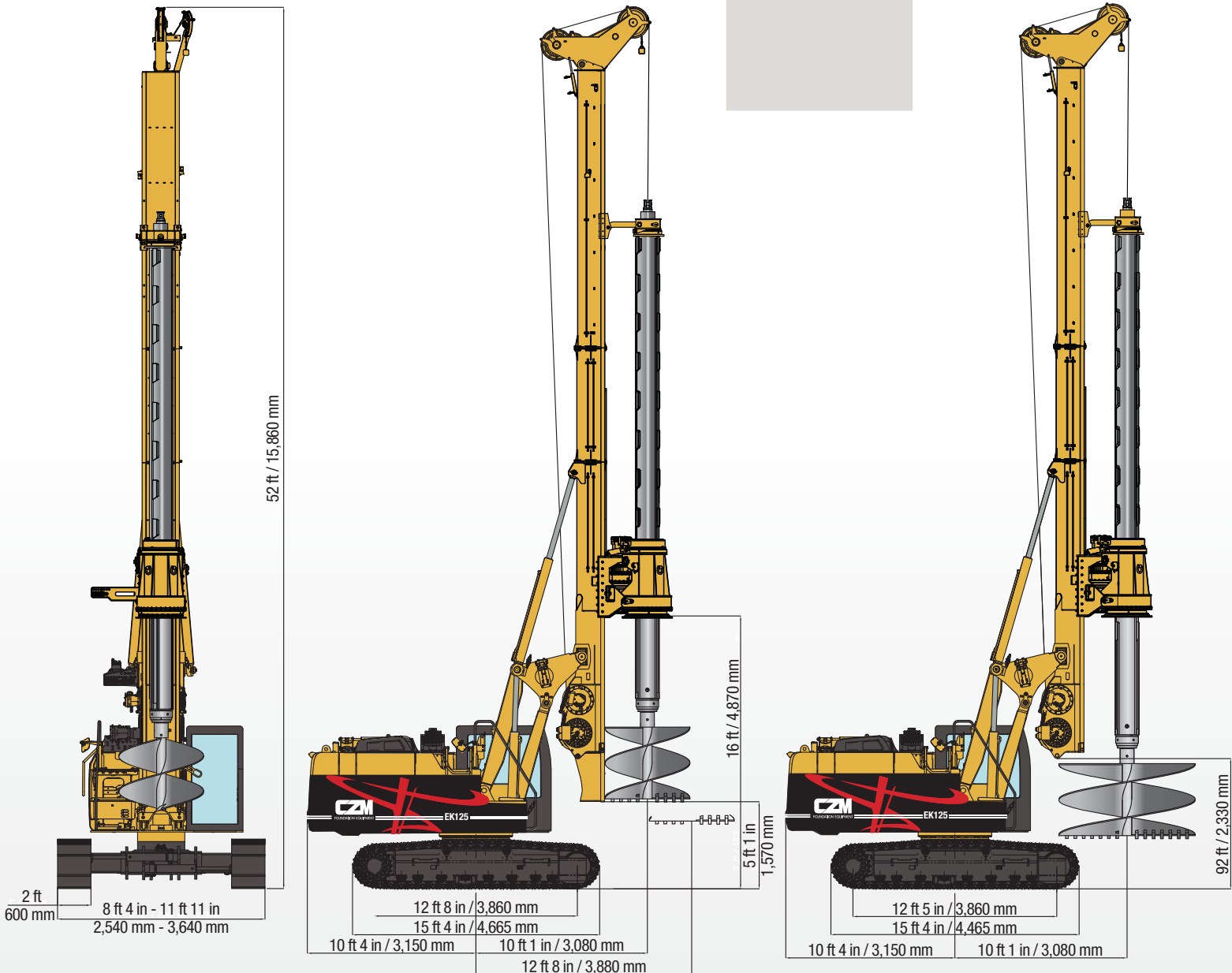
TRANSPORT

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

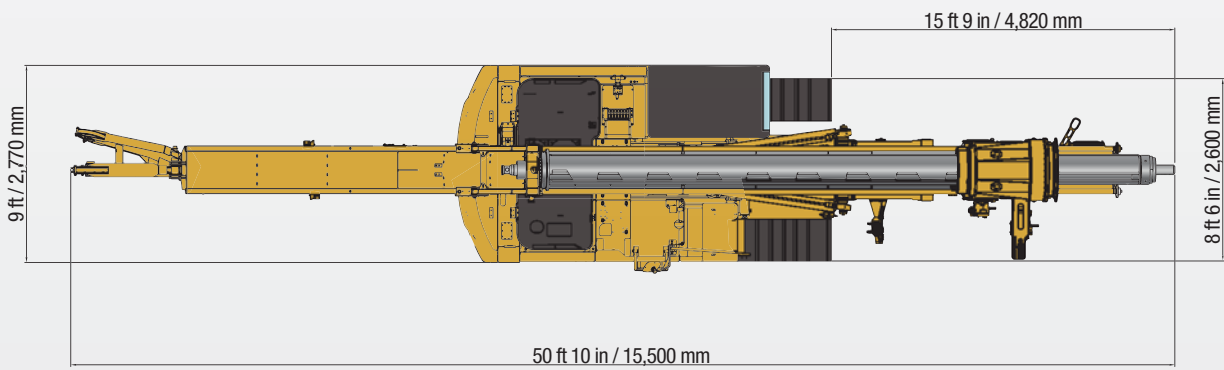
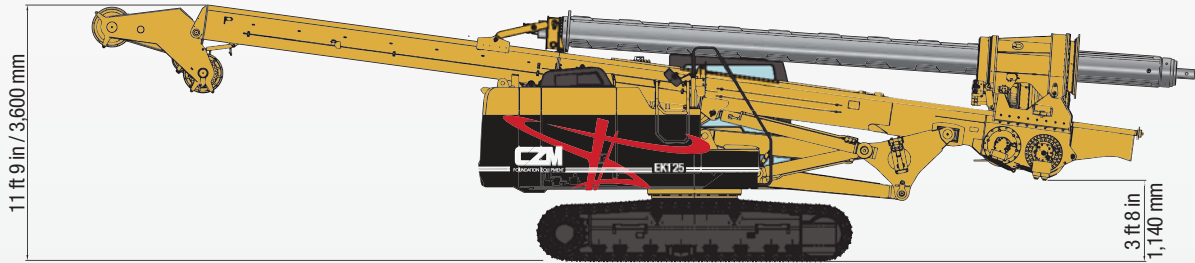
GENERAL DATA

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

GENERAL DIMENSIONS



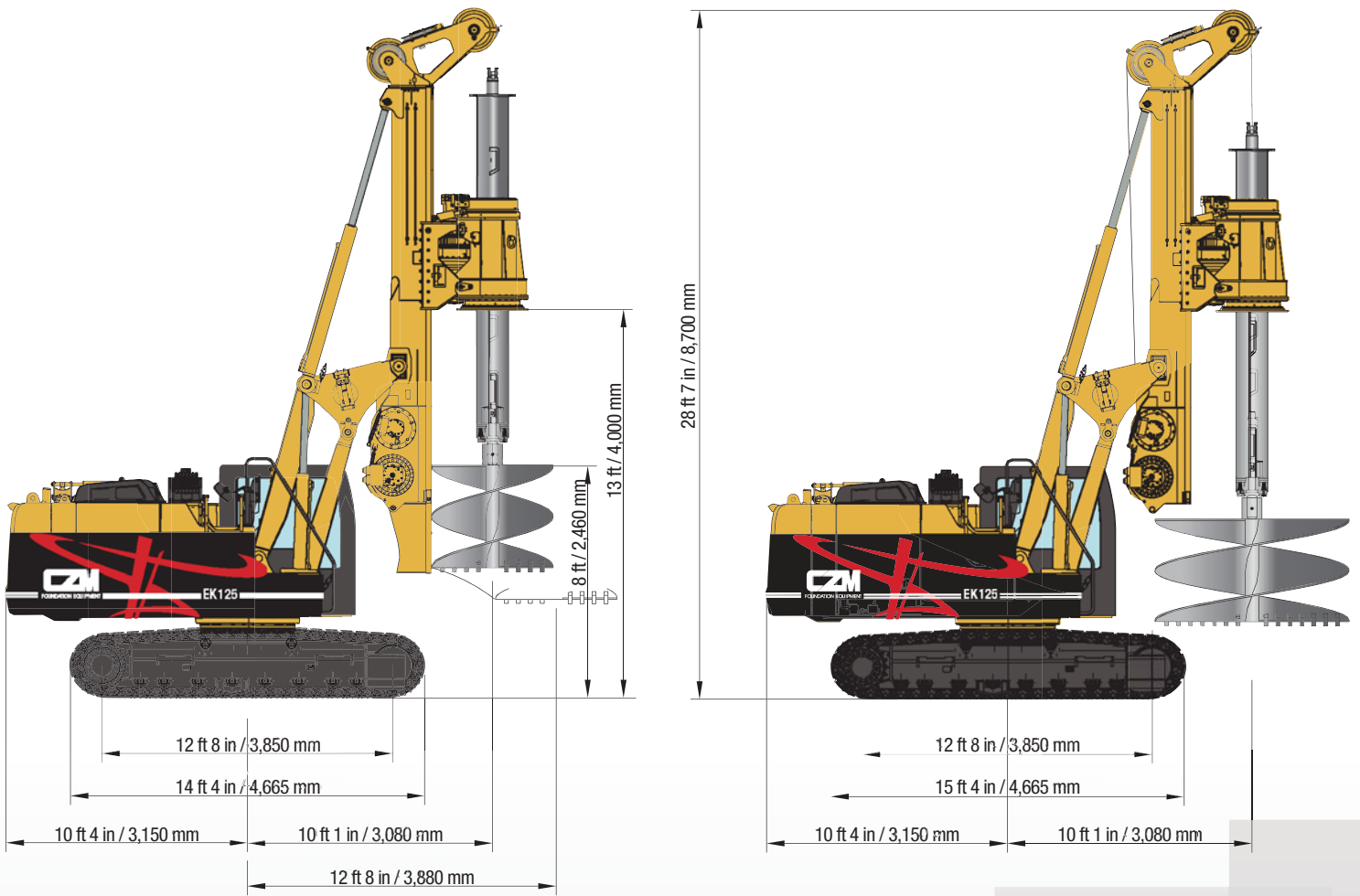
TRANSPORT POSITION



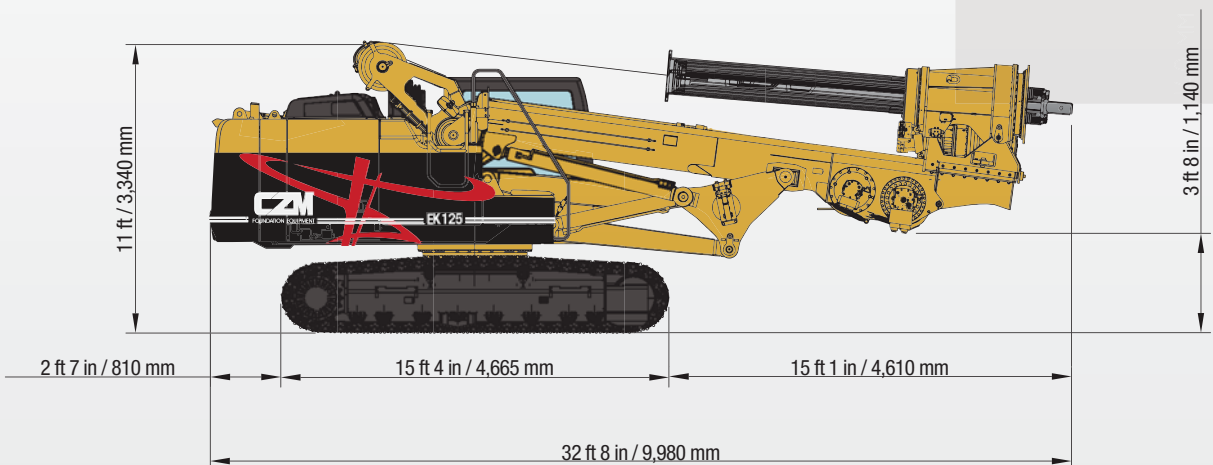
Weight: 79,500 lb / 36,150 kg (3 / 80 ft kelly)
Weight: 82,500 lb / 37,500 kg (4 / 120 ft kelly)
Weight: 85,000 lb / 38,600 kg (5 / 155 ft kelly)



GENERAL DIMENSIONS SHORT MAST

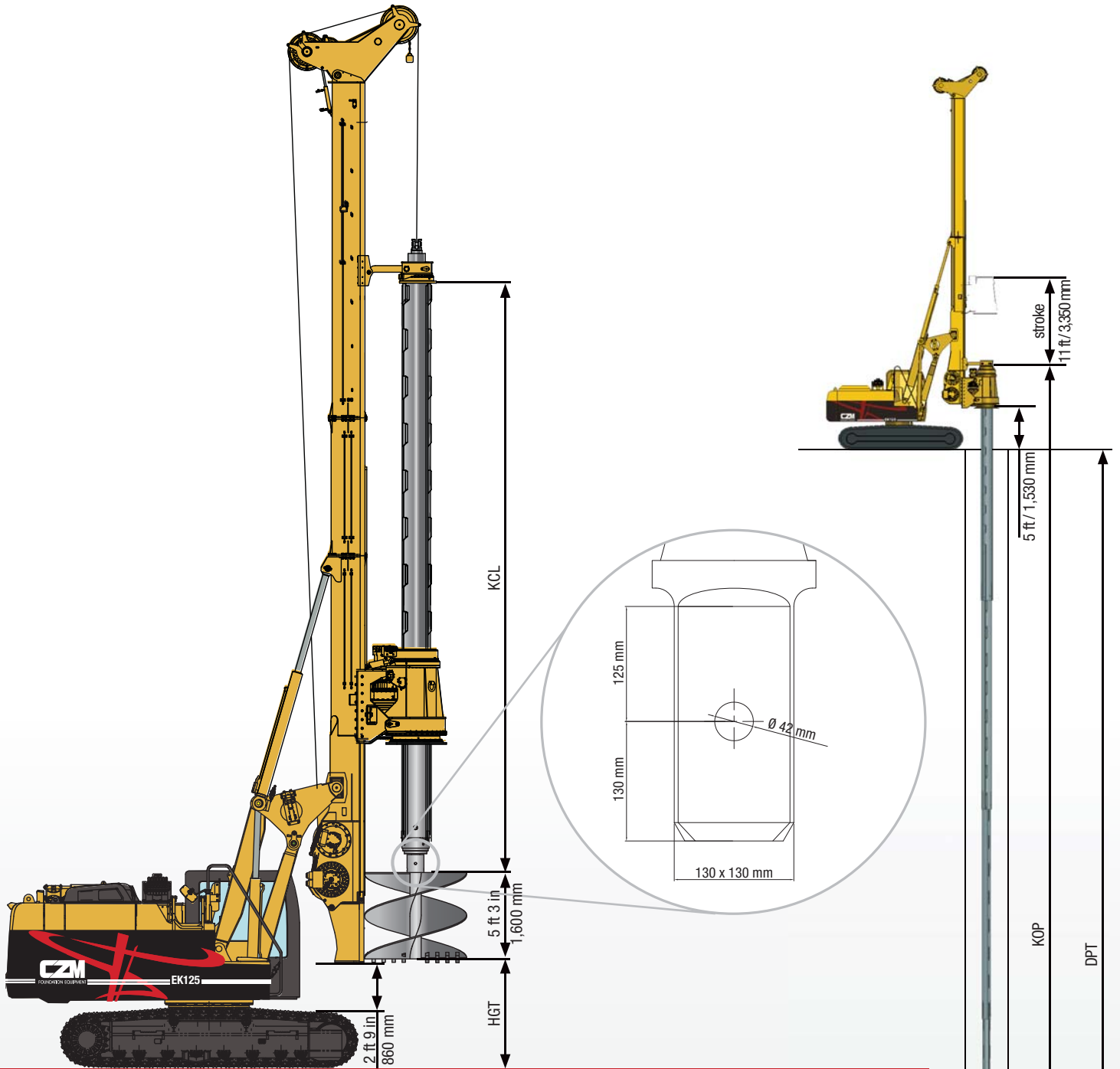


TRANSPORT POSITION SHORT MAST



Weight: 74,500 lb / 33,850 kg

KELLY BAR



KELLY BAR CHOICES FOR STANDARD MAST

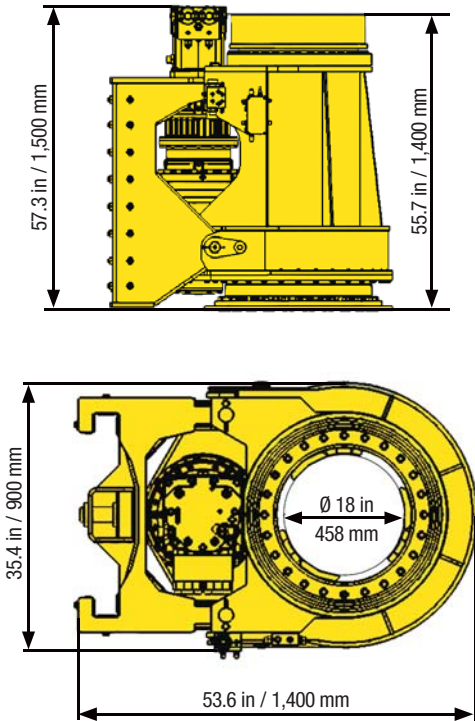
	NUMBER OF ELEMENTS	DEPTH - DPT	TRANSPORT - KCL	HGT	KOP	WEIGHT
Standard 4/120 Interlock	4	120ft (37m)	37ft (11.3m)	8ft 2in (2.5m)	126ft 11in (38.7m)	10,780lb (4,900kg)
3/80 Interlock	3	80ft (24m)	34ft (10.3m)	8ft 2in (2.5m)	74ft 9in (22.8m)	8,150lb (3,700kg)
5/150 Interlock	5	150ft (46m)	37ft (11.3m)	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)

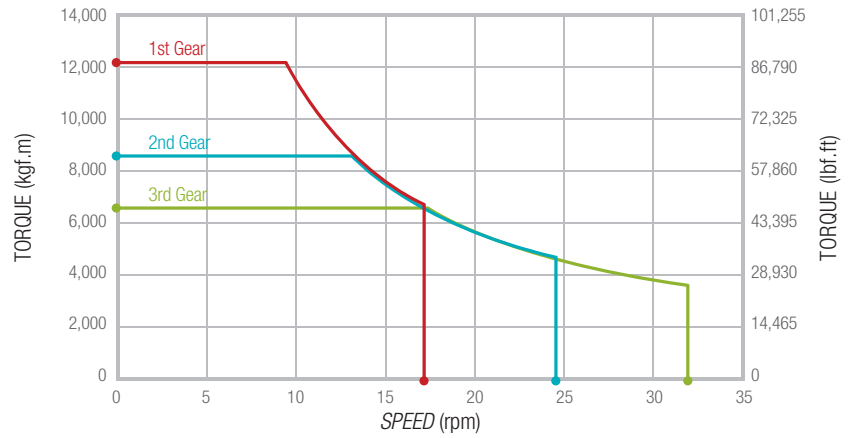
ROTARY HEAD

TORQUE DIAGRAM



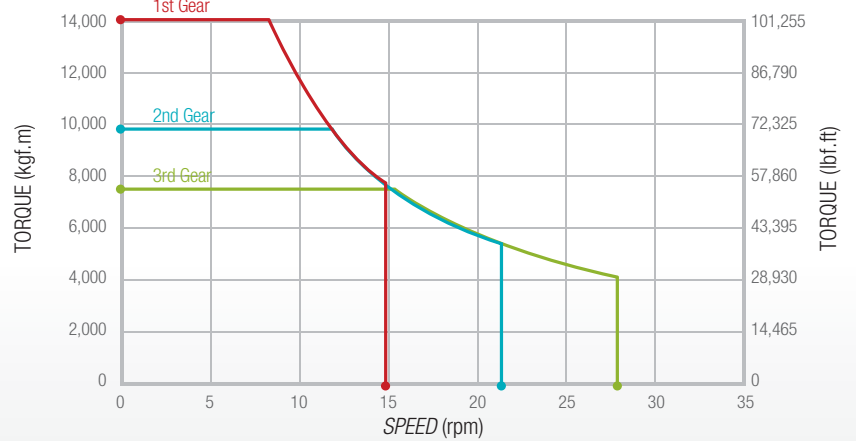
TORQUE DIAGRAM EK125 - ROTARY RD460-12 (STANDARD)

Torque x Working Speed (Nominal)

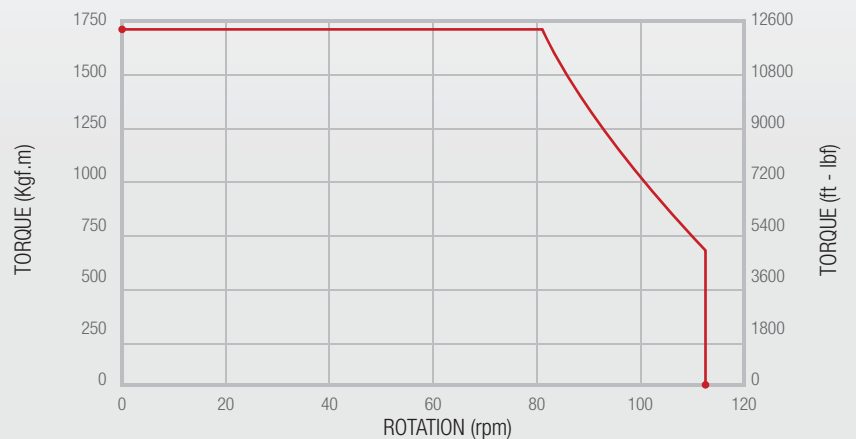


TORQUE DIAGRAM EK125 - ROTARY RD460-14 (OPTIONAL)

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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CZM
FOUNDATION EQUIPMENT

Specifications are subject to change without notice.