

ZAXIS | DASH-5 UTILITY-CLASS EXCAVATORS

ZX180LC-5

90 kW (121 hp)

ZX180LC



HITACHI

Engine	ZX180LC-5		
Manufacturer and Model	Isuzu 4JJI		
Non-Road Emissions Standards	Certified to IT4 / Stage IIIB emissions		
Net Rated Power (ISO 9249)	90 kW (121 hp) @ 2,200 rpm		
Cylinders	4		
Displacement	3.0L (183 cu in.)		
Off Level Capacity	70% (35 deg.)		
Aspiration	Turbocharged, air-to-air charge-air cooler		
Cooling	Direct-driven, high-efficiency, low-noise, suction-type fan		
Powertrain	2-speed propel with automatic shift		
Maximum Travel Speed			
Low	3.4 km/h (2.1 mph)		
High	5.3 km/h (3.3 mph)		
Drawbar Pull	17 250 kg (38,030 lb.)		
Hydraulics	Open center, load sensing		
Main Pumps	2 variable-displacement axial-piston pumps		
Maximum Rated Flow	191 L/m (50 gpm) x 2		
Pilot Pump	One gear		
Maximum Rated Flow	33.6 L/m (8.9 gpm)		
Pressure Setting	3930 kPa (570 psi)		
System Operating Pressure			
Implement Circuits	34 336 kPa (4,980 psi)		
Travel Circuits	34 336 kPa (4,980 psi)		
Swing Circuits	34 336 kPa (4,980 psi)		
Power Boost	38 000 kPa (5,511 psi)		
Controls	Pilot levers, short stroke, low-effort hydraulic pilot controls with shutoff lever		
Cylinders			
	Bore	Rod Diameter	Stroke
Boom (2)	120 mm (4.72 in.)	85 mm (3.35 in.)	1123 mm (44.21 in.)
Arm (1)	125 mm (4.92 in.)	90 mm (3.54 in.)	1371 mm (53.98 in.)
Bucket (1)	105 mm (4.13 in.)	75 mm (2.95 in.)	1060 mm (41.73 in.)
Electrical			
Number of Batteries (12 volt)	2		
Battery Capacity	1,400 CCA		
Alternator Rating	50 amp		
Work Lights	2 halogen (one mounted on boom, one on frame)		
Undercarriage			
Rollers (each side)			
Carrier Rollers	2		
Track Rollers	7		
Shoes (each side)	46		
Track			
Adjustment	Hydraulic		
Guides	Center		
Chain	Sealed and lubricated		
Ground Pressure			
600-mm (24 in.) Triple Semi-Grouser Shoes	41 kPa (5.95 psi)		
700-mm (28 in.) Triple Semi-Grouser Shoes	36 kPa (5.22 psi)		
800-mm (32 in.) Triple Semi-Grouser Shoes	32 kPa (4.64 psi)		
Swing Mechanism			
Swing Speed	12.8 rpm		
Swing Torque	50 000 Nm (36,756 lb.-ft.)		

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Serviceability

Refill Capacities

Fuel Tank	320L (84.5 gal.)
Cooling System	22L (23.2 qt.)
Engine Oil with Filter	17L (18 qt.)
Hydraulic Tank	125L (33 gal.)
Hydraulic System	220L (58.1 gal.)
Swing Gearbox	6.2L (6.6 qt.)
Propel Gearbox (each)	6.8L (7.2 qt.)
Pump Drive Gearbox	0.9L (1 qt.)

Operating Weights

With full fuel tank; 79-kg (175 lb.) operator; 600-kg (1,323 lb.) general-purpose bucket; 2.71-m (8 ft. 10 in.) arm; 3910-kg (8,620 lb.) counterweight, and 700-mm (28 in.) triple semi-grouser shoes.

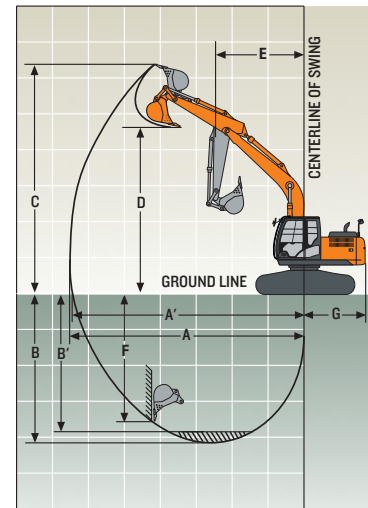
Operating Weight	18 350 kg (40,419 lb.)
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Optional Components

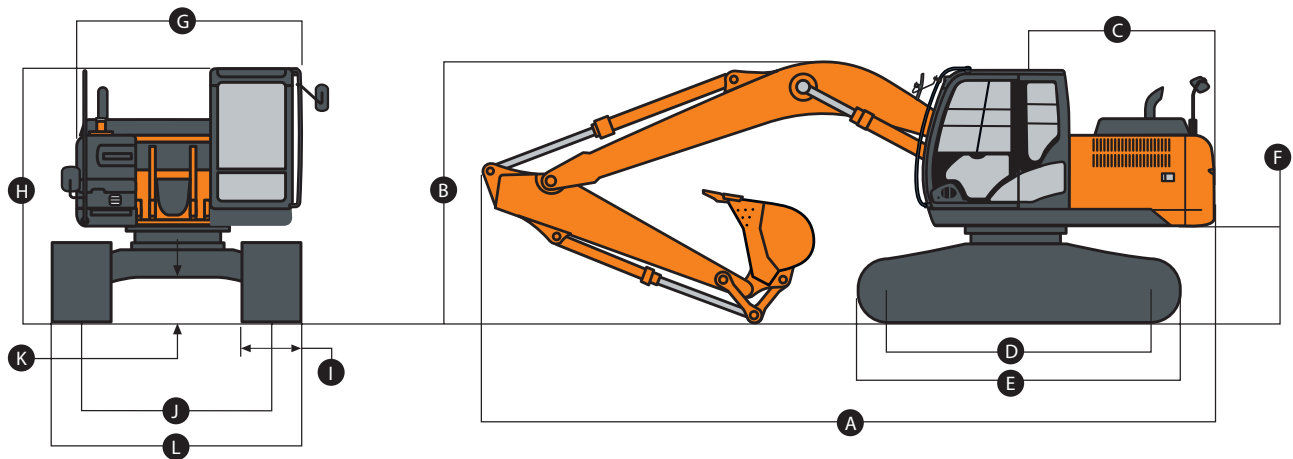
Undercarriage w/ Triple Semi-Grouser Shoes	
600 mm (24 in.)	6752 kg (14,873 lb.)
700 mm (28 in.)	7143 kg (15,733 lb.)
800 mm (32 in.)	7437 kg (16,396 lb.)
One-Piece Boom (with arm cylinder)	
	1566 kg (3,449 lb.)
Arm with Bucket Cylinder and Linkage	
2.71 m (8 ft. 10 in.)	881 kg (1,941 lb.)
3.21 m (10 ft. 6 in.)	946 kg (2,084 lb.)
Boom Lift Cylinders (2) Total Weight	
	326 kg (718 lb.)
1067-mm (42 in.), 0.83-m ³ (1.09 cu. yd.) Bucket	785 kg (1,731 lb.)
Counterweight Standard	3910 kg (8,620 lb.)

Operating Dimensions

Arm Length	2.7 m (8 ft. 10 in.)	3.21 m (10 ft. 6 in.)
Arm Digging Force		
SAE	91 kN (20,459 lb.)	81 kN (18,210 lb.)
ISO	95 kN (21,358 lb.)	84 kN (18,885 lb.)
Bucket Digging Force		
SAE	112 kN (25,180 lb.)	112 kN (25,180 lb.)
ISO	127 kN (28,552 lb.)	127 kN (28,552 lb.)
A Maximum Reach	9.43 m (30 ft. 11 in.)	9.94 m (32 ft. 7 in.)
A' Maximum Reach at Ground Level	9.27 m (30 ft. 5 in.)	9.79 m (32 ft. 1 in.)
B Maximum Digging Depth	6.57 m (21 ft. 7 in.)	7.07 m (23 ft. 2 in.)
B' Maximum Digging Depth at 2.44-m (8 ft.) Flat Bottom	6.32 m (20 ft. 9 in.)	6.87 m (22 ft. 6 in.)
C Maximum Cutting Height	9.4 m (30 ft. 10 in.)	9.79 m (32 ft. 1 in.)
D Maximum Dumping Height	6.57 m (21 ft. 7 in.)	6.93 m (22 ft. 9 in.)
E Minimum Swing Radius	3.13 m (10 ft. 3 in.)	3.13 m (10 ft. 3 in.)
F Maximum Vertical Wall	5.55 m (18 ft. 3 in.)	6.28 m (20 ft. 7 in.)
G Tail-Swing Radius	2.55 m (8 ft. 4 in.)	2.55 m (8 ft. 4 in.)



Machine Dimensions	ZX180LC-5
A Overall Length	
2.71-m (8 ft. 10 in.) arm	9.04 m (29 ft. 8 in.)
3.21-m (10 ft. 6 in.) arm	9.04 m (29 ft. 8 in.)
B Overall Height	
2.71-m (8 ft. 10 in.) arm	3.08 m (10 ft. 1 in.)
3.21-m (10 ft. 6 in.) arm	3.39 m (11 ft. 1 in.)
C Rear-End Length/Swing Radius	2.55 m (8 ft. 4 in.)
D Distance Between Idler/Sprocket Centerline	3.37 m (11 ft. 1 in.)
E Undercarriage Length	4.17 m (13 ft. 8 in.)
F Counterweight Clearance	1030 mm (3 ft. 5 in.)
G Upperstructure Width	2.5 m (8 ft. 2 in.)
H Cab Height	2.95 m (9 ft. 8 in.)
I Track Width w/ Triple Semi-Grouser Shoes	600 mm (24 in.) 700 mm (28 in.) 800 mm (32 in.)
J Gauge Width	2.20 m (7 ft. 3 in.)
K Ground Clearance	450 mm (18 in.)
L Overall Width w/ Triple Semi-Grouser Shoes	
600 mm (24 in.)	2.80 m (9 ft. 2 in.)
700 mm (28 in.)	2.90 m (9 ft. 6 in.)
800 mm (32 in.)	3.00 m (9 ft. 10 in.)



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Lift Capacities

Boldface type indicates hydraulically limited capacity; lightface type indicates stability-limited capacities, in kg (lb.). Ratings at bucket lift hook; machine equipped with 600-kg (1,323 lb.) bucket; standard gauge; and situated on firm, uniform supporting surface. Total load includes weight of cables, hook, etc. Figures do not exceed 87 percent of hydraulic capacities or 75 percent of weight needed to tip machine. All lift capacities are based on ISO 10567 (with power boost).

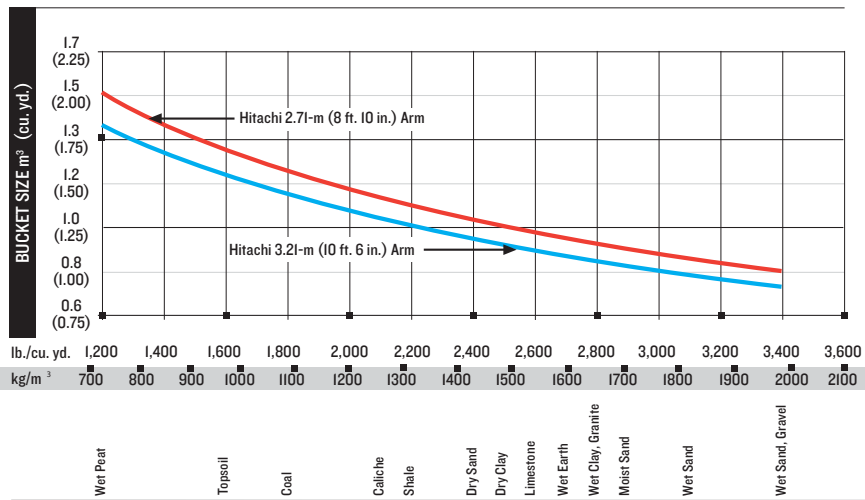
Load Point Height	1.5 m (5 ft.)		3.0 m (10 ft.)		4.5 m (15 ft.)		6.0 m (20 ft.)		7.5 m (25 ft.)	
Horizontal Distance from Centerline of Rotation	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
With 2.71-m (8 ft. 10 in.) arm and 700-mm (28 in.) shoes										
6.0 m (20 ft.)							4000 (8,850)	3800 (8,150)		
4.5 m (15 ft.)					4850 (10,450)	4850 (10,450)	4400 (9,550)	3700 (7,950)		
3.0 m (10 ft.)					6550 (14,050)	5600 (12,050)	5150 (11,150)	3550 (7,600)	3900 (8,350)	2400 (5,150)
1.5 m (5 ft.)					8200 (17,700)	5200 (11,200)	5450 (11,700)	3350 (7,200)	3800 (8,150)	2300 (4,950)
Ground Line			4350 (10,150)	4350 (10,150)	8500 (18,200)	4950 (10,650)	5300 (11,400)	3200 (6,900)	3700 (8,000)	2250 (4,850)
-1.5 m (-5 ft.)	4700 (10,500)	4700 (10,500)	8300 (18,950)	8300 (18,950)	8400 (18,000)	4900 (10,500)	5250 (11,250)	3150 (6,750)		
-3.0 m (-10 ft.)	8800 (19,850)	8800 (19,850)	12 750 (27,650)	9750 (20,950)	8450 (18,150)	4950 (10,650)	5250 (11,350)	3200 (6,850)		
-4.5 m (-15 ft.)			10 150 (21,700)	10 100 (21,700)	6900 (14,600)	5150 (11,100)				
With 3.21-m (10 ft. 6 in.) arm and 600-mm (24 in.) shoes										
6.0 m (20 ft.)							3450 (7,650)	3450 (7,650)		
4.5 m (15 ft.)							3900 (8,550)	3700 (7,950)	3350 (6,850)	2450 (5,200)
3.0 m (10 ft.)			8950 (19,000)	8950 (19,000)	5850 (12,600)	5600 (12,100)	4700 (10,250)	3500 (7,550)	3800 (8,200)	2350 (5,050)
1.5 m (5 ft.)					7650 (16,500)	5150 (11,150)	5350 (11,550)	3300 (7,100)	3700 (7,950)	2250 (4,850)
Ground Line			4700 (10,900)	4700 (10,900)	8350 (17,900)	4850 (10,500)	5200 (11,150)	3150 (6,750)	3600 (7,800)	2150 (4,650)
-1.5 m (-5 ft.)	4000 (8,950)	4000 (8,950)	7450 (17,000)	7450 (17,000)	8200 (17,600)	4750 (10,200)	5100 (10,950)	3050 (6,550)	3600 (7,700)	2150 (4,600)
-3.0 m (-10 ft.)	7250 (16,350)	7250 (16,350)	11 750 (26,900)	9450 (20,200)	8200 (17,600)	4750 (10,250)	5100 (10,950)	3050 (6,550)		
-4.5 m (-15 ft.)	11 700 (26,500)	11 700 (26,500)	11 300 (24,300)	9700 (20,850)	7700 (16,500)	4900 (10,600)				
With 3.21-m (10 ft. 6 in.) arm and 700-mm (28 in.) shoes										
6.0 m (20 ft.)							3450 (7,650)	3450 (7,650)		
4.5 m (15 ft.)							3900 (8,550)	3750 (8,100)	3350 (6,850)	2500 (5,350)
3.0 m (10 ft.)			8950 (19,000)	8950 (19,000)	5850 (12,600)	5700 (12,300)	4700 (10,250)	3550 (7,700)	3900 (8,350)	2400 (5,150)
1.5 m (5 ft.)					7650 (16,500)	5250 (11,350)	5500 (11,800)	3350 (7,250)	3800 (8,150)	2300 (4,950)
Ground Line			4700 (10,900)	4700 (10,900)	8500 (18,250)	4950 (10,700)	5300 (11,400)	3200 (6,850)	3700 (7,950)	2250 (4,800)
-1.5 m (-5 ft.)	4000 (8,950)	4000 (8,950)	7450 (17,000)	7450 (17,000)	8350 (17,950)	4850 (10,450)	5200 (11,150)	3100 (6,700)	3650 (7,850)	2200 (4,700)
-3.0 m (-10 ft.)	7250 (16,350)	7250 (16,350)	11 750 (26,900)	9600 (20,600)	8400 (18,000)	4850 (10,450)	5200 (11,200)	3100 (6,700)		
-4.5 m (-15 ft.)	11 700 (26,500)	11 700 (26,500)	11 300 (24,300)	9900 (21,250)	7700 (16,500)	5000 (10,800)				
With 3.21-m (10 ft. 6 in.) arm and 800-mm (32 in.) shoes										
6.0 m (20 ft.)							3450 (7,650)	3450 (7,650)		
4.5 m (15 ft.)							3900 (8,550)	3800 (8,200)	3350 (6,850)	2550 (5,400)
3.0 m (10 ft.)			8950 (19,000)	8950 (19,000)	5850 (12,600)	5800 (12,500)	4700 (10,250)	3600 (7,800)	3950 (8,500)	2450 (5,250)
1.5 m (5 ft.)					7650 (16,500)	5350 (11,500)	5550 (11,950)	3400 (7,350)	3850 (8,250)	2350 (5,050)
Ground Line			4700 (10,900)	4700 (10,900)	8650 (18,500)	5050 (10,850)	5400 (11,550)	3250 (7,000)	3750 (8,100)	2250 (4,850)
-1.5 m (-5 ft.)	4000 (8,950)	4000 (8,950)	7450 (17,000)	7450 (17,000)	8500 (18,200)	4950 (10,600)	5300 (11,350)	3150 (6,800)	3700 (8,000)	2250 (4,800)
-3.0 m (-10 ft.)	7250 (16,350)	7250 (16,350)	11 750 (26,900)	9750 (20,900)	8500 (18,250)	4950 (10,650)	5300 (11,350)	3150 (6,800)		
-4.5 m (-15 ft.)	11 700 (26,500)	11 700 (26,500)	11 300 (24,300)	10 050 (21,500)	7700 (16,500)	5100 (10,950)				

Buckets

A full line of buckets is offered to meet a wide variety of applications. Digging forces are with power boost. Buckets are equipped with ESCO teeth standard. Replaceable cutting edges and a variety of teeth are available through Hitachi parts. Optional side cutters add 150 mm (6 in.) to bucket widths. Capacities are SAE heaped ratings.

Type Bucket	Bucket Width		Bucket Capacity		Bucket Weight		Bucket Dig Force		Arm Dig Force 2.42 m (7 ft. 11 in.)		Arm Dig Force 2.91 m (9 ft. 7 in.)		Bucket Tip Radius		Number of Teeth
	mm	in.	m ³	cu. yd.	kg	lb.	kN	lb.	kN	lb.	kN	lb.	mm	in.	
Heavy Duty	760	30	0.54	0.71	622	1,369	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	4
Heavy Duty	915	36	0.69	0.9	708	1,559	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	5
Heavy Duty	1065	42	0.83	1.09	786	1,731	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	5
Heavy Duty	1220	48	0.99	1.29	872	1,921	135.9	30,554	130.2	29,271	107.1	24,071	1463	57.61	6
Heavy Duty	915	36	0.74	0.97	809	1,782	135.0	30,349	129.9	29,197	106.8	24,016	1473	58	5
High Capacity															
Heavy Duty	1065	42	0.91	1.19	886	1,951	135.0	30,349	129.9	29,197	106.8	24,016	1473	58	5
High Capacity															

Bucket Selection Guide*



*Contact your Hitachi dealer for optimum bucket and attachment selections. These recommendations are for general conditions and average use. Does not include optional equipment such as thumbs or couplers. Larger buckets may be possible when using light materials, for flat and level operations, less compacted materials, and volume loading applications such as mass-excavation applications in ideal conditions. Smaller buckets are recommended for adverse conditions such as off-level applications, rocks, and uneven surfaces. Bucket capacity indicated is SAE heaped.

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ADDITIONAL EQUIPMENT

Key: ● Standard ▲ Optional or special

Engine
● Auto-idle system
● Batteries (2 – 12 volt)
● Coolant recovery tank
● Dual-element dry-type air filter
● Electronic engine control
● Enclosed fan guard (conforms to SAE J1308)
● Engine coolant to -37 deg. C (-34 deg. F)
● Programmable auto shutdown
● Fuel filter with water separator
● Full-flow oil filter
● Turbocharger with charge air cooler
● 500-hour engine-oil-change interval
● 70% (35 deg.) off-level capability
● Engine-oil-sampling valve
Hydraulic System
● Reduced-drift valve for boom down, arm in
● Auxiliary hydraulic valve section
● Spring-applied, hydraulically released automatic swing brake
● Auxiliary hydraulic-flow adjustments through monitor
● Auto power lift
● 5,000-hour hydraulic-oil-change interval
● Hydraulic-oil-sampling valve
▲ Auxiliary hydraulic lines
▲ Auxiliary pilot and electric controls
▲ Hydraulic filter restriction indicator kit
▲ Load-lowering control device
▲ Single-pedal propel control
▲ Control pattern change valve
Undercarriage
● Planetary drive with axial piston motors
● Propel motor shields
● Spring-applied, hydraulically released automatic propel brake
● Track guides, front idler and center
● 2-speed propel with automatic shift
● Upper carrier rollers (2)
● Sealed and lubricated track chain
▲ Triple semi-grouser shoes, 600 mm (24 in.)
▲ Triple semi-grouser shoes, 700 mm (28 in.)
▲ Triple semi-grouser shoes, 800 mm (32 in.)

Upperstructure
● Right-hand, left-hand, and counterweight mirrors
● Vandal locks with ignition key: Cab door / Service doors / Toolbox
● Debris screen
● Remote-mounted engine oil and fuel filters
Front Attachments
● Centralized lubrication system
● Dirt seals on all bucket pins
● Less boom and arm
● HN bushings
● Reinforced resin thrust plates
● Tungsten carbide thermal coating on arm-to-bucket joint
▲ Arm, 2.6 m (8 ft. 6 in.)
▲ Arm, 3.1 m (10 ft. 2 in.)
▲ Attachment quick-couplers
▲ Boom cylinder with plumbing to mainframe less boom and arm
▲ Buckets: Ditching / Heavy duty / Heavy-duty high capacity / Side cutters and teeth
▲ Material clamps
Operator's Station
● Meets ISO 12117-2 for ROPS
● Adjustable independent-control positions (levers-to-seat, seat-to-pedals)
● AM/FM radio
● Auto climate control/air conditioner/heater/pressurizer
● Built-in Operator's Manual storage compartment and manual
● Cell-phone power outlet, 12 volt, 60 watt, 5 amp
● Coat hook
● Deluxe suspension cloth seat with 100-mm (4 in.) adjustable armrests
● Floor mat
● Front windshield wiper with intermittent speeds
● Gauges (illuminated): Engine coolant / Fuel
● Horn, electric
● Hour meter, electric
● Hydraulic shutoff lever, all controls
● Hydraulic warm-up control
● Interior light
● Large cup holder
● Machine Information Center (MIC)
● Mode selectors (illuminated): Power modes (3) / Travel modes (2 with automatic shift) / Work mode (1)

Operator's Station (continued)
● Multifunction, color LCD monitor with: Diagnostic capability / Multiple-language capabilities / Maintenance tracking / Clock / System monitoring with alarm features: Auto-idle indicator, engine air cleaner restriction indicator light, engine check, engine coolant temperature indicator light with audible alarm, engine oil pressure indicator light with audible alarm, low-alternator-charge indicator light, low-fuel indicator light, fault code alert indicator, fuel-rate display, wiper-mode indicator, work-lights-on indicator, and work-mode indicator
● Motion alarm with cancel switch (conforms to SAE J994)
● Power-boost switch on right console lever
● Auxiliary hydraulic control switches in right console lever
● SAE 2-lever control pattern
● Seat belt, 51 mm (2 in.), retractable
● Tinted glass
● Transparent tinted overhead hatch
● Hot/cold beverage compartment
▲ Air-suspension heated seat
▲ Hydraulic oil filter restriction indicator light
▲ Protection screens for cab front, rear, and side
▲ Seat belt, 76 mm (3 in.), non-retractable
▲ Window vandal-protection covers
Electrical
● 50-amp alternator
● Blade-type multi-fused circuits
● Positive-terminal battery covers
● ZXLink™ wireless communication system (available in specific countries; see your dealer for details)
▲ Rearview camera
▲ Cab extension wiring harness
Lights
● Work lights: Halogen / One mounted on boom / One mounted on frame
▲ 2 lights mounted on cab / One mounted on right side of boom

See your Hitachi dealer for further information.

Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan, at test conditions specified per ISO 9249. No derating is required up to 2000-m (6,560-ft.) altitude. Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, these specifications are based on a unit with 1067-mm (42 in.), 0.83-m³ (1.09 cu. yd.), 785-kg (1,731 lb.) general-purpose bucket; 3.21-m (10 ft. 6 in.) arm; 3910-kg (8,620 lb.) counterweight; 700-mm (28 in.) triple semi-grouser shoes; full fuel tank; and 79-kg (175 lb.) operator.

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