

ZAXIS | DASH-5 CONSTRUCTION-CLASS EXCAVATORS

ZX290LC-5

140 kW (188 hp)

ZX290LC



HITACHI

Engine	ZX290LC-5		
Manufacturer and Model	Isuzu AH-4HKIX		
Non-Road Emissions Standards	EPA Interim Tier 4/EU Stage IIIB		
Net Rated Power (ISO 9249)	140 kW (188 hp) at 2,100 rpm		
Cylinders	4		
Displacement	5.2L (317 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	3.3 km/h (2.1 mph)		
High	5.5 km/h (3.4 mph)		
Drawbar Pull	25 100 kg (55,336 lb.)		
Hydraulics	Open center, load sensing		
Main Pumps	2 variable-displacement pumps		
Maximum Rated Flow	236 L/m (62.3 gpm) x 2		
Pilot Pump	One gear		
Maximum Rated Flow	34 L/m (8.9 gpm)		
Pressure Setting	3900 kPa (566 psi)		
System Operating Pressure			
Implement Circuits	34 300 kPa (4,975 psi)		
Travel Circuits	35 000 kPa (5,076 psi)		
Swing Circuits	33 300 kPa (4,830 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)	135 mm (5.3 in.)	95 mm (3.7 in.)	1360 mm (53.5 in.)
Arm (1)	150 mm (5.9 in.)	105 mm (4.1 in.)	1659 mm (65.3 in.)
Bucket (1)	135 mm (5.3 in.)	90 mm (3.5 in.)	1070 mm (42.1 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		
	8		
Shoes, Triple Semi-Grousers (each side)	48		
Track	Adjustment		
	Hydraulic		
	Guides		
	Front and center		
	Chain		
	Sealed and lubricated		
Ground Pressure	800-mm (32 in.) Triple Semi-Grouser Shoes		
	39.7 kPa (5.76 psi)		
Swing Mechanism	Swing Speed		
	12.6 rpm		
Swing Torque	77 140 Nm (56,896 lb.-ft.)		

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Serviceability

Refill Capacities

Fuel Tank	500L (132 gal.)
Cooling System	27L (7.1 gal.)
Engine Oil with Filter	26L (6.9 gal.)
Hydraulic Tank	147.6L (39 gal.)
Hydraulic System	240L (63 gal.)
Swing Drive	8.5L (9 qt.)
Gearbox	
Propel (each)	7.6L (8 qt.)
Pump Drive	1.1L (1.2 qt.)

Operating Weights

With full fuel tank; 79-kg (175 lb.) operator; 1.34-m³ (1.75 cu. yd.), 1065-mm (42 in.), 1034-kg (2,280 lb.) bucket; 3.75-m (12 ft. 4 in.) arm; 5812-kg (12,813 lb.) counterweight; and 800-mm (32 in.) triple semi-grouser shoes

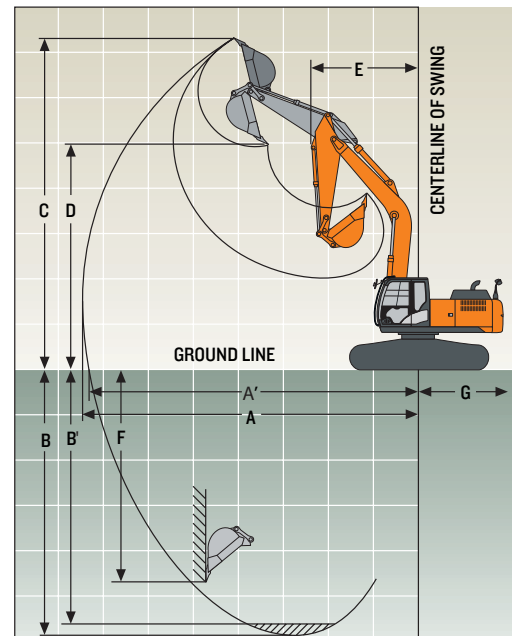
Operating Weight 28 700 kg (63,273 lb.)

Optional Components

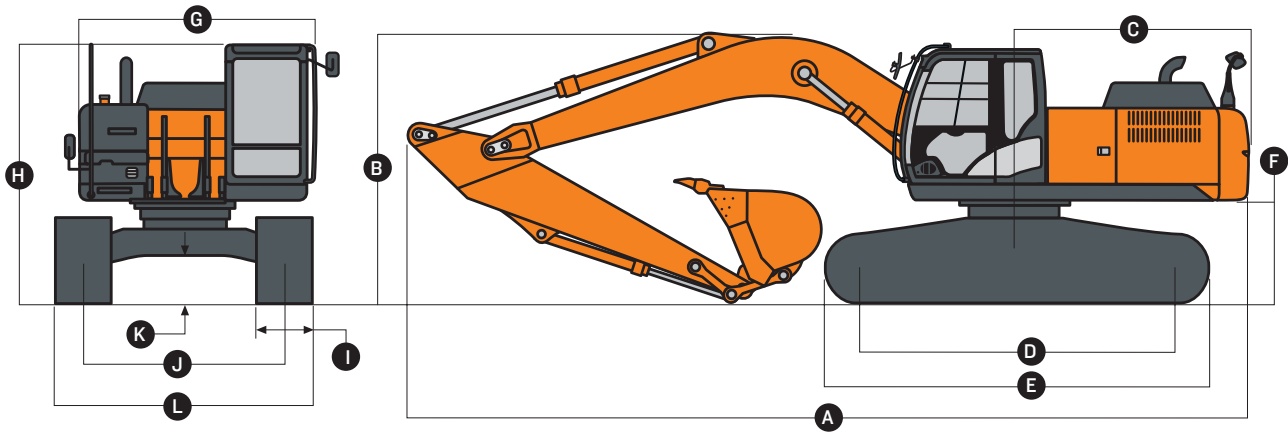
Undercarriage w/ Triple Semi-Grouser Shoes	
800 mm (32 in.)	11 765 kg (25,937 lb.)
One-Piece Boom (with arm cylinder)	2307 kg (5,086 lb.)
Arm with Bucket Cylinder and Linkage	
3.11 m (10 ft. 2 in.)	1407 kg (3,102 lb.)
3.75 m (12 ft. 4 in.)	1497 kg (3,301 lb.)
Boom-Lift Cylinders (2), Total Weight	494 kg (1,089 lb.)
1.34-m ³ (1.75 cu. yd.), 1065-mm (42 in.)	
Heavy-Duty High-Capacity Bucket	1034 kg (2,280 lb.)
Counterweight, Standard	5812 kg (12,813 lb.)

Operating Dimensions

Arm Length	3.11 m (10 ft. 2 in.)	3.75 m (12 ft. 4 in.)
Arm Digging Force		
SAE	137.9 kN (30,992 lb.)	121.3 kN (27,277 lb.)
ISO	144 kN (32,372 lb.)	127 kN (28,551 lb.)
Bucket Digging Force		
SAE	175 kN (39,352 lb.)	175 kN (39,352 lb.)
ISO	203 kN (45,636 lb.)	203 kN (45,636 lb.)
A Maximum Reach	10.71 m (35 ft. 2 in.)	11.27 m (37 ft.)
A' Maximum Reach at Ground Level	10.52 m (34 ft. 6 in.)	11.10 m (36 ft. 5 in.)
B Maximum Digging Depth	7.23 m (23 ft. 9 in.)	7.88 m (25 ft. 10 in.)
B' Maximum Digging Depth at 2.44-m (8 ft.) Flat Bottom	7.05 m (23 ft. 2 in.)	7.72 m (25 ft. 4 in.)
C Maximum Cutting Height	10.26 m (33 ft. 8 in.)	10.46 m (34 ft. 4 in.)
D Maximum Dumping Height	7.31 m (24 ft.)	7.52 m (24 ft. 8 in.)
E Minimum Swing Radius	3.91 m (12 ft. 10 in.)	3.90 m (12 ft. 10 in.)
F Maximum Vertical Wall	6.48 m (21 ft. 3 in.)	7.05 m (23 ft. 2 in.)
G Tail-Swing Radius	3.14 m (10 ft. 4 in.)	3.14 m (10 ft. 4 in.)



Machine Dimensions	ZX290LC-5	
A Overall Length	3.11 m (10 ft. 2 in.)	10.54 m (34 ft. 7 in.)
	3.75 m (12 ft. 4 in.)	10.59 m (34 ft. 9 in.)
B Overall Height	3.11 m (10 ft. 2 in.)	3.17 m (10 ft. 5 in.)
	3.75 m (12 ft. 4 in.)	3.31 m (10 ft. 10 in.)
C Rear-End Length/Swing Radius		3.14 m (10 ft. 4 in.)
D Distance Between Idler/Sprocket Centerline		4.05 m (13 ft. 3 in.)
E Undercarriage Length		4.94 m (16 ft. 2 in.)
F Counterweight Clearance		1.18 m (3 ft. 10 in.)
G Upperstructure Width		2.89 m (9 ft. 6 in.)
H Cab Height		3.11 m (10 ft. 2 in.)
I Track Width w/ Triple Semi-Grouser Shoes		800 mm (32 in.)
J Gauge Width		2.59 m (8 ft. 6 in.)
K Ground Clearance		0.51 m (20 in.)
L Overall Width w/ Triple Semi-Grouser Shoes		3.39 m (11 ft. 3 in.)
	800 mm (32 in.)	



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Lift Charts

Boldface type indicates hydraulically limited capacity; **lightface** type indicates stability-limited capacities, in kg (lb.). Ratings at bucket lift hook; machine equipped with 930-kg (2,050 lb.) bucket and 800-mm (32 in.) shoes; 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.

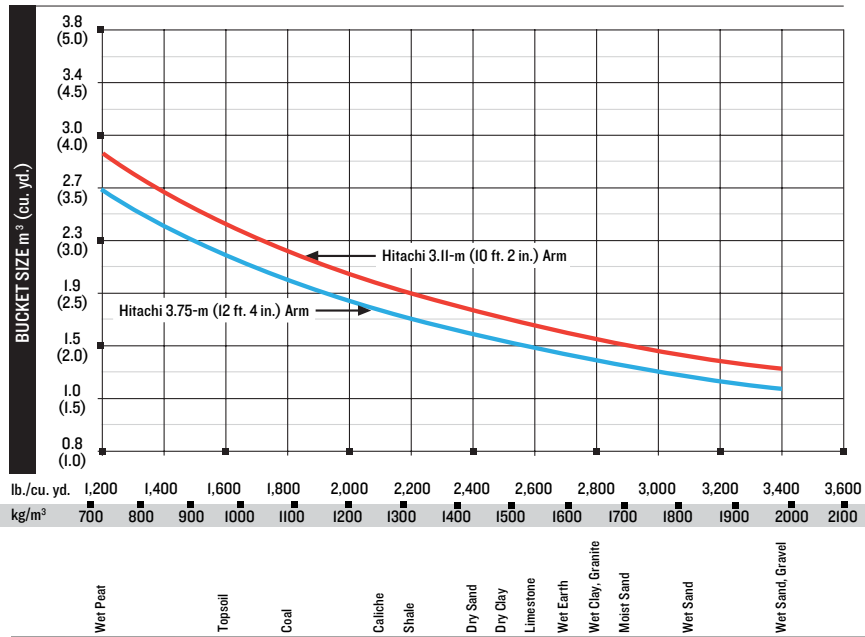
Load Point Height	1.5 m (5 ft.)		3.0 m (10 ft.)		4.5 m (15 ft.)		6.0 m (20 ft.)		7.5 m (25 ft.)		9.0 m (30 ft.)	
Horizontal Distance from Centerline of Rotation	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side
With 3.11-m (10 ft. 2 in.) arm												
6.0 m (20 ft.)							5607	5607	5543	5104		
							(12,235)	(12,235)	(12,217)	(10,924)		
4.5 m (15 ft.)					8080	8080	6681	6681	6011	4992		
					(17,332)	(17,332)	(14,472)	(14,472)	(13,120)	(10,714)		
3.0 m (10 ft.)					11 031	10 874	8082	6920	6737	4810		
					(23,653)	(23,449)	(17,465)	(14,907)	(14,643)	(10,337)		
1.5 m (5 ft.)					13 516	10 146	9432	6551	7489	4618		
					(29,105)	(21,856)	(20,388)	(14,108)	(16,252)	(9,931)		
Ground Line					14 734	9808	10 378	6305	7605	4473		
					(31,860)	(21,093)	(22,461)	(13,571)	(16,351)	(9,620)		
-1.5 m (-5 ft.)	5847	5847	9276	9276	14 900	9730	10 752	6200	7533	4409		
	(13,118)	(13,118)	(21,093)	(21,093)	(32,277)	(20,911)	(23,171)	(13,343)	(16,204)	(9,488)		
-3.0 m (-10 ft.)	10 936	10 936	15 478	15 478	14 200	9816	10 428	6228				
	(24,567)	(24,567)	(35,216)	(35,216)	(30,733)	(21,101)	(22,524)	(13,411)				
-4.5 m (-15 ft.)			17 555	17 555	12 366	10 068	8917	6425				
			(37,798)	(37,798)	(26,562)	(21,670)	(18,906)	(13,880)				
With 3.75-m (12 ft. 4 in.) arm												
6.0 m (20 ft.)									4840	4840		
									(10,650)	(10,650)		
4.5 m (15 ft.)							5848	5848	5397	5076	4555	3591
							(12,677)	(12,677)	(11,777)	(10,897)	(8,804)	(7,667)
3.0 m (10 ft.)					9647	9647	7312	7054	6195	4871	5616	3502
					(20,700)	(20,700)	(15,807)	(15,189)	(13,465)	(10,465)	(11,915)	(7,495)
1.5 m (5 ft.)					12 454	10 359	8800	6637	7042	4649	5761	3395
					(26,816)	(22,310)	(19,025)	(14,290)	(15,284)	(9,995)	(12,367)	(7,274)
Ground Line			5560	5560	14 199	9862	9959	6329	7607	4468	5662	3304
			(12,750)	(12,750)	(30,686)	(21,211)	(21,554)	(13,620)	(16,350)	(9,606)	(12,165)	(7,088)
-1.5 m (-5 ft.)	5556	5556	8978	8978	14 843	9672	10 591	6164	7489	4363		
	(12,430)	(12,430)	(20,367)	(20,367)	(32,139)	(20,787)	(22,935)	(13,261)	(16,101)	(9,382)		
-3.0 m (-10 ft.)	9347	9347	13 520	13 520	14 578	9683	10 594	6135	7479	4354		
	(20,976)	(20,976)	(30,688)	(30,688)	(31,555)	(20,810)	(22,911)	(13,203)	(16,093)	(9,375)		
-4.5 m (-15 ft.)	13 921	13 921	19 464	19 464	13 317	9859	9723	6247				
	(31,383)	(31,383)	(41,978)	(41,978)	(28,694)	(21,207)	(20,862)	(13,467)				
-6.0 m (-20 ft.)					10 296	10 264						
					(21,623)	(21,623)						

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 2.96 m (9 ft. 9 in.)		Arm Dig Force 3.61 m (11 ft. 10 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	1067	42	1.06	1.38	997	2,197	193.7	43,548	142.5	32,034	124.9	28,077	1435	56.5	5
Heavy Duty	1219	48	1.22	1.60	1071	2,361	193.7	43,548	142.5	32,034	124.9	28,077	1435	56.5	6
Heavy Duty	1372	54	1.39	1.82	1138	2,509	193.7	43,548	142.5	32,034	124.9	28,077	1435	56.5	6
Heavy Duty High Capacity	610	24	0.70	0.92	801	1,767	167.4	37,636	124.7	28,044	108.9	24,477	1588	62.5	3
Heavy Duty High Capacity	760	30	0.92	1.20	913	2,012	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	4
Heavy Duty High Capacity	914	36	1.13	1.48	968	2,135	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	4
Heavy Duty High Capacity	1065	42	1.34	1.75	1035	2,281	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	5
Heavy Duty High Capacity	1220	48	1.55	2.00	1137	2,507	175.0	39,352	137.9	30,992	121.3	27,277	1588	62.5	6
Ditching	1525	60	3.00	3.90	709	1,563	232.8	52,338	150.5	33,835	131.0	29,445	1194	47.0	0

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
- High-efficiency, low-noise fan
- Glow-plug start aid
- 500-hour engine-oil-change interval
- 70% (35 deg.) off-level capability
- Severe-duty fuel filter
- ▲ Chrome exhaust stack
- ▲ Engine coolant heater

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
- ▲ Auxiliary hydraulic lines
- ▲ Auxiliary pilot and electric controls
- ▲ Hydraulic filter restriction indicator kit
- ▲ Load-lowering control / Anti-drift 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, 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
- ▲ Rear-view camera

Front Attachments

- Centralized lubrication system
- Dirt seals on all bucket pins
- Less boom and arm
- Oil-impregnated bushings
- Reinforced resin thrust plates
- Tungsten carbide thermal coating on arm-to-bucket joint
- ▲ Arm, 3.11 m (10 ft. 2 in.)
- ▲ Arm, 3.75 m (12 ft. 4 in.)
- ▲ Attachment quick-couplers
- ▲ Boom cylinder with plumbing to mainframe for less boom and arm
- ▲ Buckets: Heavy duty / Heavy-duty high capacity / Side cutters and teeth
- ▲ "D" channel guard
- ▲ Material clamps
- ▲ Super-long fronts

Operator's Station

- 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)

Operator's Station (continued)

- Mode selectors (illuminated): Power modes (3) / Travel modes (2 with automatic shift) / Work mode (1)
- Multifunction, color LCD monitor with: Diagnostic capability / Multiple-language capabilities / Maintenance tracking / Clock / Theft-deterrent system / 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, wipermode indicator, work-lights-on indicator, and work-mode indicator
- Auxiliary hydraulic control switches in right console lever
- Motion alarm with cancel switch (conforms to SAE J994)
- Power-boost switch on right console lever
- Propel pedals and levers
- 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)
- ▲ 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 unit with 1065-mm (42 in.) bucket, 800-mm (32 in.) triple semi-grouser shoes, full fuel tank, 79-kg (175 lb.) operator, and 5812-kg (12,813 lb.) counterweight.

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