

HITACHI

Mini-Excavator Zaxis27U Specifications

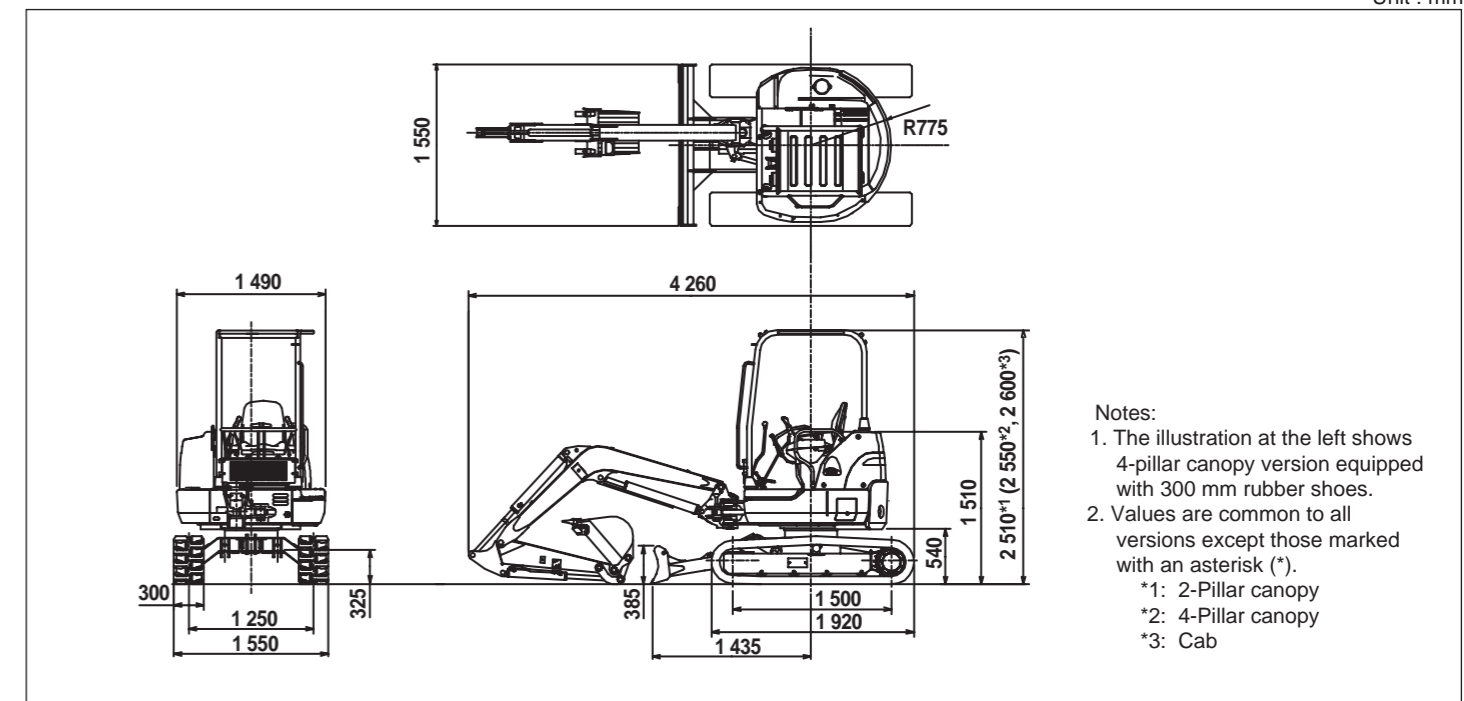
Rated Engine Power		
DIN 6271, net	22.5 kW (30.6 PS)	
SAE J1349, net	23.0 kW (30.9 hp)	
Operating Weight	(Rubber shoes)	(Grouser shoes)
2-Pillar canopy version	2 780 kg	2 850 kg
4-Pillar canopy version	2 840 kg	2 910 kg
Cab version	2 900 kg	2 970 kg
Backhoe Buckets		
ISO 7451	0.04 – 0.10 m ³	

The 2- or 4-pillar canopy, or cab can be mounted on the upper-structure according to job needs and applicable regulations. The 4-pillar canopy and cab conform to TOPS (ISO 12117) and FOPS (ISO 10262, Level 1) requirements.*

** Cab requires optional top guard.*

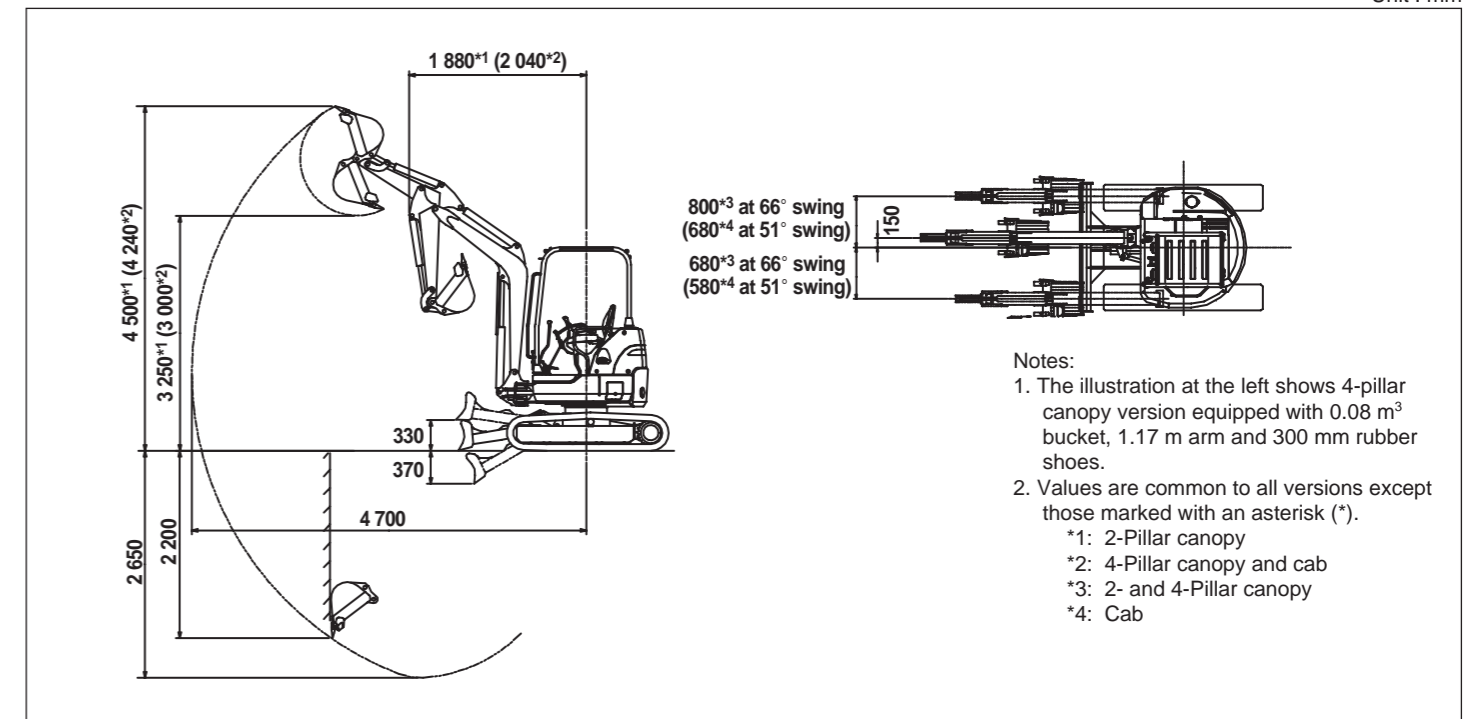
■ DIMENSIONS

Unit : mm



■ WORKING RANGES

Unit : mm



The Specifications include data that are not applicable to certain areas.
Optional equipment may vary with territory specifications.
Specifications are subject to change without notice.

KS-E414P

Printed in Japan 03.03 (TP/TP, MT₃)

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ENGINE

Model..... Isuzu AA-3LD2
 Type..... Water-cooled, 4-cycle, 3-cylinder direct injection type diesel engine
 Rated power..... 22.5 kW (30.6 PS) at 2 450 min⁻¹ (rpm) DIN 6271, net
 Rated power..... 23.0 kW (30.9 hp) SAE J1349, net at 2 450 min⁻¹ (rpm)
 Maximum torque..... 97 N·m (9.9 kgf·m) at 1 800 min⁻¹ (rpm)
 Piston displacement.....1.496 L
 Bore and stroke..... 83.1 mm x 92 mm
 Battery..... 1 x 12 V, 52 Ah



HYDRAULIC SYSTEM

The Optimum Hydraulic System (OHS) uses three pumps for job efficiency and smooth combined operations.

Main pumps.....Two variable displacement axial piston pumps
 Maximum oil flow.....2 x 31 L/min
 Third pump.....One gear pump
 Maximum oil flow.....16.8 L/min
 Pilot pump.....One gear pump
 Maximum oil flow.....12.5 L/min

Relief Valve Settings

Implement circuit.....20.6 MPa (210 kgf/cm²)
 Swing circuit.....20.6 MPa (210 kgf/cm²)
 Travel circuit.....20.6 MPa (210 kgf/cm²)
 Pilot circuit.....3.9 MPa (40 kgf/cm²)

Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom raise, arm roll-in and roll-out circuits to absorb shocks at stroke ends.

Dimensions

	No.	Bore	Rod dia.	Stroke
Boom.....	1	75 mm	40 mm	576 mm (554 mm)
Arm.....	1	70 mm	40 mm	528 mm
Bucket.....	1	60 mm	35 mm	440 mm
Boom swing... 1	75 mm	40 mm	517 mm	
Blade.....	1	85 mm	45 mm	136 mm

Note: The figure in () shows the stroke for 4-pillar canopy version and cab version.



CONTROLS

Hydraulic pilot control levers for all operations.



SWING MECHANISM

High-torque, axial piston motor with planetary reduction gear. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type. Swing shockless valve built in swing motor absorbs shocks when stopping swing, ensuring smooth stops.

Swing speed..... 9.0 min⁻¹ (9.0 rpm)



UNDERCARRIAGE

Tracks

Tractor-type undercarriage. Welded track frame using carefully selected materials. Side frame welded to track frame.

Numbers of Rollers on Each Side

Upper roller.....1
 Lower rollers.....4

Traction Device

Each track driven by a high-torque, 2-speed axial piston motor through planetary reduction gear, allowing counter-rotation of the tracks. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel, ensuring smooth stops.

Travel speeds (rubber shoes)..... High : 0 – 4.0 km/h
 Low : 0 – 2.4 km/h

Travel speeds (grouser shoes)..... High : 0 – 3.9 km/h
 Low : 0 – 2.3 km/h

Gradeability.....30 degrees (58%) continuous



WEIGHTS AND GROUND PRESSURE

Equipped with 1.17 m arm and 0.08 m³ (PCSA heaped) bucket

	Operating weight	Ground pressure
2-Pillar canopy version		
300 mm rubber shoes....	2 780 kg	26 kPa (0.27 kgf/cm ²)
300 mm grouser shoes..	2 850 kg	27 kPa (0.28 kgf/cm ²)
4-Pillar cab version		
300 mm rubber shoes....	2 840 kg	26 kPa (0.27 kgf/cm ²)
300 mm grouser shoes..	2 910 kg	27 kPa (0.28 kgf/cm ²)
Cab version		
300 mm rubber shoes....	2 900 kg	28 kPa (0.29 kgf/cm ²)
300 mm grouser shoes..	2 970 kg	28 kPa (0.29 kgf/cm ²)



FRONT-END ATTACHMENTS

Backhoe Buckets

ISO 7451 capacity	Width		No. of teeth	Weight	Use	
	Without side cutters	With side cutters			1.17 m Std. arm	1.47 m Long arm
0.04 m ³	250 mm	300 mm	2	46 kg	A	A
0.05 m ³	300 mm	350 mm	3	50 kg	A	A
0.06 m ³	350 mm	400 mm	3	52 kg	A	A
0.07 m ³	400 mm	450 mm	3	55 kg	A	A
0.08 m ³	450 mm	500 mm	3	57 kg	A	B
0.09 m ³	500 mm	550 mm	4	63 kg	B	B
0.10 m ³	550 mm	600 mm	4	66 kg	B	C
Arm crowd force				14.8 kN (1 510 kgf)	12.9 kN (1 320 kgf)	
Bucket digging force				22.6 kN (2 300 kgf)		

A: General digging
 B: Light-duty digging
 C: Loading

Boom swing angle

2- and 4-pillar canopy versions.....Left 66°, Right 66°
 Cab version.....Left 51°, Right 51°



STANDARD EQUIPMENT

Engine

- Water-separator for engine fuel system

Hydraulic System

- Hydraulic pilot type control levers
- Pilot control shut-off levers
- Anti-drift valve for front attachments
- Two-speed travel system
- Swing parking brake

Canopy (Cab)

- Two work lights
- Heater**
- Windshield wiper**
- Evacuation hammer**
- Seat belt*

Note: * : For 4-pillar canopy and cab versions
 **: For cab versions

Undercarriage

- 300 mm rubber shoes
- Semi-long stay blade

Front Attachments

- 2.1 m boom
- 1.17 m arm
- 0.08 m³ hoe bucket
- Bucket clearance adjusting device
- O-ring type pin-seals for hoe bucket
- HN bushing



OPTIONAL EQUIPMENT

Engine

- Auto-idling system

Hydraulic System

- Hydraulic P.T.O. port
- Hydraulic piping for breaker
- Travel parking brake
- Swing motion alarm device with lamp
- Travel motion alarm device

Canopy (Cab)

- Heater**
- Air cooler***
- Seat belt*
- Windshield washer***
- Wrist rest
- 12V outlet
- Air cleaner inner element
- FOPS top guard***
- 2-way control lever pattern selector valve (Excavator/Backhoe loader)

Notes: * : For 2-pillar canopy version
 **: For 2- and 4-pillar canopy versions
 ***: For cab version

Undercarriage

- 300 mm grouser shoes
- 400 mm triangle shoes
- 400 mm grouser shoes
- 300 mm pad crawler shoes

Front Attachments

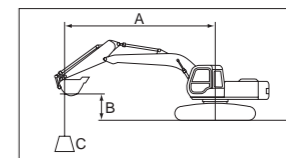
- 1.47 m arm
- Backhoe buckets; see page 2.

Counterweight

- Weight-added counterweight (270 kg added)

LIFTING CAPACITIES

(Equipped with 2-pillar canopy)



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

Rating over-side or 360 degrees Rating over-front Unit: 1 000 kg

With dozer blade above ground

Conditions	Load Point Height	Load Radius				Maximum Reach				
		2 m		3 m		4 m		meter		
Arm: 1.17 m Bucket: 0.08 m ³ ISO 7451 Rubber shoes: 300 mm	3 m			*0.48	*0.48			0.31	0.33	3.96
	2 m			0.48	0.53	0.40	0.32	0.24	0.27	4.42
	1 m			0.45	0.49	0.39	0.31	0.23	0.25	4.52
	Ground			0.42	0.46	0.38	0.30	0.25	0.27	4.23
	- 1 m	0.80	0.90	0.42	0.46			0.32	0.35	3.64

With dozer blade on ground

Conditions	Load Point Height	Load Radius				Maximum Reach				
		2 m		3 m		4 m		meter		
Arm: 1.17 m Bucket: 0.08 m ³ ISO 7451 Rubber shoes: 300 mm	3 m			*0.48	*0.48			0.31	*0.50	3.96
	2 m			0.48	*0.55	0.40	*0.55	0.24	*0.49	4.42
	1 m			0.45	*0.81	0.39	*0.60	0.23	*0.53	4.52
	Ground			0.42	*0.99	0.38	*0.65	0.25	*0.57	4.23
	- 1 m	0.80	*1.60	0.42	*0.95			0.32	*0.57	3.64

Notes: 1. Rating 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 a hook (not standard equipment) located on the back of the bucket.
 4. An asterisk mark (*) indicates load limited by hydraulic capacity.