# EQUIPMENT

## STANDARD EQUIPMENT

### ENGINE
- Meets EPA Tier II non-road emissions regulations
- H/P mode control
- E mode control
- 50 A alternator
- Dry-type air double filters with evacuator valve (with safety element)
- Cartridge-type engine oil filter
- Cartridge-type fuel filter
- Air cleaner double filter
- Radiator and oil cooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idle system
- Auto acceleration system

### HYDRAULIC SYSTEM
- Work mode selector
- Engine speed sensing system
- E-P control system
- Power boost
- Auto power lift
- Quick warm-up system for pilot circuit
- Shockless valve in pilot circuit
- Boom-arm reduced drift valve
- Control valve with main relief valve
- Extra auxiliary port in control valve
- Suction filter
- Full-flow filter
- Pilot filter

### CAB
- CRES (Center pillar Reinforced Structure) design
- All-weather sound-suppressed steel cab
- Reinforced, tinted (bronze color) glass windows
- 4 fluid-filled elastic mounts
- Upper and lower front windows and left side windows that open
- Intermittent windshield retractable wipers
- Front window washer
- Deluxe suspension cloth seat with 4” (100 mm) adjustable armrests with lumbar support
- Footrest
- Electric double horn
- 12 V-60 W, 5 amp, cellular phone outlet
- AM-FM stereo with digital clock
- Auto-idle/acceleration selector
- Seat belt, 2” (50 mm) retractable
- Large cup holder
- Cigarette lighter
- Ashtray
- Storage box
- Glove compartment
- Floor mat
- Transparent tinted overhead hatch with sunshade
- Pilot control shut-off lever
- Engine stop knob
- Auto-control air conditioning with heater

### MONITOR SYSTEM
- Meters:
  Hourmeter, trip meter, engine coolant temperature gauge, and fuel gauge
- Warning lamps:
  Alternator charge, engine oil pressure, engine overheat, air filter restriction, and minimum fuel level
- Pilot lamps:
  Engine preheat, engine oil level, engine coolant level, hydraulic oil level, work light, auto-idle, auto-acceleration, digging mode, attachment mode
- Alarm buzzers:
  Engine oil pressure and engine overheat

### LIGHTS
- 2 working lights

### UPPERSTRUCTURE
- Undercover
- 11,900 lb (5 400 kg) counterweight
- Fuel level float
- Hydraulic oil level gauge
- Tool box
- Utility space
- Rearview mirror (right and left side)
- Swing parking brake

### UNDERCARRIAGE
- Travel parking brake
- Travel motor covers
- Travel motion alarm device
- Track guards and hydraulic track adjuster
- Bolt-on sprocket
- Upper rollers and lower rollers
- Reinforced track links with pin seals

### FRONT ATTACHMENTS
- HN bushing
- WC thermal spraying
- Reinforced resin thrust plate
- Flange pin
- Bucket clearance adjust mechanism
- Monolithically cast bucket link A
- Centralized lubrication system
- Dirt seal on all bucket pins

### MISCELLANEOUS
- Lockable machine covers
- Lockable fuel filling cap
- Skid-resistant tapes, plates and handrails
- Travel direction mark on track frame
- On-board MIC

## OPTIONAL EQUIPMENT
- 9’ 9” (2.96 m) arm
- 11’ 10” (3.61 m) arm
- 24” (600 mm) reinforced triple grouser shoes
- 28” (700 mm) reinforced triple grouser shoes
- 32” (800 mm) reinforced triple grouser shoes
- Window vandal protection covers
- Auxiliary hydraulic and electric pilot contols
- Hydraulic filter restriction indicator kit
- Auxiliary hydraulic lines with shutoff valve
- Buckets: ditching, general purpose, heavy-duty, heavy-duty high capacity, severe-duty cast lip, severe-duty plate lip, side cutters and teeth
- Hydraulic bucket material clamps
- Hydraulic coupler
- Seat belt, 3” (76 mm) non-retractable
- Alternate pilot control pattern
- Cab circulation fan
- 24- to 12-volt, DC radio converters, 10 amp
- Secondary exit kit-top hatch
- Ripper
- Boom and arm anti-drift valves
- Lower front window guard
- Tropical door – left and right hand side
- Less boom and arm
- Single pedal propel control
- Heavy-duty grapple
- Protection screens for cab front, rear and side
- ISO Standard Falling Object Protective (FOPS) cab with integrated headguard
- Rub rail style guards
- Undercarriage frame opening guard
- Cab extention harness
- Tool kit

*These specifications are subject to change without notice. Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in color and features.*

HITACHI

*Hitachi Construction Products*
*P.O. Box 8806 • 1515 5th Avenue • Moline, IL 61265*

DKA230HT (04-04)




HITACHI

# ZAXIS 230LC

Rated Engine
167 hp (123 kW)

Operating Weight
53,600 lbs (24 300 kg)

Bucket Capacity
0.95 - 2.03 yd³ (0.73 - 1.55 m³)

# One POWERFUL Solution

***Smarter, faster, more productive yet more efficient–the versatile Hitachi Zaxis 230LC can be found at construction sites all over the world. Boasting a cleaner yet more powerful engine and a host of new items as well as significant refinements, Zaxis is the next generation in excavator development.***

## High-Power Engine

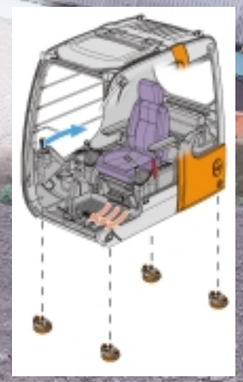
**The Isuzu CC-6BG1T generates**

- **158 hp @ 2,000 rpm in P mode (116 kW/min$^{-1}$)**
- **167 hp @ 2,100 rpm in H/P mode (123 kW/min$^{-1}$)**
- **470 lbf•ft max. torque @ 1,800 rpm (65 kgf•m/min$^{-1}$)**

**and meets EPA Tier II non-road emission regulations.**

## Safety, Comfort, and Convenience

**The operator's compartment is designed for both comfort and operating efficiency.**



## Durable

**Extensive steps have been taken to improve basic performance and overall durability.**

## Rigid Undercarriage

**A reshaped box design with X-beams helps disperse stress and boosts the overall rigidity of the entire undercarriage.**

## Multi-function Operations

**The Zaxis 230LC continues the Hitachi tradition of smooth, multi-functioning excavators. Executing combined operations such as simultaneous swinging and traveling are easy with Zaxis.**

## Machine Information Center

**The Machine Information Center captures and stores vital machine performance data such as engine speeds, hydraulic temperatures, pump pressures, alarms and faults, hours of operation, and more. The data is downloadable through a Palm™ Pilot and is transferred to your PC. Special PC software interprets the data and generates valuable machine performance reports and graphs highlighting machine utilization, performance history, and more to help users improve productivity and profit.**

# The Zaxis Advantage

## Higher Productivity

Zaxis uses the latest technologies to achieve lower total operational costs while boosting productivity. Arm digging and bucket digging forces have been increased by 7% and 8% respectively by increasing the hydraulic cylinder diameter.

## Cab Comfort

The easy-to-read monitor panel and switches are located near the operator to minimize fatigue and enhance operator control. The Auto-control air conditioner allows you to set a specific temperature, then forget it. Bi-level air ducts are positioned throughout the cab to promote even air flow.


## Auto Power Lift

Loads are increased during bucket-filling operations. The Auto Power Lift function automatically provides a 6% increase in power to meet the demand.

## Lower Operating Costs

Reduced fuel consumption, a strengthened main frame, front attachment, and undercarriage, longer lubrication intervals, 4,000-hour hydraulic oil and 1000-hour hydraulic oil filters all work together to extend the durability of Zaxis while reducing running and repair costs.

## Work Modes

Two modes simplify excavating operations. Select the "Digging" mode for smooth and speedy front operations or "Attachment" to use a wide variety of tools such as breakers, compactors, and crushers.

*The powerful engine and hydraulic system work together to bring the maximum amount of excavating forces to the toughest of job sites.*

## Cab Safety

The CRES (Center pillar Reinforced Structure) rigid cab is designed with safety in mind. The closed-section pillar and reinforcing members at central areas withstand vertical and horizontal external forces. This can help reduce the potential of operator injury in the event of an accident.

## Operator Command

The newly refined hydraulic system gives the operator unprecedented control. The Zaxis 230LC has a 6% increase in production while in the H/P mode over the EX230 LC.

## Increased Travel and Swing Power

Armed with plenty of dependable power for travel and swing operations, the Zaxis 230LC is ready for the toughest of terrains and job sites thanks to improved travel motors and swing reduction gear. It has 8% more swing torque and 5% more travel power than the EX230 LC.

## Auto Acceleration and Auto Idle

Engine speed is automatically controlled in response to the amount of lever operation. This helps reduce fuel consumption, especially during light-load work, up to 6%. The Auto Idle Control reduces the engine speed automatically to save energy when the lever is in neutral.

*A low-noise muffler and the Isuzu Tier II emissions control engine ensure a quieter, more environmentally friendly excavator. Plastic parts are labeled for easy recycling. Wiring is lead-free.*

*Easy-to-read monitor panel.*

*Cab design both guards the operator and contributes to efficient operation through its comfortable, ergonomic layout and its CRES design.*



# Spec Summary



## ENGINE

Model .....Isuzu CC-6BG1T
Type .....4-cycle water-cooled, direct injection
Aspiration .....Turbocharged, intercooled
No. of cylinders .....6
Rated power SAE J1349, net
H/P mode .....167 hp (123 kW) @ 2,100 rpm ($min^{-1}$)
P mode .....158 hp (116 kW) @ 2,000 rpm ($min^{-1}$)
Maximum torque .....470 lbf•ft (65 kgf•m) @ 1,800 rpm ($min^{-1}$)
Piston Displacement .....396 $in^3$ (6.494 L)
Bore and stroke .....4.13” x 4.92” (105 mm x 125 mm)
Batteries .....2 x 12 V, 97 AH
Governor .....Mechanical speed control by stepping motor

## HYDRAULIC SYSTEM

Work mode selector allows operator to choose between Digging mode or Attachment mode.
Engine speed sensing system.
Main pumps .....2 variable displacement axial piston pumps
Max. oil flow .....2 x 53.9 US gpm (2 x 204 L/min, 2 x 44.9 lmp gpm)
Pilot pump .....1 gear pump
Max. oil flow .....9.0 US gpm (34 L/min, 7.5 lmp gpm)

### Hydraulic Motors

Travel .....2 variable displacement axial piston motors
Swing .....1 axial piston motor

### Relief Valve Settings

Implement circuit .....4,980 psi (355 $kgf/cm^2$)
Swing circuit .....4,270 psi (300 $kgf/cm^2$)
Travel circuit .....5,050 psi (355 $kgf/cm^2$)
Pilot circuit .....570 psi (40 $kgf/cm^2$)
Power boost .....5,260 psi (370 $kgf/cm^2$)

### Hydraulic Cylinders

High-strength piston rod and tubes. Cylinder cushion mechanisms provided in all cylinders to absorb shocks at stroke ends.
Dimensions:

| | Qty. | Bore | Rod Diameter |
|---|---|---|---|
| Boom | 2 | 4.92” (125 mm) | 3.54” (90 mm) |
| Arm | 1 | 5.51” (140 mm) | 4.13” (105 mm) |
| Bucket | 1 | 5.11” (130 mm) | 3.54” (90 mm) |

### Hydraulic Filters

Hydraulic circuits use high-quality hydraulic filters. A suction filter is incorporated in the suction line and full-flow filters in the return line and swing/travel motor drain lines.

## UPPERSTRUCTURE

### Revolving Frame

Welded, sturdy box construction, using heavy-gauge steel plates for ruggedness. D-section frame for resistance to deformation.

### Swing Mechanism

Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type.
Swing speed .....12.6 rpm ($min^{-1}$)
Swing torque .....49,915 lb•ft (6 908 kgf•m)

### Operator’s Cab

Independent roomy cab, 40” (1 005 mm) wide by 66” (1 675 mm) high, conforming to ISO Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Adjustable, reclining seat with armrests; movable with or without control levers.

## CONTROLS

Pilot controls for all functions. Hitachi’s original shockless valve and quick warm-up system built in the pilot circuit. Hydraulic warm-up control system for engine and hydraulic oil.
Implement levers .....2
Travel levers with pedals .....2

## UNDERCARRIAGE

### Tracks

Tractor-type undercarriage. Welded track frame using selected materials. Side frame welded to track frame. Lubricated track rollers, idlers, and sprockets with floating seals. Track shoes with triple grousers made of induction-hardened rolled alloy. Flat and triangular shoes are also available. Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.
Number of Rollers and Shoes on Each Side, standard N.A. model
Upper rollers .....2
Lower rollers .....9
Track shoes .....51
Track guard .....1

### Traction Device

Each track driven by 2-speed axial piston motor through planetary reduction gears for counter-rotation of the tracks. Sprockets are replaceable. Parking brake is spring-set/hydraulic-released disc type. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel.
Travel speeds High: .....0-3.4 mph (5.5 km/h)
Low: .....0-2.1 mph (3.4 km/h)
Maximum traction force .....44,420 lbf (20 150 kgf)
Gradeability .....35° (70%) continuous

## SERVICE REFILL CAPACITIES

| | US gal | Liters | Imp gal |
|---|---|---|---|
| Fuel tank | 100.0 | 380.0 | 83.6 |
| Engine coolant | 6.1 | 23.0 | 5.1 |
| Engine oil | 6.6 | 25.0 | 5.5 |
| Swing mechanism (each side) | 2.3 | 8.6 | 1.9 |
| Travel final device (each side) | 1.9 | 7.2 | 1.6 |
| Hydraulic system | 80.0 | 303.0 | 66.7 |
| Hydraulic tank | 39.1 | 148.0 | 32.6 |

## WEIGHTS/GROUND PRESSURE

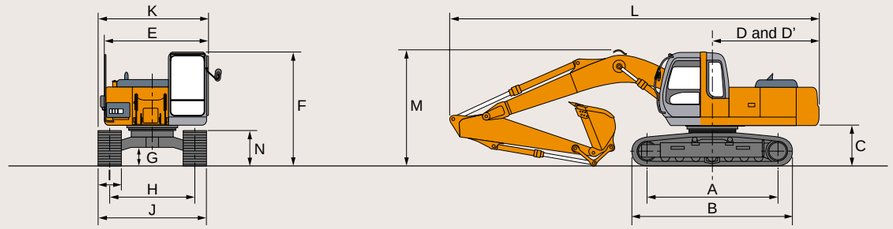
Standard North America backhoe model Zaxis 230LC:
19’ 8” (6.0 m) boom, 9’ 8” (2.96 m) arm, 1.30 $yd^3$ (1.0 $m^3$) PCSA heaped bucket, 31” (800 mm) triple grouser shoes.
Weight: .....53,600 lb (24 300 kg)
Ground pressure: .....5.26 psi (0.37 $kgf/cm^2$)
Other models available include 24” (600 mm) and 28” (700 mm) triple grouser shoes. Please check with your local Hitachi dealer for more details

## BACKHOE ATTACHMENTS

Boom and arms of all-welded, box-section design. 19’8” (6.0 m) boom, 7’7” (2.32 m), 9’8” (2.96 m), and 11’10” (3.61 m) arms are available. Bucket is all-welded, high-strength steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

# DIMENSIONS / WORKING RANGES

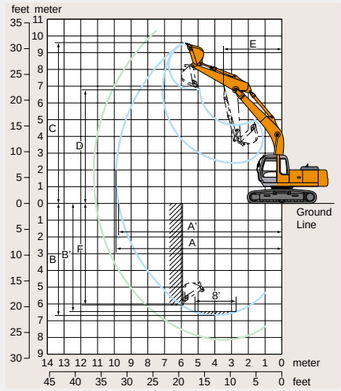
## ZAXIS230LC




Unit: ft in (mm)

| | | ZAXIS230LC |
|---|---|---|
| A | Distance between tumblers | 12'7" (3 840) |
| B | Undercarriage length | 15'3" (4 640) |
| * C | Counterweight clearance | 3'7" (1 090) |
| D | Rear-end swing radius | 9'8" (2 940) |
| D' | Rear-end length | 9'7" (2 930) |
| E | Overall width of upperstructure | 9'6" (2 890) |
| F | Overall height of cab | 9'11" (3 020) |
| * G | Min. ground clearance | 1'6" (460) |
| H | Track gauge | 8'6" (2590) |
| I | Track shoe width | 31" (G 800) |
| J | Undercarriage width | 10'6" (3 190) |
| K | Overall width | 10'6" (3 190) |
| L | Overall length<br>With 9'8" (2.96 m) arm<br>With 11'10" (3.61 m) arm | 33'3" (10 140)<br>— |
| M | Overall height of boom<br>With 9'8" (2.96 m) arm<br>With 11'10" (3.61 m) arm | 10'2" (3 100)<br>— |
| N | Track height<br>With triple grouser shoes | 2'11" (900) |

* Excluding track shoe lug. G: Triple grouser shoe




Unit: ft in (mm)

| Arm length | ZAXIS230LC 9'8" (2.96 m) | ZAXIS230LC 11'10" (3.61 m) |
|---|---|---|
| A Max. digging reach | 33'8" (10 270) | 35'9" (10 900) |
| A' Max. digging reach (on ground) | 33'2" (10 100) | 35'2" (10 730) |
| B Max. digging depth | 22'10" (6 950) | 24'11" (7 590) |
| B' Max. digging depth (8' level) | 22'1" (6 740) | 24'5" (7 430) |
| C Max. cutting height | 31'7" (9 630) | 32'9" (9 990) |
| D Max. dumping height | 22'2" (6 760) | 23'4" (7 100) |
| E Min. swing radius | 12'8" (3 870) | 12'9" (3 890) |
| F Max. vertical wall | 19'9" (6 020) | 22'1" (6 740) |
| Bucket digging force* SAE : PCSA | 37,670 lbf (17 090 kgf 167 kN) | |
| Arm crowd force* SAE : PCSA | 27,640 lbf (12 540 kgf 123 kN) | 24,020 lbf (10 900 kgf) 107 kN |

Excluding track shoe lug * At power boost

# BACKHOE BUCKETS

## ZAXIS230LC

A full line of buckets is offered to meet a wide variety of applications. Digging forces are with power boost. The buckets have an adjustable bushing for side clearance, with the exception of the ditching bucket. Tooth selection includes either the John Deere Fanggs¤, Standard, Tiger, Twin Tiger, Abrasion panel, or Flare tooth, or the ESCO (Vertalok) Standard, Tiger, Twin Tiger, or Flare tooth. Replaceable cutting edges are available through John Deere parts. Optional side cutters add 6 inches (150 mm) to bucket widths.

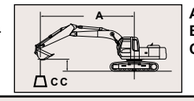
| Type Bucket | Bucket Width | | Bucket Capacity* | | Weight | | Bucket Dig Force | | Arm Dig Force 9 ft. 9 in. (2.96 m) | | Arm Dig Force 11 ft. 10 in. (3.61 m) | | Bucket Tip Radius | | No. Teeth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in. | mm | cu. yd. | $m^3$ | lb. | kg | lb. | kN | lb. | kN | lb. | kN | in. | mm | |
| General-Purpose Plate Lip | 24 | 610 | 0.95 | 0.73 | 1,453 | 659 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 3 |
| | 30 | 760 | 1.20 | 0.92 | 1,731 | 785 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 4 |
| | 36 | 915 | 1.48 | 1.13 | 1,845 | 837 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 5 |
| | 42 | 1065 | 1.38 | 1.06 | 1,785 | 810 | 37,670 | 167.0 | 27,690 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 5 |
| | 42 | 1065 | 1.75 | 1.34 | 1,966 | 892 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 5 |
| | 48 | 1220 | 2.03 | 1.55 | 2,068 | 938 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 6 |
| Heavy-Duty Plate Lip | 30 | 760 | 0.95 | 0.73 | 1,930 | 875 | 37,676 | 167.0 | 27,690 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 4 |
| | 36 | 915 | 1.16 | 0.89 | 2,075 | 941 | 37,676 | 167.0 | 27,690 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 4 |
| | 42 | 1065 | 1.38 | 1.06 | 2,195 | 996 | 37,676 | 167.0 | 27,690 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 5 |
| | 48 | 1220 | 1.60 | 1.22 | 2,359 | 1070 | 37,676 | 167.0 | 27,690 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 6 |
| | 54 | 1370 | 1.82 | 1.39 | 2,507 | 1137 | 37,676 | 167.0 | 27,690 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 6 |
| Heavy-Duty High Capacity | 24 | 610 | 0.92 | 0.70 | 1,765 | 801 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 3 |
| | 30 | 760 | 1.20 | 0.92 | 2,010 | 912 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 4 |
| | 36 | 915 | 1.48 | 1.13 | 2,133 | 968 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 4 |
| | 42 | 1065 | 1.75 | 1.34 | 2,279 | 1034 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 5 |
| | 48 | 1200 | 2.03 | 1.55 | 2,505 | 1136 | 35,846 | 159.4 | 26,710 | 118.8 | 23,313 | 103.7 | 62.5 | 1588 | 6 |
| Severe-Duty Cast Lip | 36 | 915 | 1.16 | 0.89 | 1,921 | 871 | 39,058 | 173.7 | 27,319 | 121.5 | 23,777 | 105.8 | 54.5 | 1384 | 4 |
| | 42 | 1065 | 1.38 | 1.06 | 2,119 | 961 | 39,058 | 173.7 | 27,319 | 121.5 | 23,777 | 105.8 | 54.5 | 1384 | 5 |
| Severe-Duty Plate Lip | 30 | 760 | 0.95 | 0.73 | 2,080 | 943 | 37,676 | 167.0 | 27,640 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 4 |
| | 36 | 915 | 1.16 | 0.89 | 2,179 | 988 | 37,676 | 167.0 | 27,640 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 4 |
| | 42 | 1065 | 1.38 | 1.06 | 2,345 | 1064 | 37,676 | 167.0 | 27,640 | 122.9 | 24,020 | 106.8 | 56.5 | 1435 | 5 |
| Ditching | 60 | 1525 | 1.34 | 1.02 | 1,562 | 709 | 45,273 | 201.4 | 29,244 | 130.1 | 25,225 | 112.2 | 47.0 | 1194 | 0 |
| | 72 | 1830 | 1.66 | 1.27 | 1,759 | 798 | 45,273 | 201.4 | 29,244 | 130.1 | 25,225 | 112.2 | 47.0 | 1194 | 0 |

*All capacities are SAE heaped ratings and with side cutters.



# LIFTING CAPACITIES

Notes: 1. Ratings are based on SAE J1097.
2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
3. The load point is a hook (not standard equipment) located on the back of the bucket.
4. *Indicates load limited by hydraulic capacity.




**A: Load radius**
**B: Load point height**
**C: Lifting capacity**

Rating over-side or 360 degrees  Rating over-front

Unit: lb (kg)

## ZAXIS230LC

| Conditions | Load point height | Load radius 10 ft. (3.05 m) | | 15 ft. (4.57 m) | | 20 ft. (6.10 m) | | 25 ft. (7.62 m) | | 30 ft. (9.15 m) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boom 19'8" (6.0 m) Arm 9'9" (2.96 m) Bucket 1.38 yd³ (1.06 m³) Shoe 24" (600 mm) | 20 ft. (6.10 m) | | | | | | | *8,174 (3708) | *8,174 (3708) | | |
| | 15 ft. (4.57 m) | | | | | *10,321 (4682) | *10,321 (4682) | *9,733 (4415) | 8,581 (3892) | | |
| | 10 ft. (3.05 m) | | | *17,171 (7789) | *17,171 (7789) | *12,827 (5818) | 12,029 (5456) | *10,925 (4955) | 8,194 (3717) | *6,996 (3173) | 5,760 (2613) |
| | 5 ft. (1.52 m) | | | *22,872 (10 375) | 17,272 (7834) | *15,563 (7059) | 11,169 (5066) | *12,355 (5604) | 7,759 (3519) | *9,044 (4102) | 5,572 (2527) |
| | Ground Line | | | *25,546 (11 587) | 16,412 (7444) | *17,281 (7839) | 10,554 (4787) | 12,029 (5456) | 7,403 (3358) | *8,907 (4040) | 5,407 (2453) |
| | –5 ft. (–1.52 m) | *12,891 (5847) | *12,891 (5847) | *25,759 (11 684) | 16,231 (7362) | 16,953 (7690) | 10,264 (4656) | 11,814 (5359) | 7,206 (3269) | | |
| | –10 ft. (–3.05 m) | *20,687 (9383) | *20,687 (9383) | *24,411 (11 073) | 16,373 (7427) | 16,946 (7687) | 10,258 (4653) | 11,830 (5366) | 7,221 (3275) | | |
| | –15 ft. (–4.57 m) | *28,595 (12 970) | *28,595 (12 970) | *21,205 (9618) | 16,803 (7622) | *15,773 (7155) | 10,546 (4784) | | | | |
| Boom 19'8" (6.0 m) Arm 11'10" (3.61 m) Bucket 1.38 yd³ (1.06 m³) Shoe 24" (600 mm) | 20 ft. (6.10 m) | | | | | | | *7,557 (3428) | *7,557 (3428) | | |
| | 15 ft. (4.57 m) | | | | | | | *8,534 (3871) | *8,534 (3871) | *6,161 (2795) | *6,009 (2726) |
| | 10 ft. (3.05 m) | | | *14,308 (6490) | *14,308 (6490) | *11,291 (5122) | *11,291 (5122) | *9,851 (4468) | 8,315 (3772) | *8,047 (3650) | 5,826 (2643) |
| | 5 ft. (1.52 m) | | | *20,379 (9244) | 17,852 (8098) | *14,230 (6455) | 11,370 (5157) | *11,438 (5188) | 7,823 (3548) | 9,101 (4128) | 5,576 (2529) |
| | Ground Line | | | *24,314 (11 029) | 16,560 (7511) | *16,672 (7562) | 10,616 (4815) | 12,034 (5459) | 7,393 (3353) | 8,855 (4017) | 5,347 (2425) |
| | –5 ft. (–1.52 m) | *13,152 (5966) | *13,152 (5966) | *25,636 (11 628) | 16,090 (7298) | 16,889 (7661) | 10,188 (4621) | 11,727 (5319) | 7,113 (3226) | 8,706 (3949) | 5,209 (2363) |
| | –10 ft. (–3.05 m) | *24,308 (11 026) | *24,308 (11 026) | *25,121 (11 395) | 16,073 (7291) | 16,749 (7597) | 10,064 (4565) | 11,633 (5277) | 7,027 (3187) | | |
| | –15 ft. (–4.57 m) | *32,401 (14 697) | *32,401 (14 697) | *22,854 (10 366) | 16,375 (7428) | *16,874 (7654) | 10,219 (4635) | 11,826 (5364) | 7,203 (3267) | | |
| | –20 ft. (–6.10 m) | | | *17,802 (8075) | 17,067 (7741) | | | | | | |
| Boom 19'8" (6.0 m) Arm 9'9" (2.96 m) Bucket 1.38 yd³ (1.06 m³) Shoe 28" (700 mm) | 20 ft. (6.10 m) | | | | | | | *8,174 (3708) | *8,174 (3708) | | |
| | 15 ft. (4.57 m) | | | | | *10,321 (4682) | *10,321 (4682) | *9,733 (4415) | 8,738 (3963) | | |
| | 10 ft. (3.05 m) | | | *17,171 (7789) | *17,171 (7789) | *12,827 (5818) | 12,236 (5550) | *10,925 (4955) | 8,351 (3788) | *6,996 (3173) | 5,886 (2670) |
| | 5 ft. (1.52 m) | | | *22,872 (10 375) | 17,578 (7973) | *15,563 (7059) | 11,376 (5160) | *12,355 (5604) | 7,915 (3590) | *9,044 (4102) | 5,698 (2585) |
| | Ground Line | | | *25,546 (11 587) | 16,718 (7583) | *17,604 (7985) | 10,761 (4881) | 12,269 (5565) | 7,559 (3429) | *9,001 (4083) | 5,533 (2510) |
| | –5 ft. (–1.52 m) | *12,891 (5847) | *12,891 (5847) | *25,759 (11 684) | 16,537 (7501) | 17,280 (7838) | 10,471 (4750) | 12,054 (5468) | 7,363 (3340) | | |
| | –10 ft. (–3.05 m) | *20,687 (9383) | *20,687 (9383) | *24,411 (11 073) | 16,679 (7565) | 17,274 (7835) | 10,465 (4747) | 12,069 (5474) | 7,377 (3346) | | |
| | –15 ft. (–4.57 m) | *28,595 (12 970) | *28,595 (12 970) | *21,205 (9618) | 17,109 (7761) | *15,773 (7155) | 10,754 (4878) | | | | |
| Boom 19'8" (6.0 m) Arm 11'10" (3.61 m) Bucket 1.38 yd³ (1.06 m³) Shoe 28" (700 mm) | 20 ft. (6.10 m) | | | | | | | 7,557 (3428) | 7,557 (3428) | | |
| | 15 ft. (4.57 m) | | | | | | | 8,534 (3871) | 8,534 (3871) | 6,161 (2795) | 6,135 (2783) |
| | 10 ft. (3.05 m) | | | *14,308 (6490) | *14,308 (6490) | *11,291 (5122) | 11,291 (5122) | 9,851 (4468) | 8,472 (3843) | 8,047 (3650) | 5,952 (2700) |
| | 5 ft. (1.52 m) | | | *20,379 (9244) | 18,158 (8236) | *14,230 (6455) | 11,577 (5251) | 11,438 (5188) | 7,979 (3619) | 9,290 (4214) | 5,702 (2586) |
| | Ground Line | | | *24,314 (11 029) | 16,866 (7650) | *16,672 (7562) | 10,823 (4909) | 12,274 (5567) | 7,549 (3424) | 9,044 (4102) | 5,473 (2483) |
| | –5 ft. (–1.52 m) | *13,152 (5966) | *13,152 (5966) | *25,636 (11 628) | 16,396 (7437) | 17,216 (7809) | 10,395 (4715) | 11,967 (5428) | 7,270 (3298) | 8,895 (4035) | 5,335 (2420) |
| | –10 ft. (–3.05 m) | *24,308 (11 026) | *24,308 (11 026) | *25,121 (11 395) | 16,379 (7429) | 17,076 (7746) | 10,271 (4659) | 11,873 (5386) | 7,183 (3258) | | |
| | –15 ft. (–4.57 m) | *32,401 (14 697) | *32,401 (14 697) | *22,854 (10 366) | 16,681 (7566) | *16,874 (7654) | 10,426 (4729) | 12,065 (5473) | 7,359 (3338) | | |
| | –20 ft. (–6.10 m) | | | *17,802 (8075) | 17,373 (7880) | | | | | | |
| Boom 19'8" (6.0 m) Arm 9'9" (2.96 m) Bucket 1.38 yd³ (1.06 m³) Shoe 32" (800 mm) | 20 ft. (6.10 m) | | | | | | | *8,174 (3708) | *8,174 (3708) | | |
| | 15 ft. (4.57 m) | | | | | *10,321 (4682) | *10,321 (4682) | *9,733 (4415) | 8,843 (4011) | | |
| | 10 ft. (3.05 m) | | | *17,171 (7789) | *17,171 (7789) | *12,827 (5818) | 12,375 (5613) | *10,925 (4955) | 8,456 (3836) | *6,996 (3173) | 5,970 (2708) |
| | 5 ft. (1.52 m) | | | *22,872 (10 375) | 17,783 (8066) | *15,563 (7059) | 11,515 (5223) | *12,355 (5604) | 8,020 (3638) | *9,044 (4102) | 5,782 (2623) |
| | Ground Line | | | *25,546 (11 587) | 16,923 (7676) | *17,604 (7985) | 10,899 (4944) | 12,428 (5637) | 7,664 (3476) | *9,001 (4083) | 5,617 (2548) |
| | –5 ft. (–1.52 m) | *12,891 (5847) | *12,891 (5847) | *25,759 (11 684) | 16,741 (7594) | 17,498 (7937) | 10,610 (4813) | 12,213 (5540) | 7,468 (3387) | | |
| | –10 ft. (–3.05 m) | *20,687 (9383) | *20,687 (9383) | *24,411 (11 073) | 16,883 (7658) | 17,492 (7934) | 10,604 (4810) | 12,229 (5547) | 7,482 (3394) | | |
| | –15 ft. (–4.57 m) | *28,595 (12 970) | *28,595 (12 970) | *21,205 (9618) | 17,314 (7853) | *15,773 (7155) | 10,892 (4941) | | | | |
| Boom 19'8" (6.0 m) Arm 11'10" (3.61 m) Bucket 1.38 yd³ (1.06 m³) Shoe 32" (800 mm) | 20 ft. (6.10 m) | | | | | | | *7,557 (3428) | *7,557 (3428) | | |
| | 15 ft. (4.57 m) | | | | | | | *8,534 (3871) | *8,534 (3871) | *6,161 (2795) | *6,161 (2795) |
| | 10 ft. (3.05 m) | | | *14,308 (6490) | *14,308 (6490) | *11,291 (5122) | *11,291 (5122) | *9,851 (4468) | 8,576 (3890) | *8,047 (3650) | 6,036 (2738) |
| | 5 ft. (1.52 m) | | | *20,379 (9244) | 18,363 (8329) | *14,230 (6455) | 11,715 (5314) | *11,438 (5188) | 8,084 (3667) | 9,416 (4271) | 5,786 (2624) |
| | Ground Line | | | *24,314 (11 029) | 17,070 (7743) | *16,672 (7562) | 10,962 (4972) | 12,433 (5640) | 7,654 (3472) | 9,170 (4159) | 5,557 (2521) |
| | –5 ft. (–1.52 m) | *13,152 (5966) | *13,152 (5966) | *25,636 (11 628) | 16,600 (7530) | 17,434 (7908) | 10,534 (4778) | 12,127 (5501) | 7,374 (3345) | 9,021 (4092) | 5,419 (2458) |
| | –10 ft. (–3.05 m) | *24,308 (11 026) | *24,308 (11 026) | *25,121 (11 395) | 16,584 (7522) | 17,294 (7844) | 10,410 (4722) | 12,032 (5458) | 7,288 (3306) | | |
| | –15 ft. (–4.57 m) | *32,401 (14 697) | *32,401 (14 697) | *22,854 (10 366) | 16,885 (7659) | *16,874 (7654) | 10,565 (4792) | 12,225 (5545) | 7,464 (3386) | | |
| | –20 ft. (–6.10 m) | | | *17,802 (8075) | 17,578 (7973) | | | | | | |