

ENGINE

Model	Isuzu AI-4JJ1X
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharged, intercooled
No. of cylinders	4
Rated power	
ISO 9249, net	90.2 kW (121 HP) at 2 200 min ⁻¹ (rpm)
EEC 80/1269, net ..	90.2 kW (121 HP) at 2 200 min ⁻¹ (rpm)
SAE J1349, net	90.2 kW (121 HP) at 2 200 min ⁻¹ (rpm)
Maximum torque	402 N·m (41 kgf·m) at 1 800 min ⁻¹ (rpm)
Piston displacement ..	2.999 L
Bore and stroke	95.4 mm x 104.9 mm
Batteries	2 x 12 V / 70 Ah

HYDRAULIC SYSTEM

- Work mode selector
Digging mode / Attachment mode
 - Engine speed sensing system
- | | |
|---------------------|--|
| Main pumps | 2 variable displacement axial piston pumps |
| Maximum oil flow .. | 2 x 191 L/min |
| Pilot pump | 1 gear pump |
| Maximum oil flow .. | 33.6 L/min |

Hydraulic Motors

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

Relief Valve Settings

Implement circuit	34.3 MPa (350 kgf/cm ²)
Swing circuit	29.3 MPa (299 kgf/cm ²)
Travel circuit	34.3 MPa (350 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)
Power boost	36.3 MPa (370 kgf/cm ²)

Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom and arm cylinders to absorb shock at stroke ends.

Dimensions

	Quantity	Bore	Rod diameter
Boom	2	110 mm	80 mm
Arm	1	120 mm	90 mm
Bucket	1	105 mm	75 mm
Positioning	1	140 mm	95 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.

CONTROLS

Pilot controls. Hitachi's original shockless valve.

Implement levers	2
Travel levers with pedals	2

UPPERSTRUCTURE

Revolving Frame

Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. 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, 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	13.3 min ⁻¹ (rpm)
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Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat with armrests; adjustable with or without control levers.

* International Standardization Organization

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. 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	7
Track shoes	43
Track guard	1

Travel Device

Each track driven by 2-speed axial piston motor through planetary reduction gear for counterrotation 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.

Automatic transmission system: High-Low.

Travel speeds	High : 0 to 5.3 km/h
	Low : 0 to 3.4 km/h

Maximum traction force ..	169 kN (17 250 kgf)
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Gradeability	35° (70%) continuous
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WEIGHTS AND GROUND PRESSURE

ZX160LC-3 WITH MONOBLOCK BOOM:

Equipped with 5.1 m monoblock boom, 2.58 m arm and 0.60 m³ bucket (SAE, PCSA heaped).

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	500 mm	16 600 kg	48 kPa (0.49 kgf/cm ²)
	600 mm	16 800 kg	40 kPa (0.41 kgf/cm ²)
	700 mm	17 100 kg	35 kPa (0.36 kgf/cm ²)
	800 mm	17 400 kg	31 kPa (0.32 kgf/cm ²)

ZX160LC-3 WITH 2-PIECE BOOM:

Equipped with 2-piece boom, 2.58 m arm and 0.80 m³ bucket (SAE, PCSA heaped).

Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	500 mm	17 100 kg	50 kPa (0.51 kgf/cm ²)
	600 mm	17 400 kg	42 kPa (0.43 kgf/cm ²)
	700 mm	17 600 kg	36 kPa (0.37 kgf/cm ²)
	800 mm	17 900 kg	32 kPa (0.33 kgf/cm ²)

SERVICE REFILL CAPACITIES

Fuel tank	320.0 L
Engine coolant	18.0 L
Engine oil	17.0 L
Swing device	6.2 L
Travel device	6.8 L
(each side)	
Hydraulic system	300.0 L
Hydraulic oil tank	125.0 L

BACKHOE ATTACHMENTS

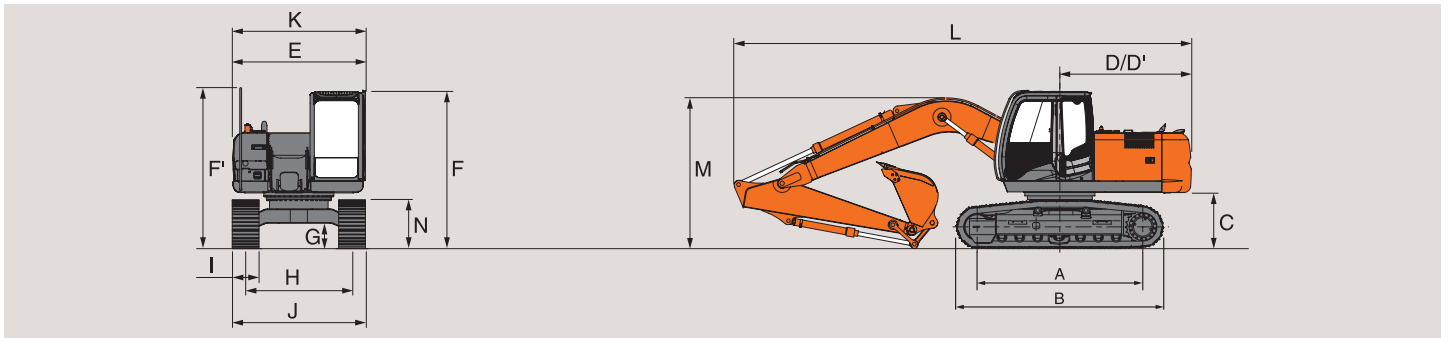
Boom and arms are of welded, box-section design. 5.10 m monoblock boom, 2-piece boom and 2.22 m, 2.58 m arms are available.

BUCKETS

Capacity SAE, PCSA heaped	Width without side cutters	Weight
0.52 m ³	790 mm	480 kg
0.60 m ³	925 mm	500 kg
0.70 m ³	1 005 mm	535 kg
0.82 m ³	1 140 mm	580 kg

SPECIFICATIONS

DIMENSIONS : MONOBLOCK BOOM



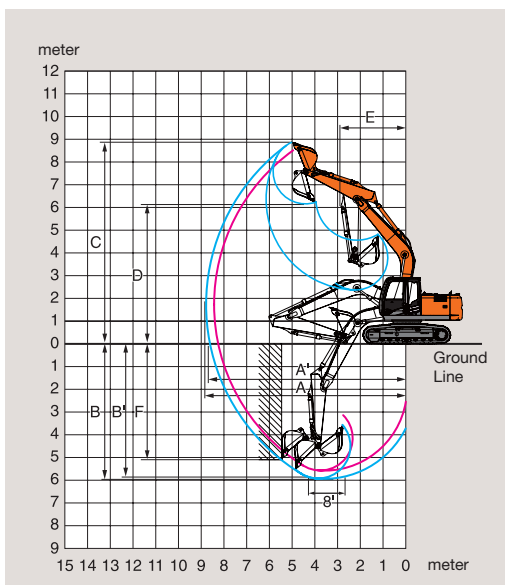
Unit: mm

	ZX160LC-3
A Distance between tumblers	3 100
B Undercarriage length	3 920
* C Counterweight clearance	1 030
D Rear-end swing radius	2 490
D' Rear-end length	2 460
E Overall width of upperstructure	2 480
F Overall height of cab	2 950
F' Overall height of hand rail	3 010
* G Min. ground clearance	470
H Track gauge	1 990
I Track shoe width	G 500
J Undercarriage width	2 490
K Overall width	2 500
L Overall length	
With 2.22 m arm	8 650
With 2.58 m arm	8 550
M Overall height of boom	
With 2.22 m arm	3 190
With 2.58 m arm	2 870
N Track height with triple grouser shoes	920

* Excluding track shoe lug G: Triple grouser shoe

WORKING RANGES

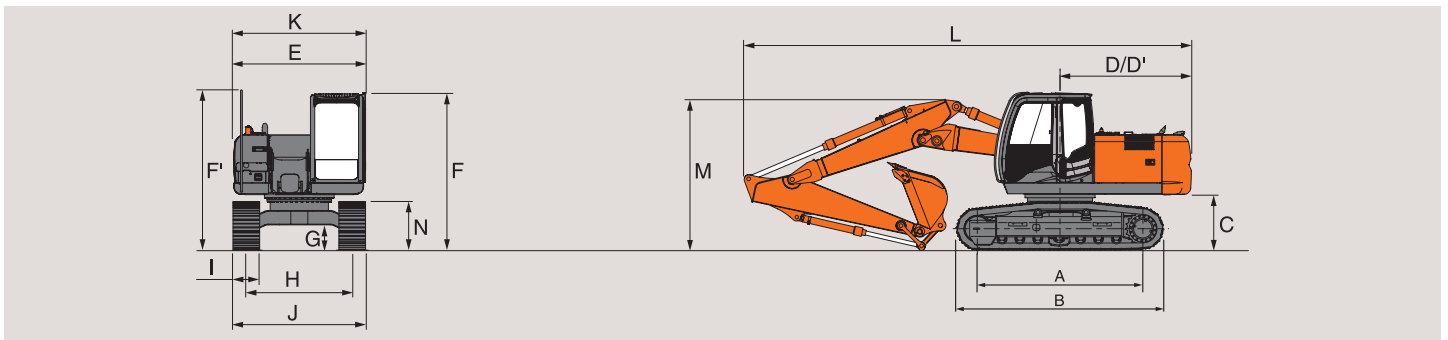
Unit: mm



	ZX160LC-3	
	5.10 m Monoblock boom	
Arm length	2.22 m	2.58 m
A Max. digging reach	8 520	8 870
A' Max. digging reach (on ground)	8 340	8 700
B Max. digging depth	5 620	5 980
B' Max. digging depth (B' level)	5 340	5 740
C Max. cutting height	8 620	8 880
D Max. dumping height	5 940	6 170
E Min. swing radius	3 290	2 910
F Max. vertical wall	4 510	5 160
Bucket digging force** ISO	108 kN (11 000 kgf)	
Bucket digging force** SAE : PCSA	95 kN (9 700 kgf)	
Arm crowd force** ISO	110 kN (11 200 kgf)	87 kN (8 900 kgf)
Arm crowd force** SAE : PCSA	106 kN (10 800 kgf)	84 kN (8 600 kgf)

Excluding track shoe lug ** At power boost

DIMENSIONS : 2-PIECE BOOM



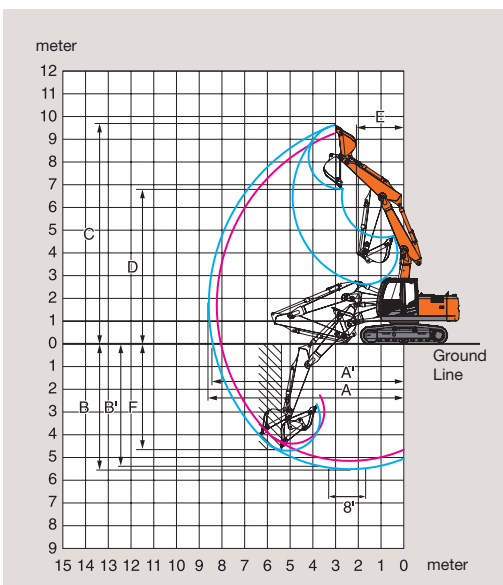
Unit: mm

	ZX160LC-3
A Distance between tumblers	3 100
B Undercarriage length	3 920
* C Counterweight clearance	1 030
D Rear-end swing radius	2 490
D' Rear-end length	2 460
E Overall width of upperstructure	2 480
F Overall height of cab	2 950
F' Overall height of hand rail	3 010
* G Min. ground clearance	470
H Track gauge	1 990
I Track shoe width	G 500
J Undercarriage width	2 490
K Overall width	2 500
L Overall length	
With 2.22 m arm	8 450
With 2.58 m arm	8 350
M Overall height of boom	
With 2.22 m arm	3 090
With 2.58 m arm	2 830
N Track height with triple grouser shoes	920

* Excluding track shoe lug G: Triple grouser shoe

WORKING RANGES

Unit: mm



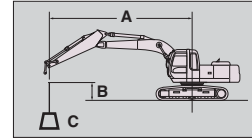
	ZX160LC-3	
	2-piece boom	
Arm length	2.22 m	2.58 m
A Max. digging reach	8 330	8 690
A' Max. digging reach (on ground)	8 150	8 510
B Max. digging depth	5 210	5 580
B' Max. digging depth (B' level)	5 090	5 470
C Max. cutting height	9 420	9 740
D Max. dumping height	6 600	6 900
E Min. swing radius	2 580	2 070
F Max. vertical wall	4 230	4 710
Bucket digging force** ISO	108 kN (11 000 kgf)	
Bucket digging force** SAE : PCSA	95 kN (9 700 kgf)	
Arm crowd force** ISO	110 kN (11 200 kgf)	87 kN (8 900 kgf)
Arm crowd force** SAE : PCSA	106 kN (10 800 kgf)	84 kN (8 600 kgf)

Excluding track shoe lug ** At power boost

LIFTING CAPACITIES

Metric measure

- Notes: 1. Ratings are based on ISO 10567.
 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 the centre-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

ZX160LC-3 MONO BLOCK BOOM

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

Conditions	Load point height	Load radius										At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m				meter
Boom 5.10 m	4.5 m					*4 440	*4 440	*4 100	3 140			*4 100	2 760	6.51
Arm 2.22 m	3.0 m					*5 580	4 580	*4 530	3 020			3 700	2 410	6.97
Counterweight 3 300 kg	1.5 m					*6 720	4 280	4 500	2 890			3 540	2 290	7.08
Shoe 500 m	0 (Ground)					6 740	4 120	4 400	2 800			3 640	2 340	6.87
	-1.5 m			*10 690	7 560	6 710	4 090	4 390	2 790			4 110	2 620	6.30
	-3.0 m			*9 290	7 730	*6 500	4 190					*5 400	3 420	5.25
	-4.5 m													

Conditions	Load point height	Load radius										At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m				meter
Boom 5.10 m	6.0 m							*3 310	3 220			*3 160	*3 160	6.05
Arm 2.58 m	4.5 m					*4 070	*4 070	*3 820	3 170			*3 090	2 530	6.89
Counterweight 3 300 kg	3.0 m			*7 910	*7 910	*5 230	4 650	*4 310	3 050			*3 200	2 240	7.33
Shoe 500 m	1.5 m					*6 460	4 320	4 520	2 900			3 290	2 130	7.44
	0 (Ground)			*6 280	*6 280	6 760	4 130	4 400	2 800			3 380	2 170	7.23
	-1.5 m	*5 750	*5 750	*10 430	7 510	6 700	4 080	4 360	2 760			3 750	2 400	6.69
	-3.0 m	*10 320	*10 320	*9 820	7 660	6 770	4 140					4 750	3 010	5.72
	-4.5 m											*5 410	5 190	3.98

ZX160LC-3 2-PIECE BOOM

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

Conditions	Load point height	Load radius										At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m				meter
2-Piece Boom	7.5 m			*6 510	*6 510							*6 110	*6 110	3.84
Arm 2.22 m	6.0 m			*6 290	*6 290	*5 410	5 140					*5 140	3 650	5.50
Counterweight 3 300 kg	4.5 m			*7 620	*7 620	*5 820	5 040	4 830	3 180			4 310	2 800	6.41
Shoe 500 m	3.0 m			*8 440	*8 440	*6 640	4 930	4 770	3 140			3 780	2 440	6.87
	1.5 m			*10 540	8 540	7 060	4 860	4 670	3 010			3 610	2 310	6.99
	0 (Ground)	*24 510	*24 510	*11 390	8 290	7 070	4 550	4 520	2 870			3 730	2 370	6.78
	-1.5 m	*24 540	*24 540	*11 550	7 990	6 980	4 270	4 430	2 790			*4 240	2 680	6.20
	-3.0 m	*21 560	*21 560	*10 330	7 880	*5 670	4 220					*5 980	3 710	4.95

Conditions	Load point height	Load radius										At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m				meter
2-Piece Boom	7.5 m											*5 410	5 170	4.46
Arm 2.58 m	6.0 m					5 050	*5 050					*4 750	3 240	5.95
Counterweight 3 300 kg	4.5 m			*6 970	*6 970	5 510	*5 060	*4 730	3 260			3 940	2 560	6.80
Shoe 500 m	3.0 m	*13 390	*13 390	*9 500	*8 800	6 380	*4 940	4 760	3 210			3 500	2 260	7.24
	1.5 m	*23 800	*23 800	*11 220	8 580	7 070	4 810	4 710	3 070			3 350	2 150	7.35
	0 (Ground)	*24 370	*24 370	*11 350	8 420	7 040	4 600	4 560	2 910			3 450	2 190	7.15
	-1.5 m	*24 610	*24 610	*11 470	8 030	7 040	4 330	4 430	2 790			3 860	2 440	6.60
	-3.0 m	*23 230	*23 230	*11 110	7 890	*6 580	4 200					*3 730	3 120	5.58

STANDARD EQUIPMENT

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

ENGINE

- H/P mode control
- E mode control
- 50 A alternator
- Dry-type air filter with evacuator valve (with air filter restriction indicator)
- Cartridge-type engine oil filter
- Cartridge-type fuel double filters
- Air cleaner double filters
- Radiator, oil cooler and intercooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto idle system
- Fuel cooler
- Electrical fuel feed pump
- Engine oil drain coupler

HYDRAULIC SYSTEM

- Work mode selector
- Power boost
- Auto power lift
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter
- Swing dampener valve

CAB

- CRES II (Center pillar reinforced structure) cab
- OPG top guard fitted Level I (ISO10262) compliant cab
- All-weather sound suppressed steel cab
- Equipped with reinforced, tinted (green color) glass windows
- 4 fluid-filled elastic mounts
- Front windows on upper, lower and left side can be opened
- Intermittent windshield wipers
- Front window washer
- Adjustable reclining seat with adjustable armrests
- Footrest
- Electric double horn
- AM-FM radio with digital clock
- Seat belt
- Drink holder
- Cigarette lighter
- Ashtray
- Storage box
- Glove compartment
- Fire extinguisher bracket
- Floor mat
- Short wrist control levers
- Pilot control shut-off lever
- Engine shut-off switch
- Auto control air conditioner
- Transparent roof with slide curtain
- Mechanical suspension seat with heater

MONITOR SYSTEM

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

LIGHTS

- 2 working lights

UPPER STRUCTURE

- Undercover
- 3 300 kg counterweight
- Fuel level float
- Electric fuel refilling pump with auto stop
- Rear view camera
- 70 Ah batteries
- Hydraulic oil level gauge
- Tool box
- Utility space
- Rear view mirror (right & left side)
- Swing parking brake

UNDERCARRIAGE

- Travel parking brake
- Travel motor covers
- 1 track guard (each side) and hydraulic track adjuster
- Bolt-on sprocket
- Upper and lower rollers
- Reinforced track links with pin seals
- 4 tie down hooks

FRONT ATTACHMENTS

- HN bushing
- WC (tungsten-carbide) thermal spraying
- Reinforced resin thrust plate
- Flanged pin
- Centralized lubrication system
- Dirt seal on all bucket pins

MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel refilling cap
- Skid-resistant tapes, plates and handrails
- Travel direction mark on track frame
- Onboard information controller

OPTIONAL EQUIPMENT

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

CAB

- Laminated round glass window
- FOPS guard
- Air suspension seat with heater
- Rain guard
- Sun visor
- 12 V power source

LIGHTS

- Additional cab roof front lights
- Additional cab roof rear lights
- Rotating lamp
- Additional boom light with cover

UNDERCARRIAGE

- Track undercover

ATTACHMENTS

- Hammer and crusher piping
- Parts for hammer and crusher
- 2 pump combined flow
- Additional pump (30 L/min)
- Pilot accumulator
- High mesh full flow filter with restriction indicator
- Welded bucket link A with welded hook

OTHERS

- Hose rupture valve
- Overload warning device
- Pre-cleaner
- Biodegradable oil