

Zero Tail Swing Type Mini EXCAVATOR



AX48u-5

AX29U-5
AX33U-5
AX38U-5
AX48U-5
AX52U-5

SAFETY

- Operate safely in accordance with proper operation manual.
- To prevent trouble and accidents, perform daily and preventive maintenance checks without fail.

AIRMAN[®]

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DISTRIBUTOR



AX38u-5

HOKUETSU INDUSTRIES CO., LTD.

Easy Maintenance, Toughness and Durability

Daily and periodical maintenance / inspection can be carried out easily and efficiently even on tight jobsites without having to move the machine to a bigger area.

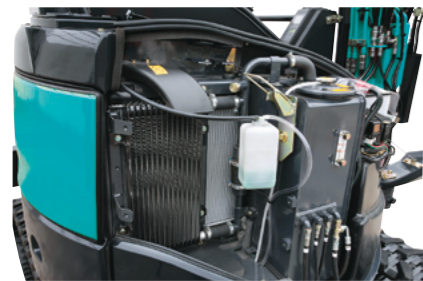
Sliding Engine Cover

The newly designed engine cover can slide up and down in order to allow maintenance and servicing in confined space.



Removable engine side cover to allow easy access to the engine. This cover is made of steel to allow easy repair when damaged.

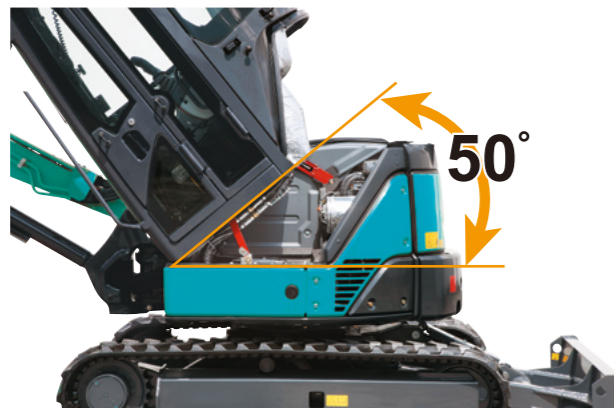
Finned Radiator and Oil Cooler for Effective Cooling



The radiator and oil cooler, made of rust-resistant aluminum, are integrated with wavy fins for effective cooling. Fins are easy to clean and hard to be packed with dirt.

Tilt-up Canopy / Cabin

The cabin or canopy floor can be tilted up to 50 degrees to provide easy access to the excavators inner parts such as the swing motor, engine starter motor, control valve and other key components to reduce valuable inspection and maintenance time.

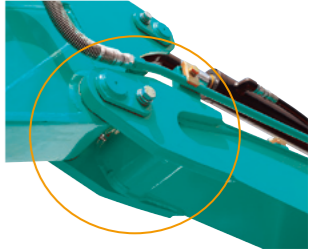


Additional Counterweight (Standard)



Reinforced Boom End **New**

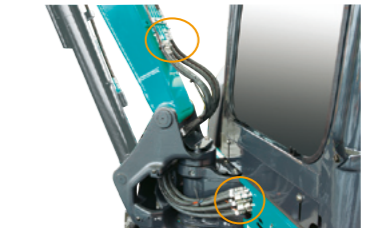
The boom end is made out of high tensile steel to reduce wearing of the pin that holds the arm.



Auxiliary Piping **New**

Auxiliary piping size has been increased to reduce back pressure also a larger capacity selector valve has been used. (For model AX48u/52u)

Split-Type Front Hoses



Split-Type Front Hoses are being used between the machine's cover ports and the bottom side of the boom to allow easy replacement in case of damage to one or more of the hoses.

Reinforced Angle-Steel type Boom Cylinder Guard **New**

The boom cylinder guard is reinforced as it is now constructed from angle steel to prevent damages to the boom cylinder.



Single Swing Pin



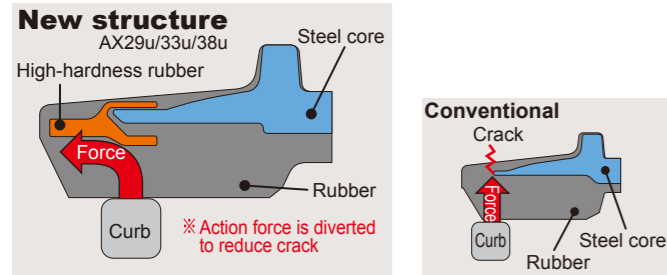
A large single swing pin is used for ease of operation with exceptionally smooth movement.

Easy Operation / Ecological Atmosphere

Increased swing speed and travel pulling force to allow more efficient operation.

New-Structure Rubber Crawlers

The Original-developed rubber crawlers are highly durable, featuring a steel-cored structure that protects shoe edges from being damaged even when riding on curbs.

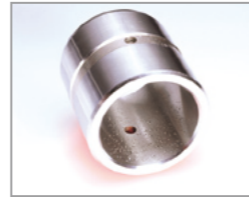


Grease-Bathed Type Swing Gear

Grease-Bathed Type Swing Gear, allowing longer lubrication interval times.

State of The Art Bushes

Hard wearing bushes are used for the front pins to reduce wear and tear and also make movement very smooth. Also longer lubrication intervals.

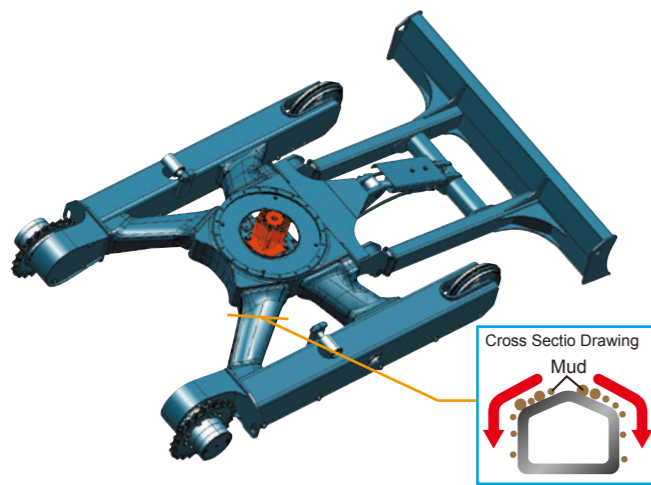


Reinforced Blade **New**

The blade is designed as a box construction to improve strength and reliability of the blade.

X-Beam Track Frame

Rounded X-beam track frame will minimize mud packing on the frame, which shortens washing time of the machine.



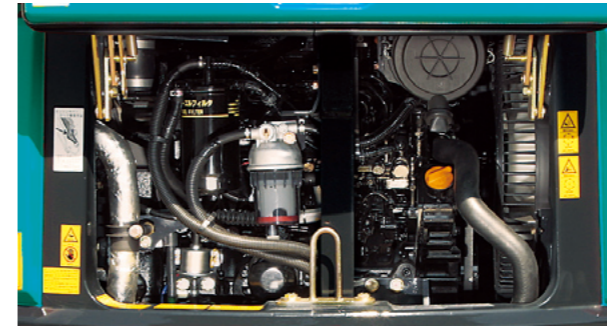
ROPS/OPG Canoy and Cabin

Both canopy and cabin are compliant to the latest ROPS/TOPS and OPG top guard Lv.1 as standard.



Powerful High Displacement Engine

New-generation ECO-powered engine with more power and higher efficiency. (EU Stage III A)



Smooth and Speedy Combined Operation of Functions

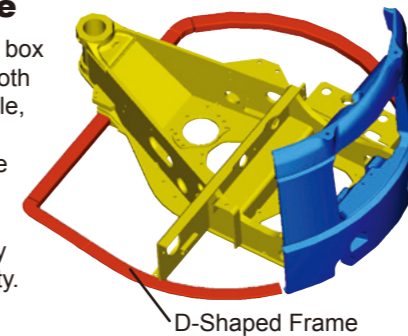
The matching between the 3 hydraulic pumps system on the AX29u / 33u and 38u and the arm recovery circuit are improved. On the AX48u and 52u, the matching between the original hydraulic circuit (AHCS) and the arm recovery circuit are also improved.

Hydraulic Pilot Control

The control levers are hydraulic pilot type for ease of operation and smooth movement.

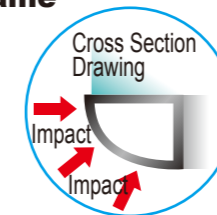
Enlarged Counterweight and Box Type Frame

The newly developed box type frame which is both lightweight and durable, the enlarged counterweight and the more heavy undercarriage give a lower center of gravity thus improving stability.



Reinforced D-Shaped Frame

The machine is reinforced with a strong D-shaped frame to protect the machine against damages and shocks.



Automatic Travel Speed Control

During high speed travel, the speed is automatically switched down to low speed when the load increases due to steering and it is automatically resumed when the load decreases again.

High Fuel Efficiency (Eco Zone) **New**

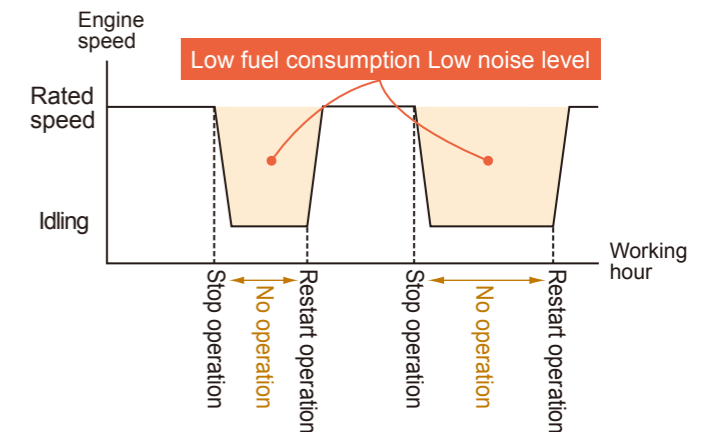
The new setting of the Eco Zone results in more production with lower fuel consumption due to the optimal control of the engine speed and torque as well as the hydraulic pressure settings.



Auto-Idle Device as Standard

AX33u ~ 52u

The engine speed is automatically lowered to idling speed to reduce fuel consumption when the control levers are at neutral position for 4 seconds.



Hydraulic Oil Circulation Type Swing Reduction Gear

The swing reduction gear is a hydraulic oil circulation type that does not require troublesome gear oil change. Long-life hydraulic oil extends replacement interval up to 2000 hours. (This will depend on country and working conditions)

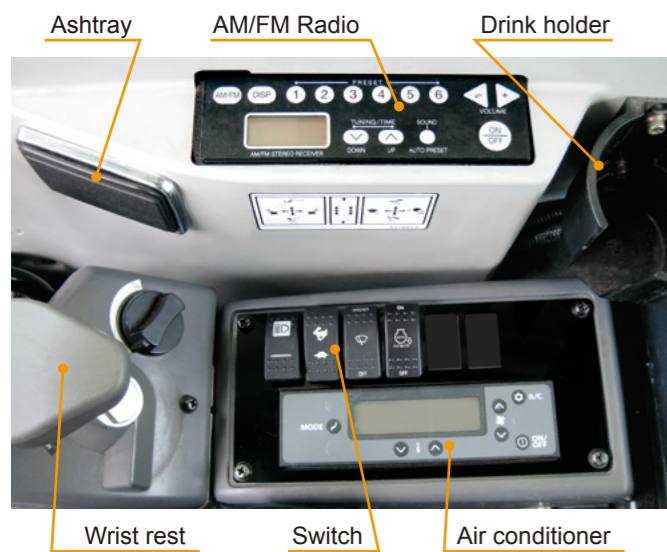
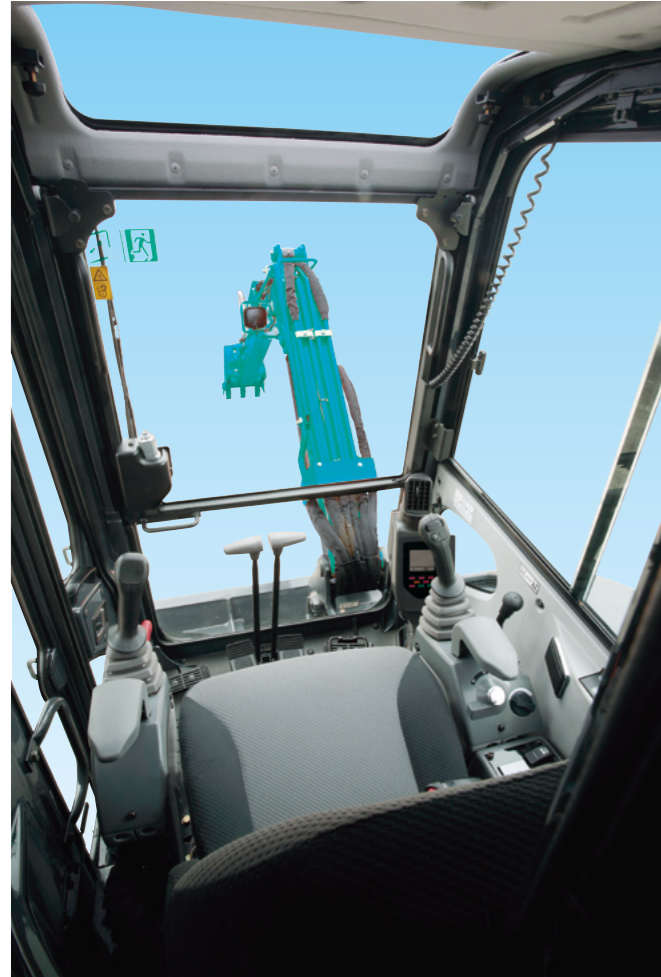


Operator Comfort and Safety

Sufficient space and convenient options are offered to enlighten the operator's job.

● Largest Cabin Space in It's Class

The cabin space, conforming to the international standards, is the largest among the mini excavators for comfort and efficient operation.



● Renewed Cabin Interior Color **New**

The consol and cab interior are painted with a new color ensuring comfortable atmosphere for an operator.



Equipment

Standard Equipment

- Auto-idling system (AX33u~52u)
- Reclining seat
- Suspension seat
- Retractable seat belt
- Wrist rests
- Drink holder
- Electric horn
- Cigarette lighter (inside 12V outlet)
- Floor mat
- Rearview mirror (AX48u/52u canopy only)
- Two work lights

Option

- Rearview mirror (AX29u/33u/38u canopy only)

Standard Equipment for Cabin

- Air conditioner
- AM/FM radio
- Window washer
- Defroster
- Ashtray
- Rearview mirror
- Spare power supply (outside 12V outlet)

● Comfortable Operator's Seat **New**

The operator's seat is designed for more comfort with a higher and more spacious back of the seat. The fabric seat is also available for the cabin model.



Canopy (Semi high backrest)



Cabin (High backrest)

● Easy-to Read Monitor

The large LCD monitor placed in the front right position, clearly shows fuel level, coolant temperature and the status of various indicators to the operator.



● Storage Space

Seat backrest box



Tool box for canopy spec



The tool box is provided behind the operator's seat as standard for AX48u/52u only.

● Stock muffler (AX48u/52u for Cabin)



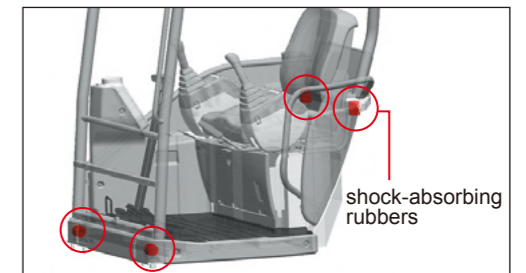
● Clear Roof Sun Visor (4 Pole Canopy)

A clear sun visor is mounted at the front of the roof to secure the visibility for upper operation.



● Shock-Absorbing Rubber Mounted Cabin / Canopy Floor

The cabin / canopy floor is mounted on 4 shock-absorbing rubbers to ensure comfortable operation.



Pilot Control Shut-Off Lever and Neutral Engine Start System

All operations such as front swing, travel and blade are shut off when the pilot control lever is up. It prevents accidental movement. The engine can start only when the pilot control shut-off lever is locked. This is called the neutral engine start system. It eliminates unexpected operation.



● Brakes on Both The Swing and Travel Operation are equipped as Standard for Safety

SPECIFICATIONS AX33u/38u-5

ENGINE

Model	Yanmar 3TNV88
Type	4-cycle water-cooled, direct injection
No. of cylinders	3
Rated power	
ISO 9249, net	21.3 kW (28.5 HP) at 2,400 min ⁻¹ (rpm)
EEC 80/1269, net	21.3 kW (28.5 HP) at 2,400 min ⁻¹ (rpm)
SAE J1349, net	21.3 kW (28.5 HP) at 2,400 min ⁻¹ (rpm)
DIN 6271, net	21.2 kW (28.4 HP) at 2,400 min ⁻¹ (rpm)
Gross	22.0 kW (29.9 HP) at 2,400 min ⁻¹ (rpm)
Maximum torque	106 Nm (10.8 kgf-m) at 1,000 min ⁻¹ (rpm)
Piston displacement	1.642 L
Bore and stroke	88 mm x 90 mm
Electric system	
Voltage	12 V
Batteries	55 Ah
Alternator	55 A
Starter motor	2.3 kW

HYDRAULIC SYSTEM

Main pumps	2 variable displacement axial piston pumps
	1 gear pump
Maximum oil flow	2 x 38.4 L/min
	1 x 25.2 L/min
Pilot pump	1 gear pump
Maximum oil flow	10.8 L/min
Auxiliary Maximum oil flow	63.6 L/min

Hydraulic Motors

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

Relief Valve Settings

Implement circuit	24.5 MPa (250 kgf/cm ²)
Swing circuit (AX33u)	14.8 MPa (150 kgf/cm ²)
(AX38u)	16.7 MPa (170 kgf/cm ²)
Travel circuit	24.5 MPa (250 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)
Auxiliary circuit	24.5 MPa (250 kgf/cm ²)

Hydraulic Cylinders

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

Dimensions

	Quantity	Bore	Rod diameter	Stroke
Boom	1	80 mm	45 mm	579 mm
	1	85 mm	50 mm	576 mm
Arm	1	70 mm	40 mm	546 mm
	1	75 mm	45 mm	597 mm
Bucket	1	65 mm	40 mm	435 mm
	1	65 mm	40 mm	435 mm
Blade	1	85 mm	45 mm	135 mm
	1	95 mm	45 mm	140 mm
Boom swing	1	85 mm	45 mm	525 mm
	1	85 mm	45 mm	525 mm

Figure in are data on the AX33u-5
Figure in are data on the AX38u-5

NOISE LEVEL

Noise level (LwA)(2000/14/EC)	95 dB(A)
Noise level (LpA)(ISO6396)	79 dB(A)

FRONT ATTACHMENTS

BACKHOE BUCKETS

ISO 7451 capacity	Width		No. of teeth	Weight	Front Attachment	
	Without side cutters	With side cutters			AX33u-5	AX38u-5
					1.52m arm	1.72m arm
0.09 m ³	450 mm	500 mm	4	73 kg	B	A
0.11 m ³	550 mm	600 mm	4	80 kg	C	B
Arm crowd force					14.7kN (1,500 kgf)	17.2kN (1,750 kgf)
Bucket digging force					27.5kN (2,800 kgf)	27.5kN (2,800 kgf)

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

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 lubricated by hydraulic oil. Swing circle is single-row, shear-type ball bearing with inductionhardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed	9.0 min ⁻¹ (rpm)
Swing torque (AX33u)	4.86 kN-m (496 kgf-m)
(AX38u)	5.47 kN-m (558 kgf-m)

Operator's Cab

Independent spacious cab, 960mm wide by 1,520mm high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat.
* International Standardization Organization

UNDERCARRIAGE

Tracks

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

Numbers of Rollers and Shoes on Each Side

Upper rollers	1
Lower rollers	4

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 speeds	High : 0 to 4.4 km/h
	Low : 0 to 2.9 km/h
Maximum traction force	27 kN (2,750 kgf)
Gradeability	58 % (30 degree) continuous

WEIGHTS AND GROUND PRESSURE

AX33u-5 Equipped with 2.28m boom, 1.52m arm and 0.09m³ bucket (ISO heaped) rubber shoes 300mm. AX38u-5 Equipped with 2.47m boom, 1.72m arm and 0.11m³ bucket (ISO heaped) rubber shoes 300mm.

	AX33u-5		AX38u-5	
	Operating weight	Ground pressure	Operating weight	Ground pressure
4-Pillars Canopy	3,300 kg	30 kPa (0.30 kgf/cm ²)	3,790 kg	34 kPa (0.35 kgf/cm ²)
Cabin	3,470 kg	31 kPa (0.32 kgf/cm ²)	3,960 kg	36 kPa (0.36 kgf/cm ²)

* AX33u-5 Operating weight with 0.09m³ bucket if fully serviced +80kg operator ISO 6016.
* AX38u-5 Operating weight with 0.11m³ bucket if fully serviced +80kg operator ISO 6016.

CONTROLS

Hydraulic pilot control levers for all operations.

SERVICE REFILL CAPACITIES

Fuel tank	40.0 L
Engine coolant	5.0 L
Engine oil	7.2 L
Travel device (each side)	0.6 L
Hydraulic system	56.0 L
Hydraulic oil tank	32.0 L

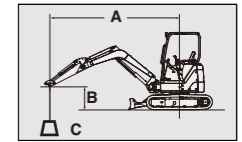
LIFTING CAPACITIES

Notes:Notes: 1. Rating are based on ISO 10567.

2. Lifting capacity of the AX Series does not exceed 75% of tipping loadwith the machine on firm, level ground or 87% full hydraulic capacity.

3. Load point is the center - line of the Bucket pivot mounting Pin on the Arm.

Side: Rating over-side or 360 degrees
Front: Rating over-front



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

AX33u-5 Cabin Version, Blade above Ground



Rating over-side or 360 degrees



Rating over-front

Unit: 1,000 kg

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.52 m Rubber shoes 300 mm	3.0 m							0.42	0.53	3.88
	2.0 m			0.62	0.79	0.39	0.50	0.34	0.44	4.33
	1.0 m			0.57	0.74	0.38	0.48	0.32	0.41	4.45
	0 (Ground)	0.97	1.33	0.54	0.70	0.36	0.47	0.33	0.42	4.29
	-1.0 m	0.97	1.33	0.53	0.70			0.39	0.50	3.81

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.52 m Rubber shoes 300 mm Additional counterweight 190 kg	3.0 m							0.48	0.60	3.88
	2.0 m			0.70	*0.85	0.45	0.57	0.40	0.50	4.33
	1.0 m			0.66	0.84	0.44	0.55	0.37	0.47	4.45
	0 (Ground)	1.12	1.52	0.63	0.81	0.42	0.54	0.38	0.49	4.29
	-1.0 m	1.12	1.53	0.62	0.80			0.45	0.57	3.81

AX33u-5 Cabin Version, Blade on Ground

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.52 m Rubber shoes 300 mm	3.0 m							0.42	*0.74	3.88
	2.0 m			0.62	*0.85	0.39	*0.78	0.34	*0.73	4.33
	1.0 m			0.57	*1.18	0.38	*0.89	0.32	*0.79	4.45
	0 (Ground)	0.97	*1.56	0.54	*1.40	0.36	*0.96	0.33	*0.87	4.29
	-1.0 m	0.97	*2.41	0.53	*1.36			0.39	*0.93	3.81

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.52 m Rubber shoes 300 mm Additional counterweight 190 kg	3.0 m							0.48	*0.74	3.88
	2.0 m			0.70	*0.85	0.45	*0.78	0.40	*0.73	4.33
	1.0 m			0.66	*1.18	0.44	*0.89	0.37	*0.79	4.45
	0 (Ground)	1.12	*1.56	0.63	*1.40	0.42	*0.96	0.38	*0.87	4.29
	-1.0 m	1.12	*2.41	0.62	*1.36			0.45	*0.93	3.81

AX38u-5 Cabin Version, Blade above Ground

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.72 m Rubber shoes 300 mm	3.0 m							0.49	0.50	4.30
	2.0 m			0.84	*0.85	0.54	0.55	0.42	0.43	4.69
	1.0 m			0.78	0.81	0.51	0.53	0.39	0.40	4.81
	0 (Ground)	1.36	1.45	0.74	0.77	0.49	0.51	0.40	0.41	4.66
	-1.0 m	1.36	1.45	0.73	0.76	0.49	0.50	0.45	0.47	4.24

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.72 m Rubber shoes 300 mm Additional counterweight 230 kg	3.0 m							0.57	0.59	4.30
	2.0 m			*0.85	*0.85	0.62	0.64	0.49	0.50	4.69
	1.0 m			0.91	0.95	0.60	0.62	0.46	0.47	4.81
	0 (Ground)	*1.55	*1.55	0.86	0.90	0.58	0.60	0.47	0.49	4.66
	-1.0 m	1.58	1.70	0.85	0.89	0.57	0.60	0.53	0.55	4.24

AX38u-5 Cabin Version, Blade on Ground

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.72 m Rubber shoes 300 mm	3.0 m							0.49	*0.74	4.30
	2.0 m			0.84	*0.85	0.54	*0.79	0.42	*0.78	4.69
	1.0 m			0.78	*1.25	0.51	*0.93	0.39	*0.82	4.81
	0 (Ground)	1.36	*1.55	0.74	*1.54	0.49	*1.05	0.40	*0.88	4.66
	-1.0 m	1.36	*2.50	0.73	*1.57	0.49	*1.04	0.45	*0.94	4.24

Conditions	Load point height	Load radius						At max. reach		
		2.0 m		3.0 m		4.0 m		meter		
		Side	Front	Side	Front	Side	Front			
Arm 1.72 m Rubber shoes 300 mm Additional counterweight 230 kg	3.0 m							0.57	*0.74	4.30
	2.0 m			*0.85	*0.85	0.62	*0.79	0.49	*0.78	4.69
	1.0 m			0.91	*1.25	0.60	*0.93	0.46	*0.82	4.81
	0 (Ground)	*1.55	*1.55	0.86	*1.54	0.58	*1.05	0.47	*0.88	4.66
	-1.0 m	1.58	*2.50	0.85	*1.57	0.57	*1.04	0.53	*0.94	4.24

SPECIFICATIONS

AX48u/52u-5

ENGINE

Model.....	Yanmar 4TNV88
Type.....	4-cycle water-cooled, direct injection
No. of cylinders.....	4
Rated power	
ISO 9249, net.....	28.4 kW (38.1 HP) at 2,400 min ⁻¹ (rpm)
EEC 80/1269, net.....	28.4 kW (38.1 HP) at 2,400 min ⁻¹ (rpm)
SAE J1349, net.....	28.4 kW (38.1 HP) at 2,400 min ⁻¹ (rpm)
DIN 6271, net.....	28.2 kW (37.8 HP) at 2,400 min ⁻¹ (rpm)
Gross.....	29.5 kW (39.5 HP) at 2,400 min ⁻¹ (rpm)
Maximum torque.....	141 Nm (14.4 kgf-m) at 1,100 min ⁻¹ (rpm)
Piston displacement.....	2.189 L
Bore and stroke.....	88 mm x 90 mm
Electric system	
Voltage.....	12 V
Batteries.....	72 Ah
Alternator.....	55 A
Starter motor.....	2.3 kW

HYDRAULIC SYSTEM

Main pumps.....	1 variable displacement axial piston pumps
Maximum oil flow.....	1 x 120 L/min
Pilot pump.....	1 gear pump
Maximum oil flow.....	12.0 L/min
Auxiliary Maximum oil flow.....	85.0 L/min

Hydraulic Motors

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

Relief Valve Settings

Implement circuit.....	24.5 MPa (250 kgf/cm ²)
Swing circuit.....	18.1 MPa (185 kgf/cm ²)
Travel circuit.....	24.5 MPa (250 kgf/cm ²)
Pilot circuit.....	5.9 MPa (60.2 kgf/cm ²)
Auxiliary circuit.....	24.5 MPa (250 kgf/cm ²)

Hydraulic Cylinders

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

Dimensions

	Quantity	Bore	Rod diameter	Stroke
Boom	1	90 mm	55 mm	702 mm
	1	95 mm	55 mm	702 mm
Arm	1	80 mm	50 mm	698 mm
	1	80 mm	50 mm	731 mm
Bucket	1	70 mm	40 mm	551 mm
	1	75 mm	45 mm	551 mm
Blade	1	105 mm	50 mm	140 mm
	1	105 mm	50 mm	140 mm
Boom swing	1	90 mm	50 mm	664 mm
	1	90 mm	50 mm	664 mm

Figure in are data on the AX48u-5
 Figure in are data on the AX52u-5

NOISE LEVEL

Noise level (LwA)(2000/14/EC).....	96 dB(A)
Noise level (LpA)(ISO6396).....	78 dB(A)

FRONT ATTACHMENTS

BACKHOE BUCKETS

ISO 7451 capacity	Width		No. of teeth	Weight	Front Attachment	
	Without side cutters	With side cutters			AX48u-5	AX52u-5
					1.69m arm	1.69m arm
0.14 m ³	550 mm	600 mm	4	109 kg	C	A
0.16 m ³	600 mm	650 mm	4	113 kg	C	B
Arm crowd force					21.0 kN (2,140 kgf)	21.0 kN (2,140 kgf)
Bucket digging force					32.1 kN (3,270 kgf)	36.8 kN (3,750 kgf)

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

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 lubricated by hydraulic oil. Swing circle is single-row, shear-type ball bearing with inductionhardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed.....	9.0 min ⁻¹ (rpm)
Swing torque.....	8.92 kN-m (910 kgf-m)

Operator's Cab

Independent spacious cab, 960mm wide by 1,520mm high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat.
 * International Standardization Organization

UNDERCARRIAGE

Tracks

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

Numbers of Rollers and Shoes on Each Side

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

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 speeds.....	High : 0 to 4.2 km/h
	Low : 0 to 2.7 km/h
Maximum traction force.....	38.3 kN (3,905 kgf)
Gradeability.....	58 % (30 degree) continuous

WEIGHTS AND GROUND PRESSURE

AX48u-5 Equipped with 2.68 m boom, 1.69 m arm and 0.14 m³ bucket (ISO heaped) rubber shoes 400mm. AX52u-5 Equipped with 2.85m boom, 1.69m arm and 0.16m³ bucket (ISO heaped) rubber shoes 400mm.

	AX48u-5		AX52u-5	
	Operating weight	Ground pressure	Operating weight	Ground pressure
4-Pillars Canopy	4,850 kg	27 kPa (0.28 kgf/cm ²)	5,180 kg	29 kPa (0.30 kgf/cm ²)
Cabin	5,010 kg	28 kPa (0.29 kgf/cm ²)	5,340 kg	30 kPa (0.31 kgf/cm ²)

* AX48u-5 Operating weight with 0.14m³ bucket if fully serviced +80kg operator ISO 6016.
 * AX52u-5 Operating weight with 0.16m³ bucket if fully serviced +80kg operator ISO 6016.

CONTROLS

Hydraulic pilot control levers for all operations.

SERVICE REFILL CAPACITIES

Fuel tank.....	70.0 L
Engine coolant.....	6.5 L
Engine oil.....	8.6 L
Travel device (each side).....	0.9 L
Hydraulic system.....	77.0 L
Hydraulic oil tank.....	50.0 L

LIFTING CAPACITIES

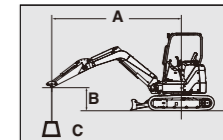
Notes:Notes: 1. Rating are based on ISO 10567.

2. Lifting capacity of the AX Series does not exceed 75% of tipping loadwith the machine on firm, level ground or 87% full hydraulic capacity.

3. Load point is the center - line of the Bucket pivot mounting Pin on the Arm.

Side: Rating over-side or 360 degrees

Front: Rating over-front



A: Load radius

B: Load point height

C: Lifting capacity

AX48u-5 Cabin Version, Blade above Ground

Rating over-side or 360 degrees

Rating over-front

Unit: 1,000 kg

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm	3.0 m					0.72	0.88			0.53	0.65	4.77
	2.0 m			1.09	1.36	0.69	0.85	0.48	0.59	0.46	0.57	5.10
	1.0 m			0.99	1.25	0.65	0.81	0.46	0.57	0.44	0.54	5.18
	0 (Ground)			0.93	1.19	0.62	0.77	0.45	0.56	0.45	0.56	5.02
	-1.0 m	1.79	2.45	0.92	1.18	0.61	0.77			0.51	0.63	4.59

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm Additional counterweight 220 kg	3.0 m					0.81	*0.97			0.60	0.73	4.77
	2.0 m			1.22	*1.41	0.78	0.95	0.55	0.67	0.53	0.64	5.10
	1.0 m			1.12	1.41	0.74	0.91	0.53	0.65	0.50	0.62	5.18
	0 (Ground)			1.07	1.35	0.71	0.88	0.52	0.64	0.52	0.64	5.02
	-1.0 m	2.04	*2.59	1.06	1.34	0.70	0.87			0.59	0.72	4.59

AX48u-5 Cabin Version, Blade on Ground

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm	3.0 m					0.72	*0.97			0.53	*0.85	4.77
	2.0 m			1.09	*1.41	0.69	*1.13	0.48	*1.01	0.46	*0.85	5.10
	1.0 m			0.99	*1.96	0.65	*1.33	0.46	*1.06	0.44	*0.91	5.18
	0 (Ground)			0.93	*2.21	0.62	*1.45	0.45	*1.06	0.45	*1.05	5.02
	-1.0 m	1.79	*2.59	0.92	*2.09	0.61	*1.38			0.51	*1.08	4.59

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm Additional counterweight 220 kg	3.0 m					0.81	*0.97			0.60	*0.85	4.77
	2.0 m			1.22	*1.41	0.78	*1.13	0.55	*1.01	0.53	*0.85	5.10
	1.0 m			1.12	*1.96	0.74	*1.33	0.53	*1.06	0.50	*0.91	5.18
	0 (Ground)			1.07	*2.21	0.71	*1.45	0.52	*1.06	0.52	*1.05	5.02
	-1.0 m	2.04	*2.59	1.06	*2.09	0.70	*1.38			0.59	*1.08	4.59

AX52u-5 Cabin Version, Blade above Ground

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm	3.0 m					0.86	1.01			0.59	0.70	4.99
	2.0 m			1.29	1.54	0.83	0.98	0.58	0.69	0.53	0.62	5.31
	1.0 m			1.18	1.43	0.78	0.93	0.56	0.67	0.50	0.60	5.39
	0 (Ground)			1.13	1.37	0.75	0.90	0.55	0.65	0.52	0.61	5.24
	-1.0 m	2.18	*2.28	1.12	1.36	0.74	0.89			0.58	0.69	4.83

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm Additional counterweight 220 kg	3.0 m					0.96	*1.02			0.67	*0.72	4.99
	2.0 m			1.42	*1.57	0.92	1.08	0.65	0.77	0.59	0.69	5.31
	1.0 m			1.32	1.59	0.88	1.04	0.64	0.75	0.57	0.67	5.39
	0 (Ground)			1.26	1.53	0.84	1.00	0.62	0.73	0.58	0.69	5.24
	-1.0 m	*2.28	*2.28	1.25	1.52	0.84	0.99			0.65	0.77	4.83

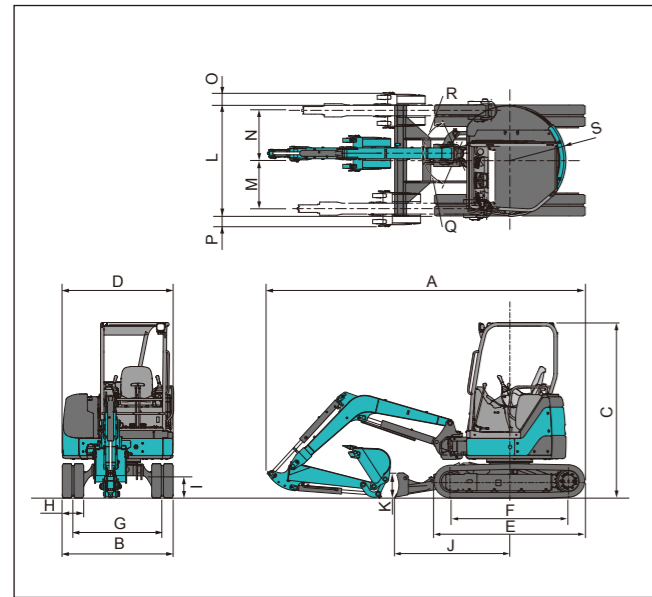
AX52u-5 Cabin Version, Blade on Ground

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm	3.0 m					0.86	*1.02			0.59	*0.72	4.99
	2.0 m			1.29	*1.57	0.83	*1.22	0.58	*1.08	0.53	*0.72	5.31
	1.0 m			1.18	*2.20	0.78	*1.46	0.56	*1.16	0.50	*0.76	5.39
	0 (Ground)			1.13	*2.47	0.75	*1.61	0.55	*1.21	0.52	*0.86	5.24
	-1.0 m	2.18	*2.28	1.12	*2.37	0.74	*1.59			0.58	*1.07	4.83

Conditions	Load point height	Load radius								At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m				meter
Arm 1.69 m Rubber shoes 400 mm Additional counterweight 220 kg	3.0 m					0						

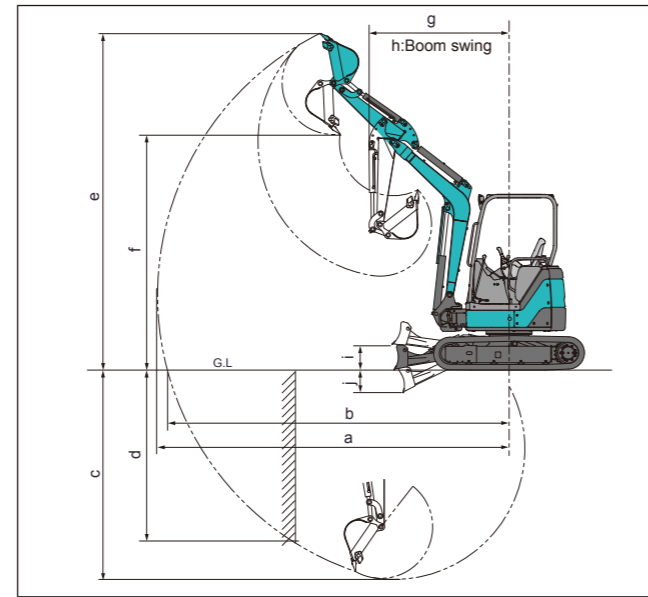
DIMENSIONS & WORKING RANGES

● DIMENSIONS



Note:
The illustration shows the AX33u-5 canopy version equipped with 1.17m arm and 300mm rubber shoes.

● WORKING RANGES



Note:
The illustration shows the AX33u-5 canopy version equipped with 0.09m³ bucket, 1.17m arm and 300mm rubber shoes.

● DIMENSIONS & WORKING RANGES

Unit: mm

Item	Model	AX29u-5		AX33u-5		AX38u-5		AX48u-5		AX52u-5	
		Canopy	Cabin	Canopy	Cabin	Canopy	Cabin	Canopy	Cabin	Canopy	Cabin
Shoe type											
Roof type											
DIMENSIONS	A: Max. transport length (with short arm)	4,280(4,200)		4,560(4,450)		4,780(4,650)		5,380(5,340)		5,520(5,460)	
	B: Undercarriage width	1,550		1,550		1,740		1,960		2,000	
	C: Overall height	2,460	2,500	2,460	2,500	2,460	2,500	2,510	2,550	2,510	2,550
	D: Upper structure width	1,550		1,550		1,550		1,850		1,850	
	E: Undercarriage length	1,950		2,100		2,100		2,500		2,500	
	F: Sprocket center to idler center	1,490		1,650		1,650		1,990		1,990	
	G: Distance between undercarriage center	1,250		1,250		1,440		1,560		1,600	
	H: Track shoe width	300		300		300		400		400	
	I: Min. ground clearance	320		280		280		340		340	
	J: Parallel blade distance	1,530		1,610		1,610		1,720		1,720	
	K: Blade height	320		355		355		360		360	
	L: Blade width	1,550		1,550		1,740		1,960		2,000	
	M: Left offset distance	605		605		605		695		695	
	N: Right offset distance	740	700	740	700	740	700	860	860	860	860
	O: Right over width	215	175	215	175	170	130	180	180	185	185
	P: Left over width	80		80		35		15		20	
	Q: Left max. boom swing angle	72	62	72	62	72	62	80	80	80	80
R: Right max. boom swing angle	62		62		62		60		60		
S: Rear edge swing radius	865		865		960		1,060		1,080		
WORKING RANGES	a: Max. digging reach (with short arm)	4,920(4,670)		5,170(4,890)		5,520(5,210)		6,030(5,740)		6,240(5,940)	
	b: Max. digging reach at ground	4,790(4,530)		5,040(4,750)		5,400(5,080)		5,900(5,590)		6,110(5,800)	
	c: Max. digging depth (with short arm)	2,890(2,590)		3,130(2,780)		3,450(3,050)		3,650(3,340)		3,860(3,550)	
	d: Max. vertical wall (with short arm)	2,390(2,200)		2,540(2,340)		2,800(2,590)		2,900(2,550)		3,160(2,820)	
	e: Max. cutting height (with short arm)	4,550(4,450)	4,350(4,280)	4,700(4,620)	4,470(4,430)	4,950(4,870)	4,760(4,710)	5,840(5,600)	5,700(5,480)	6,010(5,760)	5,870(5,630)
	f: Max. dumping height (with short arm)	3,300(3,190)	3,120(3,030)	3,310(3,210)	3,100(3,040)	3,570(3,470)	3,390(3,320)	4,160(3,920)	4,040(3,810)	4,330(4,080)	4,200(3,960)
	g: Min. swing radius (with short arm)	2,040(1,960)	2,100(2,050)	2,080(1,950)	2,180(2,140)	2,170(2,070)	2,300(2,230)	2,330(2,190)	2,390(2,270)	2,280(2,150)	2,320(2,300)
	h: Max. boom swing (with short arm)	1,640(1,580)	1,790(1,750)	1,660(1,580)	1,730(1,730)	1,730(1,670)	1,970(1,810)	1,820(1,710)	1,880(1,780)	1,770(1,680)	1,820(1,790)
	i: Blade bottom highest position (above ground)	360		360		370		430		430	
	j: Blade bottom lowest position (under ground)	315		320		390		335		335	

The figure in () shows the machine equipped with short arm.

EQUIPMENT

● STANDARD EQUIPMENT

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

ENGINE

- Water-separator for engine fuel
- Radiator reserve tank
- Electrical fuel feed pump
- Cartridge-type engine oil filter
- Fuel filter

HYDRAULIC SYSTEM

- Hydraulic pilot type control levers
- Pilot control shut-off lever with neutral engine start system
- Swing parking brake
- Travel parking brake
- Two-speed travel system
- Auto idling system (AX33u~52u)
- Suction filter
- Full-flow filter
- Pilot filter
- Boom anti-drift valve (AX33u~52u)
- Valve for extra piping

CABIN

- ROPS/OPG cab
- Air conditioner
- AM/FM radio
- Window washer
- Defroster
- Reclining seat
- Suspension seat
- Retractable seat belt
- Wrist rests
- Wiper
- Drink holder
- Electric horn
- Cigarette lighter (inside 12V outlet)
- Ashtray
- Floor mat
- Rearview mirror
- Spare power supply (outside 12V outlet)

● OPTIONAL EQUIPMENT

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

4-PILLARS CANOPY

- ROPS/OPG canopy
- Reclining seat
- Suspension seat
- Retractable seat belt
- Wrist rests
- Drink holder
- Electric horn
- Cigarette lighter (12V outlet)
- Floor mat
- Rearview mirror (AX48u/52u)

UPPERSTRUCTURE

- Additional counterweight
- Two work lights
- Utility box
- Stack muffler(AX48u/52u for cabin)

UNDERCARRIAGE

- 300mm rubber shoes(AX29u/33u/38u)
- 400mm rubber shoes(AX48u/52u)

FRONT ATTACHMENTS

- Original bushing
- 1.47m arm(AX29u)
- 1.52m arm(AX33u)
- 1.72m arm(AX38u)
- 1.69m arm(AX48u/52u)

UPPERSTRUCTURE

- Rearview mirror(AX29u~38u for canopy)
- Accumulator
- Theft deterrent system
- AFL(AUX Function lever)
- Auxiliary overload relief valve

UNDERCARRIAGE

- Grouser shoes
- Pad crawler shoes

FRONT ATTACHMENTS

- Backhoe buckets(refer to specification page)
- 1.17m arm(AX29u/33u)
- 1.32m arm(AX38u)
- 1.38m arm(AX48u/52u)