

CZM

FOUNDATION EQUIPMENT



EK270LS

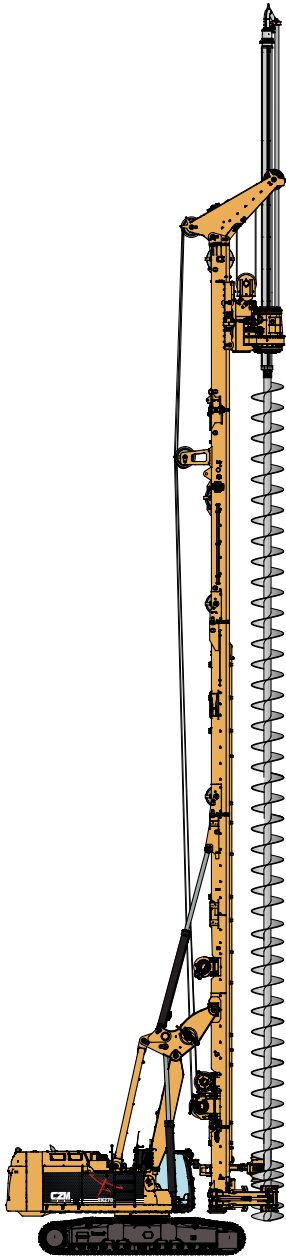
Cat® 352 NG



APPLICATIONS

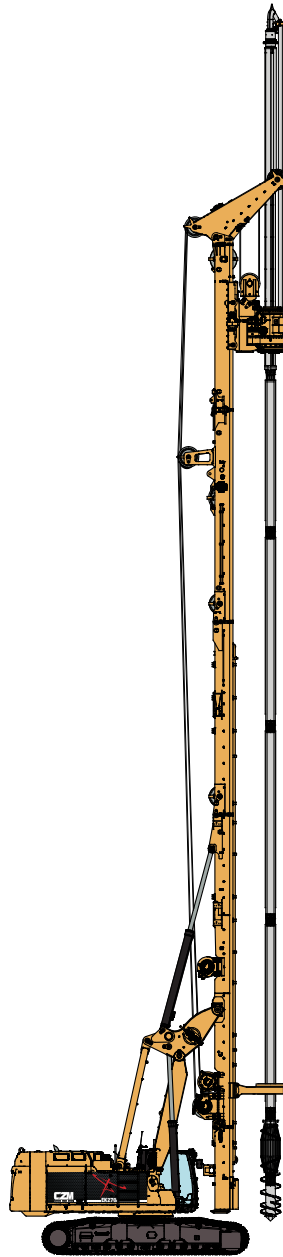
The EK270LS is a full cable crowd drilling rig mounted on a Cat® 352. The long stroke of the rotary makes it ideal for:

- Large Diameter CFA
- Displacement piles
- Large diameter single column Soil Mixing



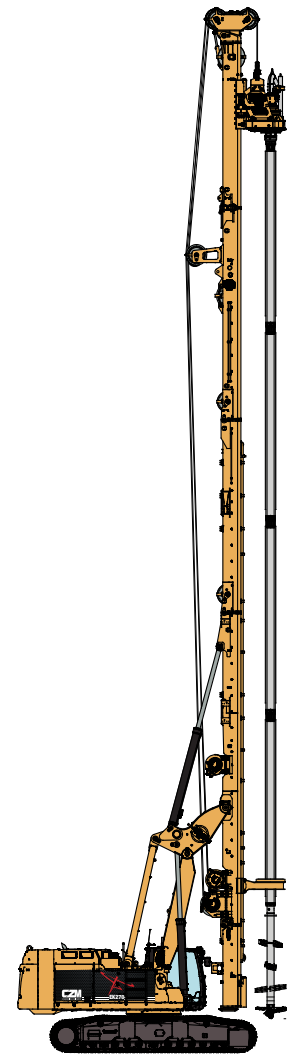
CONTINUOUS FLIGHT AUGER PILE

Depth (max.): 110 ft / 33.6 m
Diameter (max.): 48 in / 1,200 mm



DISPLACEMENT PILE

Depth (max.): 110 ft / 33.6 m
Diameter (max.): 24 in / 610 mm



SOIL MIXING

Max Depth (Std.): 90 ft / 27.4 m
Diameter (with lower mast): 10 ft / 3,050 mm

TECHNICAL SPECIFICATIONS

ROTARY HEAD

Maximum torque (nominal)	201,470lbf.ft	35,000kgf.m
Working Speed	15-40rpm	15-40rpm
Spin-off Speed	47-111rpm	47-111rpm

CROWD SYSTEM

Pull down/Pull up force (effective)	83,725lbf	38,000kgf
Max. Extraction Force (Crowd + Main Winch)	211,125lbf	95,910kgf
Standard Rotary Stroke	89ft	27,125mm
Cable Diameter	1in	26mm
Speed (down/up)	25ft/min	7.5m/min
Fast Speed (down/up)	115ft/min	35m/min

MAIN WINCH (PULL-UP)

Max. Pull-force effective (1st layer)	63,700lbf	38,893kgf
Max. Pull-force effective (1st layer - 2nd speed)	57,000lbf	25,860kgf
Line speed (1st layer)	235ft/min	71m/min
Max. Line speed (2nd speed)	250ft/min	78m/min
Cable diameter	1 1/8 in	28mm
Drum pitch diameter (1st Layer)	24.6in	580mm

AUXILIARY WINCH

Max. Pull-force effective (1st layer)	22,000lbf	10,000kgf
Cable diameter	3/4 in	19mm
Drum pitch diameter (1st Layer)	16.7in	442mm

MAST INCLINATION

Backward	15°	15°
Forward	5°	5°
Sideways	5 / 5°	5 / 5°

DIESEL ENGINE Cat® 352 NEXT GEN (CAT C13 ACCERT)*

Exhaust Emission Standard	EPA Tier 4 Final	EPA Tier 4 Final
Gross Power - Standard ISO 9249	443hp	330kW
Displacement	763in³	12.5L
Fuel tank	188.9gal	715L

MAIN HYDRAULIC SYSTEM

Main circuit pressure (max.)	5,076psi	350bar
Main circuit Flow rate (max.)	2x 103 g/min	2x 389 L/min
Hydraulic Oil Tank (CAT + Additional)	84gal	317L

AUXILIARY HYDRAULIC SYSTEM

Pump Displacement	4.58in³	75cc³
Auxiliary circuit flow rate (max.)	29gpm	108lpm

UNDERCARRIAGE

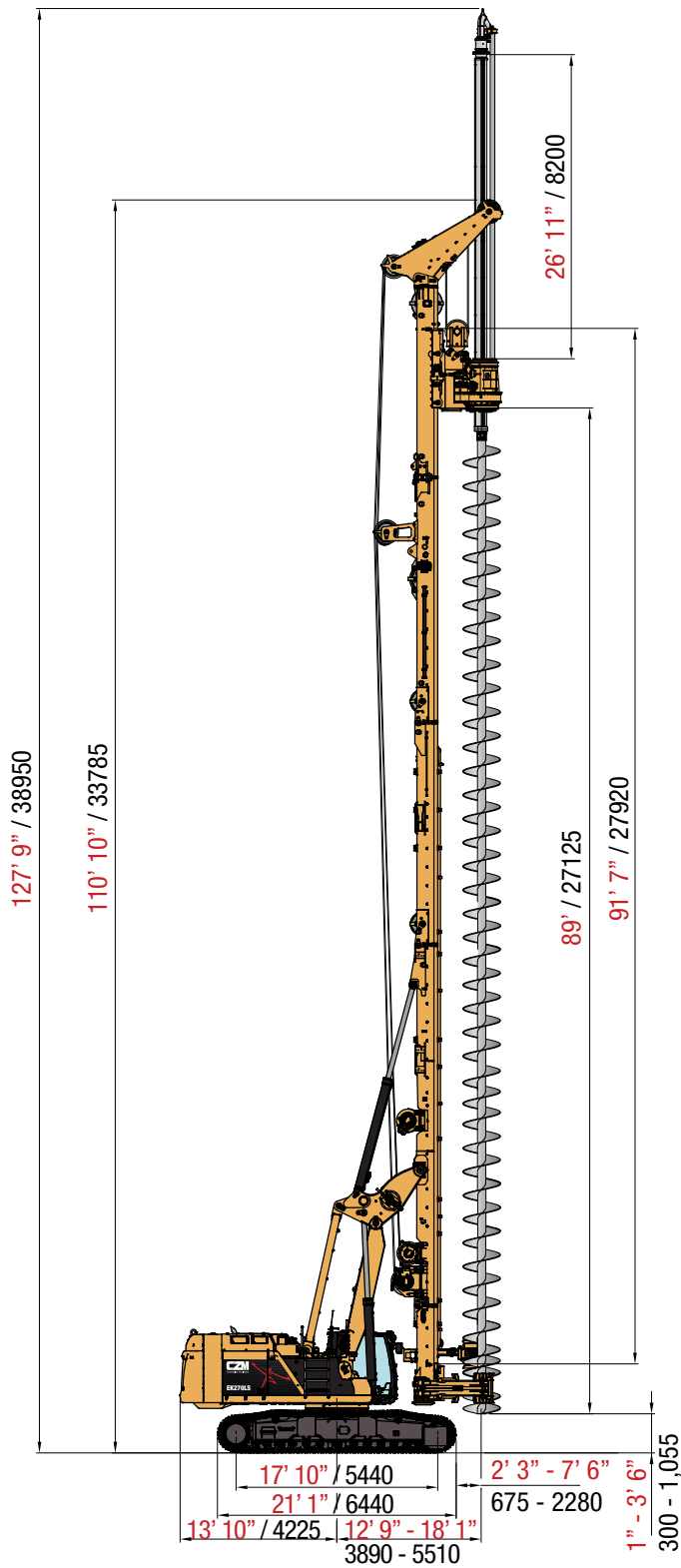
Track length	21ft 2in	6,440mm
Length to center of rollers	17ft 10in	5,440mm
Transport position width (retracted)	11ft 6in	3,500mm
Operation position width (extended)	16ft 4in	4,980mm
Track shoes width	35.4in	900mm

GENERAL DATA STANDARD MAST APPLICATION

Overall Height (Working position)	87ft 1in	26,800mm
Operation Weight	249,600lb	113,216kg



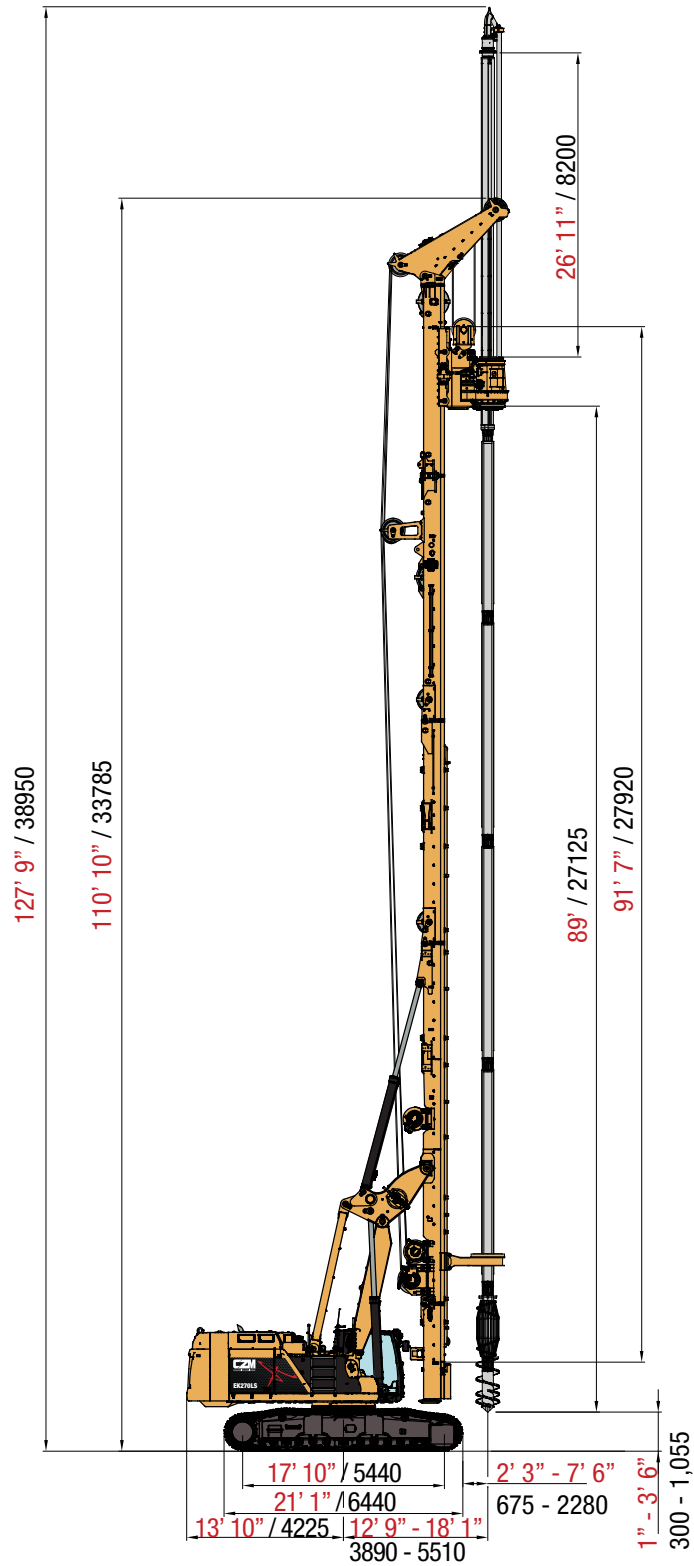
CONTINUOUS FLIGHT AUGER



CFA APPLICATION SPECS

Max. drilling diameter	48 in	1,200 mm
Max. drilling depth (Standard Mast)	110 ft	33,600 mm
Max. extraction force (Main + Crowd winch)	211,125lbf	95,910kgf

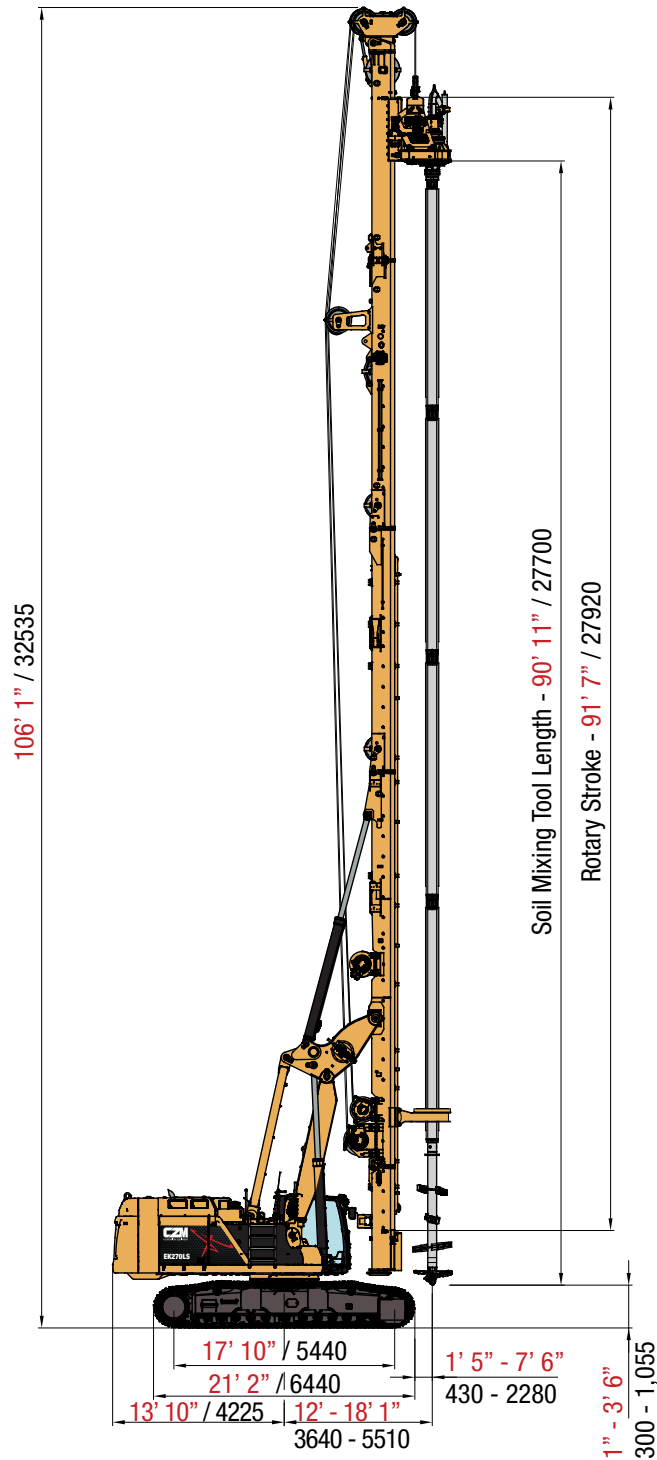
DISPLACEMENT PILE



DISPLACEMENT PILE APPLICATION SPECS

Max. drilling diameter	28 in	720 mm
Max. drilling depth (Standard Mast)	110 ft	33,600 mm
Max. extraction force (Main + Crowd winch)	211,125 lbf	95,910 kgf

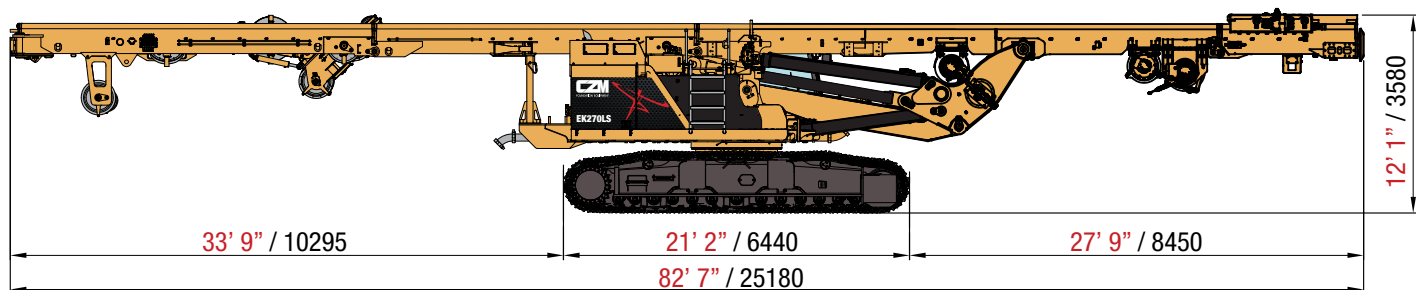
SOIL MIXING



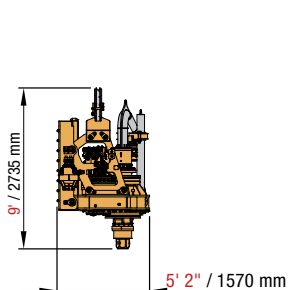
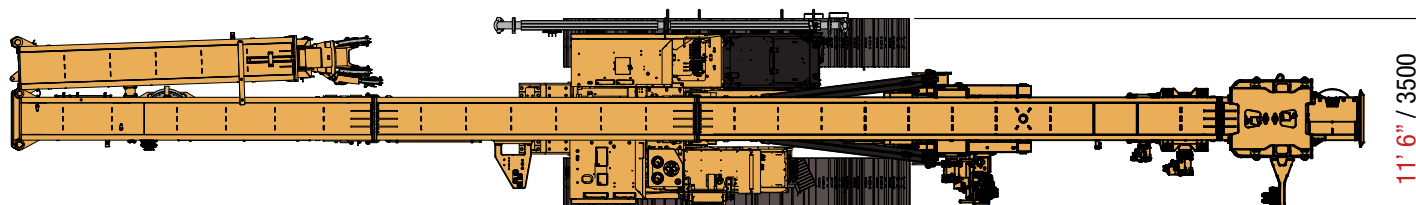
SINGLE COLUMN SOILMIXING APPLICATION SPECS

Max. drilling diameter	10 ft	3,050 mm
Max. drilling depth (Standard Mast)	90 ft	27,400 mm
Max. extraction force (Main + Crowd winch)	211,125lbf	95,910 kgf

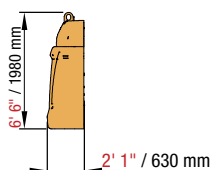
TRANSPORT POSITION GENERAL DIMENSIONS



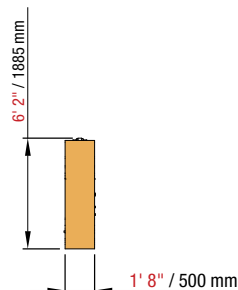
Weight: 195,550 lbs / 88,700 kg



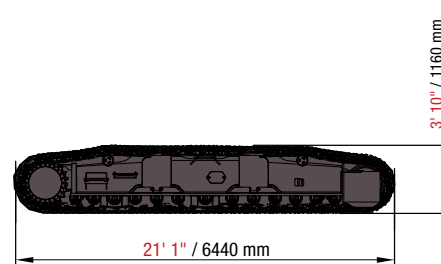
Width: 8' 10" / 2700mm
Weight: 14,110lb / 6.4 ton



Width: 9' 10" / 3000mm
Weight: 27,000lb / 12.3 ton



Width: 9' 10" / 3000mm
Weight: 12,790lb / 5.8 ton



Width: 5' 1" / 1555mm
Weight: 20,000lb / 9.1 ton
Per Unit

EK270LS FEATURES

BASE:

- The new **Cat 352** is a purpose-built machine powered by a fuel-efficient U.S. EPA **Tier 4 Final** C13 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.

UNDERCARRIAGE:

- Caterpillar **variable undercarriage** VH5440/4900/900. Reinforced frame H style variable undercarriage. Length between wheels 5440mm, Transport width 3500mm, Operation width 4900mm, Shoe width 900mm.

MAST:

- Reinforced mast, with high resistance steel **Weldox 900**.

ROTARY:

- **Robust design**, with 2 slewing bearings on top and bottom, robust pinion and main gear.
- **3 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. No need to rebuild keys by welding inside the rotary.
- Hydraulic measurement of torque displayed in the cabin for the operator.

MAIN WINCH:

- **Special groove** for better cable winding and longer cable life.
- Press-roller included
- **2 gears** allows for both **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.
- Freewheeling winch during crowd operation.
- Hydraulic and mechanical brake.
- Hydraulic measurement of pulling force displayed in the cabin for operator.
- Swivel and Limit switch.

CAB:

- AM/FM Radio, Air conditioning/Heating
- ROPS cab
- 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



ACCESSORIES:

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





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

AFTER SALES - CALIFORNIA

1720 N. Ventura Avenue
Ventura • California • 93001
United States • Phone: (805) 667-8416

AFTER SALES - GEORGIA

145 East Industrial Boulevard
Pembroke • Georgia • 31321
United States • Phone: (912) 200-7656

AFTER SALES - KENTUCKY

2001 West Hal Rogers Parkway
London • Kentucky • 40741
United States • Phone: (912) 320-2699

AFTER SALES - TEXAS

2501 Blue Mound Rd. W
Haslet • Texas • 76052
United States • Phone: (817) 232-8053

WWW.CZM-US.COM    