



FOUNDATION EQUIPMENT



LR75

LONG REACH

ON CAT330
(NEXT GEN)

ABOUT THE LONG REACH SERIES

APPLICATIONS:

- **Long Reach**, the longest reach drill rig of its class in the market.
- Conversion to **Long Mast** and **Short Mast** options available.

BASE:

- **The new Cat 330 Next Gen** is a purpose-built machine powered by a fuel-efficient U.S. EPA **Tier 4 Final** C7.1 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** VH4400/4230/700. Reinforced frame H style variable undercarriage.

MAST:

- Reinforced mast, with high resistance steel **Weldox 700**.

ROTARY:

- **Robust design**, with 2 slewing bearings on top and bottom, robust pinion and main gear.
- Anti-cavitation and anti-shock system for longer hydraulic motor life.
- **1 group of Hydraulic Motor / Planetary Gear** for high torque, high speeds and long 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 automatic stops.
- Free willing winch during crowd operation.
- Hydraulic and mechanic brake.
- Hydraulic measurement of pulling force displayed in the cabin for operator.

KELLY BAR:

- Large inner passage on rotary allows for **large diameter pipes** (16in) and **thicker keys**.
- Thick Keys made of Wear resistant materials – **Hardox 450**.



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
 - Drill Lock
 - Auto Crowd
 - Return to Center
- Maintenance and data logging

ACCESSORIES:

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

TECHNICAL SPECIFICATIONS

KELLY BAR SHORT MAST APPLICATION

Drilling Depth (5 elements; interlock kelly bar)*	55 ft	16,760 mm
Maximum Drilling Depth (Interlocking bars)	80 ft	24,380 mm
Maximum Drilling Depth (Friction bars)	100 ft	30,480 mm
Drilling Diameter	11 ft	3,350 mm

*For longer bars, mast extension is required.

ROTARY HEAD - RT 406-10

Max. torque (nominal)	77,530 ft.lbs	10,750 kg.m
Working speed of rotation	20 – 32 rpm	20 – 32 rpm
Spin-off rotation	100-140 rpm	100-140 rpm

CROWD SYSTEM

Cylinder stroke - short mast	6 ft 3 in	1,920 mm
Cylinder push force	27,000 lbf	12,300 kgf
Cylinder push speed	128 ft/min	33 m/min
Cylinder pull force	39,600 lbf	18,000 kgf
Cylinder pull speed	118 ft/min	36 m/min

MAIN WINCH

Max. pull-force - 1st Layer (effective)	27,120 lbf	12,330 kgf
Line speed - 1st Layer	412 ft/min	125 m/min
Cable diameter	3/4 in	20 mm
Drum diameter - 1st Layer	15.75 in	400 mm

AUXILIARY WINCH

Max. pull-force - 1st Layer (effective)	14,300 lbf	6,500 kgf
Cable diameter	5/8 in	16 mm
Drum diameter - 1st Layer	10.2 in	260 mm

MAST INCLINATION

Backward	15°	15°
Forward	10°	10°
Sideways	12° / 12°	12° / 12°

DIESEL ENGINE CAT330 NEXT GEN TIER IV (CAT® C7.1 ACERT™)

Net Power – SAE J1349	275 hp	205 kW
Displacement	428 in ³	7.1 L
Fuel Tank	125 gal	474 L



HYDRAULIC SYSTEM (CAT336F L TIER IV)

Hydraulic pressure	5,076 psi	350 bar
Flow rate (main circuit)	2x65 gal/min	2x246.5 L/min
Hydraulic oil tank capacity	46.2 gal	175 L

UNDERCARRIAGE

Track length	17 ft	5,200 mm
Length to Center of rollers	14 ft 5 in	4,400 mm
Transport position width (retracted)	9 ft 11 in	3,000 mm
Working position width (extended)	14 ft 1 in	4,300 mm
Shoes width	28 in	700 mm
Max. drawbar pull (both tracks)	90,200 lbf	41,000 kgf
Max. travel speed	1.30 mph	2.0 km/h

TRANSPORT

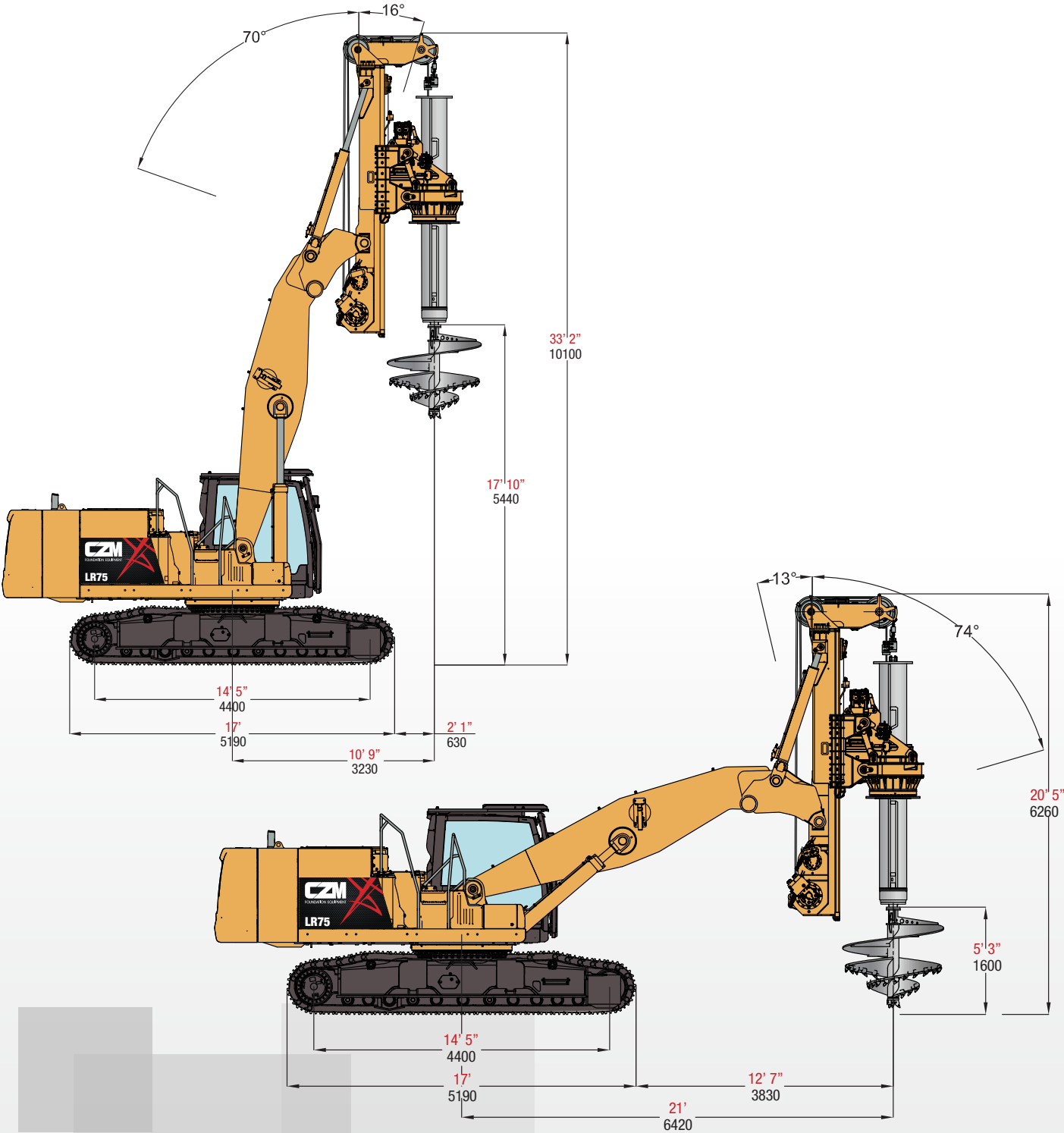
Transport height	10 ft 4 in	3,150 mm
Length	41 ft 4 in	12,600 mm
Transport width	9 ft 11 in	3,000 mm
Transport weight (standard kelly 5 / 55 ft)	85,000 lb	38,600 kg

GENERAL DATA

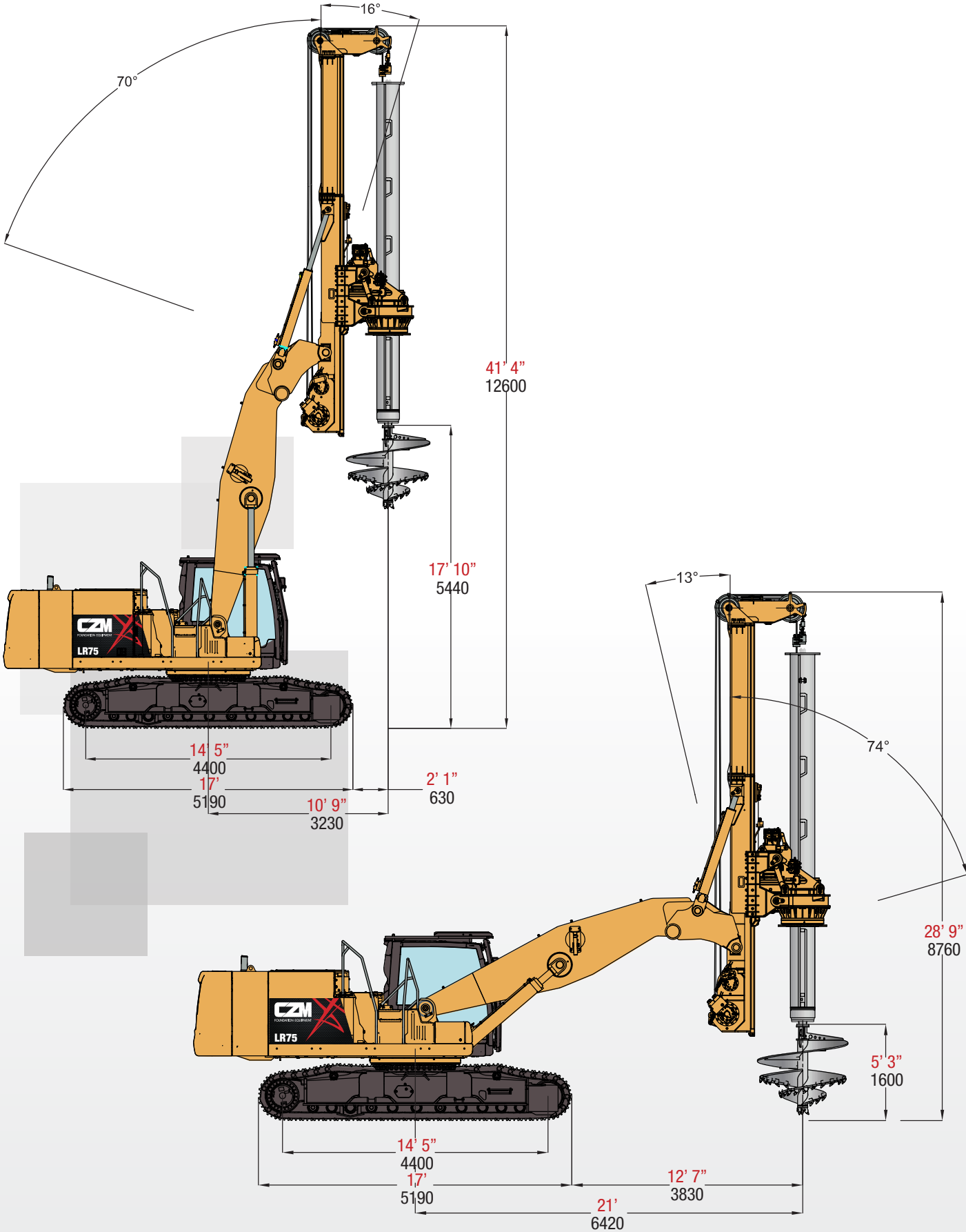
Overall height (boom in)	33 ft 2 in	10,100 mm
Overall height (boom out)	19 ft 2 in	5,825 mm
Operating weight	92,000 lb	42,000 kg



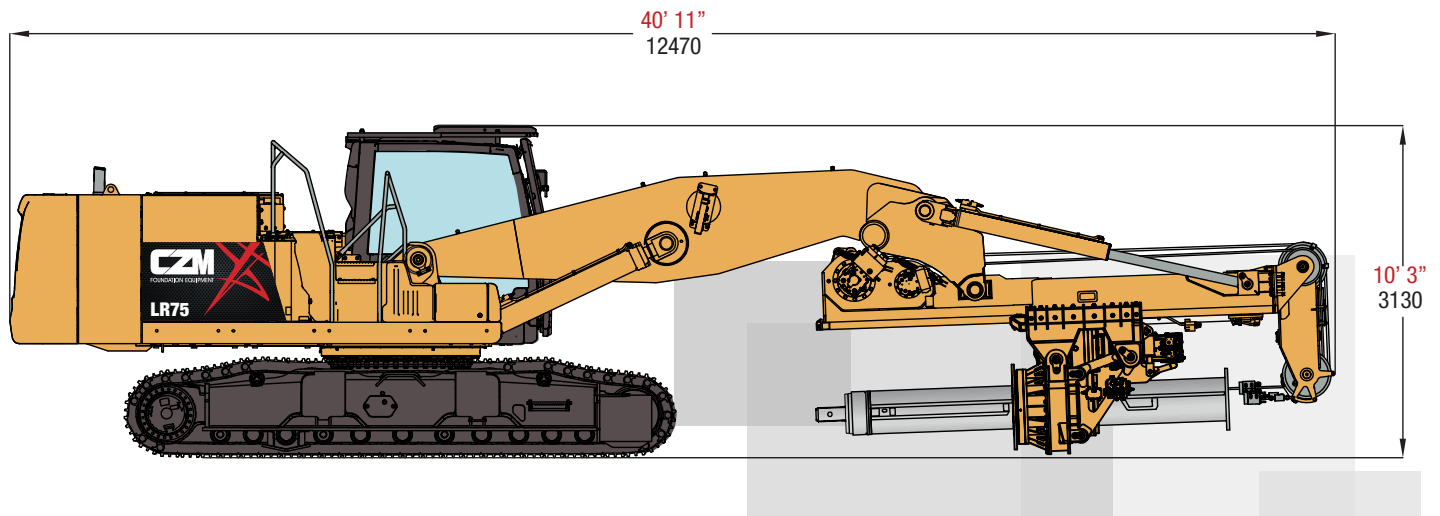
GENERAL DIMENSIONS SHORT MAST



GENERAL DIMENSIONS LONG MAST



TRANSPORT POSITION GENERAL DIMENSIONS



KELLY BAR OPTIONS FOR LR75

	NUMBER OF ELEMENTS	DEPTH - DPT	CLOSED LENGTH	WEIGHT
3/40 Interlock	5	45' / 15.7m	14' 2" / 4.3m	5,900lbs / 2,700kg
5/55 Interlock	5	53' / 16m	15' 2" / 4.6m	8,300lbs / 3,800kg
5/65 Interlock	5	80' / 24m	17' 2" / 5.2m	9,500lbs / 4,300kg
5/80 Interlock	5	55' / 16.8m	20' 2" / 6.1m	11,600lbs / 5,270kg
5/65 Friction	5	70' / 21m	17' 2" / 5.2m	9,300lbs / 4,220kg
5/80 Friction	5	100' / 30.5m	20' 2" / 6.1m	11,400lbs / 5,180kg

LR75

Mounted on
CAT330
(NEXT GEN)

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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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