

ZX290 SPECIFICATIONS

ENGINE

Model	Isuzu AL-4HK1X
Type	4-cycle water-cooled, common rail direct injection
Aspiration	Variable geometry turbocharged, intercooled, cooled EGR
After treatment	Muffler filter
No. of cylinders	4
Rated power	
ISO 14396	147 kW at 2 100 min ⁻¹
ISO 9249, net	140 kW at 2 100 min ⁻¹
EEC 80/1269, net	140 kW at 2 100 min ⁻¹
SAE J1349, net	140 kW at 2 100 min ⁻¹
Maximum torque	652 Nm at 1 800 min ⁻¹
Piston displacement	5.193 L
Bore and stroke	115 mm x 125 mm
Batteries	2 x 12 V / 88 Ah

HYDRAULIC SYSTEM

Hydraulic Pumps

Main pumps	3 variable displacement axial piston pumps
Maximum oil flow	2 x 236 L/min
.....	1 x 210 L/min
Pilot pump	1 gear pump
Maximum oil flow	37.3 L/min

Hydraulic Motors

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

Relief Valve Settings

Implement circuit	34.3 MPa
Swing circuit	32.4 MPa
Travel circuit	34.3 MPa
Pilot circuit	3.90 MPa
Power boost	38.0 MPa

Hydraulic Cylinders

	Quantity	Bore	Rod diameter
Boom	2	135 mm	95 mm
Arm	1	150 mm	105 mm
Bucket	1	135 mm	90 mm

UPPERSTRUCTURE

Revolving Frame

D-section frame for resistance to deformation.

Swing Device

Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed	10.3 min ⁻¹
Swing torque	90.5 kNm

Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO* Standards.

* International Organization for Standardization

UNDERCARRIAGE

Tracks

Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.

Numbers of Rollers and Shoes on Each Side

Upper rollers	2
Lower rollers	8
Track shoes	48
Track guards	3

Travel Device

Each track driven by 2-speed axial piston motor. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.

Travel speeds	High : 0 to 5.2 km/h
.....	Low : 0 to 3.1 km/h

Maximum traction force ... 246 kN

Gradeability

70% (35 degree) continuous

SOUND LEVEL

Sound level in cab according to ISO 6396 LpA 70 dB(A)
 External sound level according to ISO 6395 and
 EU Directive 2000/14/EC LwA 103 dB(A)

SERVICE REFILL CAPACITIES

Fuel tank	510 L
Engine coolant	26.0 L
Engine oil	27.0 L
Swing device	11.7 L
Travel device (each side)	9.20 L
Hydraulic system	290 L
Hydraulic oil tank	156 L

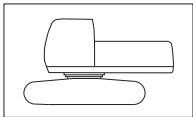
WEIGHTS AND GROUND PRESSURE

Operating Weight and Ground Pressure

			ZAXIS 290LC	
Shoe type	Shoe width	Arm length	kg	kPa(kgf/cm ²)
Triple grouser	600 mm	2.42 m	28 800	54
		3.11 m	28 900	54
	700 mm	2.42 m	29 400	47
		3.11 m	29 500	47
	800 mm	2.42 m	29 800	42
		3.11 m	29 900	42
	900 mm	2.42 m	30 200	37
		3.11 m	30 300	38

Including 1.10 m³ (ISO heaped), bucket weight (900 kg) and counterweight (6 200 kg).

Basic Machine Weight and Overall Width



Excluding front end attachment, fuel, hydraulic oil and coolant etc. Including counterweight.

ZAXIS 290LC

Shoe width	Weight	Overall width
600 mm	22 700 kg	3 190 mm
700 mm	23 300 kg	3 290 mm
800 mm	23 700 kg	3 390 mm
900 mm	24 100 kg	3 490 mm

Components Weight

	Weight
Counterweight	6 200 kg
Boom 6.20 m (with arm cylinder and boom cylinder)	3 130 kg
Arm 2.42 m (with bucket cylinder)	1 350 kg
Arm 3.11 m (with bucket cylinder)	1 430 kg
Bucket 1.10 m ³	900 kg

BUCKET AND ARM DIGGING FORCE

			ZAXIS 290LC	
Arm length	2.42 m	3.11 m		
Bucket digging force* ISO	202 kN			
Bucket digging force* SAE	175 kN			
Arm crowd force* ISO	182 kN	144 kN		
Arm crowd force* SAE	174 kN	138 kN		

* At power boost

BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design. 6.20 m boom, and 2.42 m and 3.11 m arms are available. Bucket is of welded steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

Buckets

Capacity	Width		No. Of teeth	Weight	Recommendation	
					ZAXIS 290LC	
	Without side cutters	With side cutters			Arm 2.42 m	Arm 3.11 m
1.00 m ³	1 130 mm	1 260 mm	5	850 kg	☉	☉
1.10 m ³	1 220 mm	1 350 mm	5	900 kg	☉	☉
1.40 m ³	1 500 mm	1 630 mm	5	1 020 kg	○	○
1.62 m ³	1 700 mm	1 830 mm	5	1 080 kg	□	—

☉ Suitable for materials with density of 2 000 kg/m³ or less

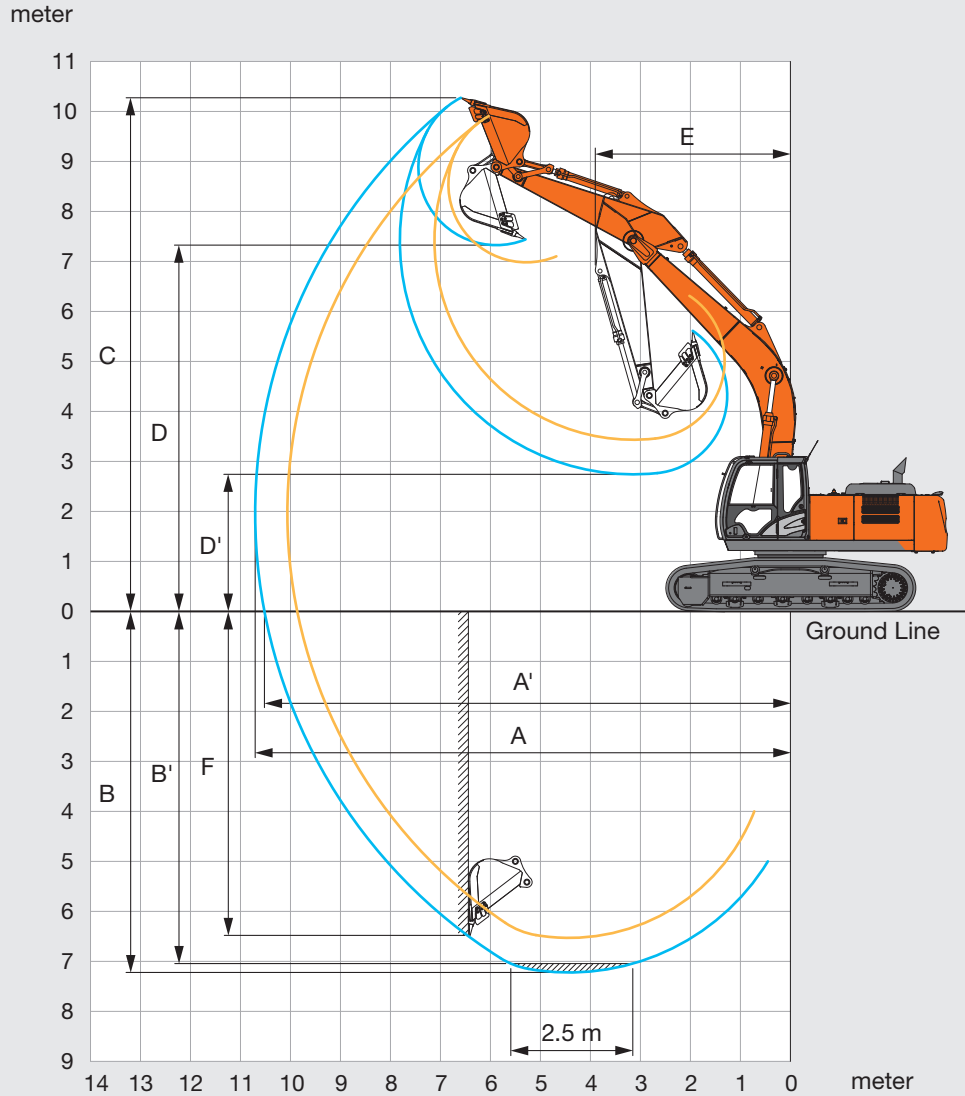
○ Suitable for materials with density of 1 600 kg/m³ or less

□ Suitable for materials with density of 1 100 kg/m³ or less

— Not applicable

SPECIFICATIONS

WORKING RANGES: MONOBLOCK BOOM



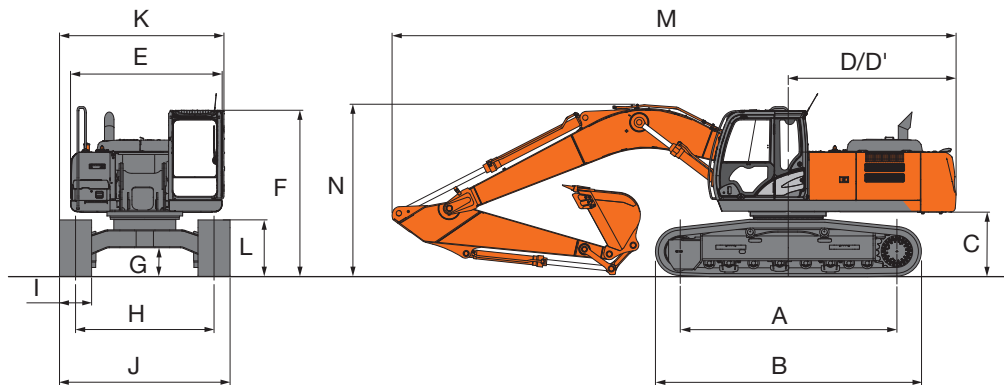
Unit: mm

	ZAXIS 290LC	
Arm length	2.42 m	3.11 m
A Max. digging reach	10 600	10 710
A' Max. digging reach (on ground)	9 860	10 520
B Max. digging depth	6 530	7 220
B' Max. digging depth for 2.5 m level	6 310	7 040
C Max. cutting height	9 910	10 270
D Max. dumping height	6 980	7 330
D' Min. dumping height	3 450	2 740
E Min. swing radius	4 060	3 900
F Max. vertical wall digging depth	5 650	6 480

Excluding track shoe lug

SPECIFICATIONS

DIMENSIONS



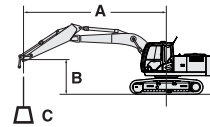
Unit: mm

	ZAXIS 290LC
A Distance between tumblers	4 050
B Undercarriage length	4 940
* C Counterweight clearance	1 170
D Rear-end swing radius	3 140
D' Rear-end length	3 140
E Overall width of upperstructure	2 870
F Overall height of cab	3 110
* G Min. ground clearance	510
H Track gauge	2 590
I Track shoe width	G 600
J Undercarriage width	3 190
K Overall width	3 190
* L Track height with triple grouser shoes	1 070
M Overall length	
With 2.42 m arm	10 640
With 3.11 m arm	10 550
N Overall height of boom	
With 2.42 m arm	3 450
With 3.11 m arm	3 200

* Excluding track shoe lug G: Triple grouser shoe

LIFTING CAPACITIES

- Notes:
1. Ratings are based on ISO 10567.
 2. Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the center-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. 0 m = Ground.



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

For lifting capacities, subtract bucket and quick hitch weight from lifting capacities.

ZAXIS 290LC

Rating over-front Rating over-side or 360 degrees Unit : kg

Conditions	Load point height m	Load radius												At max. reach				
		1.5		3.0		4.5		6.0		7.5		9.0		meter				
Boom 6.20 m Arm 2.42 m Counterweight 6 200 kg Shoe 600 mm	6.0							*8 020	*8 020							*7 790	5 740	7.46
	4.5					*11 240	*11 240	*9 000	7 850	*8 010	5 590					7 710	4 930	8.11
	3.0					*14 150	11 150	*10 290	7 740	8 550	5 410					7 130	4 530	8.44
	1.5							*11 390	7 100	8 360	5 230					6 960	4 400	8.49
	0 (Ground)					*16 230	10 370	11 470	6 910	8 230	5 120					7 170	4 500	8.27
	-1.5			*10 350	*10 350	*15 710	10 390	11 420	6 860	8 210	5 100					7 860	4 900	7.75
	-3.0			*18 760	*18 760	*14 210	10 540	*10 810	6 950							*9 060	5 850	6.86
	-4.5			*14 540	*14 540	*11 090	10 910									*8 930	8 360	5.42
Boom 6.20 m Arm 3.11 m Counterweight 6 200 kg Shoe 600 mm	6.0							*7 120	*7 120	*6 930	5 820				*4 740	*4 740	8.19	
	4.5					*9 810	*9 810	*8 170	8 010	*7 370	5 670				*4 730	4 390	8.78	
	3.0					*12 760	11 530	*9 560	7 580	*8 060	5 470	*5 570	4 130		*4 890	4 070	9.09	
	1.5					*15 140	10 750	*10 860	7 190	8 390	5 260	6 380	4 040		*5 220	3 950	9.14	
	0 (Ground)					*16 180	10 390	11 500	6 920	8 220	5 100				*5 800	4 020	8.93	
	-1.5	*6 820	*6 820	*10 250	*10 250	*16 100	10 300	11 370	6 810	8 140	5 030				*6 800	4 310	8.45	
	-3.0	*11 900	*11 900	*16 480	*16 480	*15 090	10 390	*11 370	6 830	8 190	5 080				7 980	4 960	7.65	
	-4.5			*17 510	*17 510	*12 840	10 650	*9 480	7 030						*8 590	6 480	6.39	

EQUIPMENT

● : Standard equipment

○ : Optional equipment

ENGINE

Air cleaner double filters	●
Alternator 50 A	●
Auto idle system	●
Auto shut-down control	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
Cartridge-type fuel pre-filter	●
Dust-proof indoor net	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
ECO/PWR mode control	●
Electrical fuel feed pump	●
Engine oil drain coupler	●
Engine warm-up device	●
Fan guard	●
Fuel cooler	●
High performance water separator	●
Isolation-mounted engine	●
Maintenance free pre-cleaner	●
Muffler filter	●
Radiator, oil cooler and intercooler	●
Radiator reserve tank	●

HYDRAULIC SYSTEM

Auto power lift	●
Control valve with main relief valve	●
Full-flow filter	●
High mesh full flow filter with restriction indicator	○
Hose rupture valve for arm	●
Hose rupture valve for boom	●
Pilot filter	●
Power boost	●
Suction filter	●
Swing dampener valve	●
Variable relief valve for breaker & crusher	●
Work mode selector	●

CAB

All-weather sound suppressed steel cab	●
AM-FM radio	●
Ashtray	●
Auto control air conditioner	●
Auxiliary function lever (breaker or assist)	○
AUX. terminal and storage	●
Cigarette lighter 24 V	●
CRES V (center pillar reinforced structure) cab	●
Drink holder with hot & cool function	●
Electric double horn	●
Engine shut-off switch	●
Equipped with reinforced, tinted (green colour) glass windows	●
Evacuation hammer	●
Fire extinguisher bracket	○
Floor mat	●
Footrest	●
Front guard (lower mesh type)	○
Front guard (upper mesh type)	○
Front window washer	●
Glove compartment	●
Hot & cool box	●
Intermittent windshield wipers	●
Key cylinder light	●
Laminated round glass window	●
LED room light with door courtesy	●
OPG front guard Level II	○
OPG top guard Level II (ISO10262) compliant cab	○
Pilot control shut-off lever	●
Power outlet 12 V	●
Rear tray	●
Retractable seat belt	●
ROPS (ISO12117-2) compliant cab	●
Rubber radio antenna	●
Seat adjustment part : backrest, armrest, height and angle, slide forward / back	●
Seat: air suspension seat with heater	●
Short wrist control levers	●
Sun visor (front window/side window)	○
Top guard (mesh type)	○
Transparent roof with slide curtain	●
Windows on front, upper, lower and left side can be opened	●
2 speakers	●
4 fluid-filled elastic mounts	●

MONITOR SYSTEM

Alarm buzzers: overheat, engine oil pressure, overload	●
Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, etc	●
Display of meters: water temperature, hour, fuel rate, clock	●
Other displays: work mode, auto-idle, glow, rearview monitor, operating conditions, etc	●
32 languages selection	●

LIGHTS

Additional boom light with cover	○
Additional cab roof front 2 lights	●
Additional cab roof rear 1 light	●
2 working lights	●

UPPER STRUCTURE

Batteries 2 x 88 Ah	●
Counterweight 6 200 kg	●
Electric fuel refilling pump with auto stop and filter	○
Fuel level float	●
Hydraulic oil level gauge	●
Rear view camera	●
Rear view mirror (right & left side)	●
Swing parking brake	●
Tool box	●
Travel motion alarm	●
Undercover	●
Undercover 6.0 mm reinforced	○
Utility space	●

UNDERCARRIAGE

Bolt-on sprocket	●
Reinforced track links with pin seals	●
Shoe : 600 mm triple grouser	●
Shoe : 700 mm triple grouser	○
Shoe : 800 mm triple grouser	○
Shoe : 900 mm triple grouser	○
Travel motor covers	●
Travel parking brake	●
Track undercover	●
Upper and lower rollers	●
3 track guards (each side) and hydraulic track adjuster	●
4 tie down brackets	●

FRONT ATTACHMENTS

Arm (lower reinforced) 3.11 m	●
Arm 2.42 m	○
Boom (reinforced) 6.20 m	●
Bucket 1.00 m ³	○
Bucket 1.10 m ³	●
Bucket 1.40 m ³	○
Bucket 1.62 m ³	○
Bucket (reinforced) 0.80 m ³	○
Casted bucket link A	●
Centralized lubrication system	●
Dirt seal on all bucket pins	●
Flanged pin	●
HN bushing	●
Reinforced link B	●
Reinforced resin thrust plate	●
WC (tungsten-carbide) thermal spraying	●

ATTACHMENTS

Accessories for 2 speed selector	○
Additional pump (50 L/min)	○
Assist piping	○
Attachment basic piping	●
Breaker and crusher piping	●
Pilot accumulator	●

MISCELLANEOUS

Battery disconnect switch	●
Global e-service	●
Level indicator	●
Lockable fuel refilling cap	●
Lockable machine covers	●
Onboard information controller	●
Satellite communication system unit	●
Skid-resistant tapes, plates and handrails	●
Standard tool kit	●
Swing alarm	○
Travel alarm	●
Travel direction mark on track frame	●

Standard and optional equipment may vary by country, so please consult your Hitachi dealer for details.