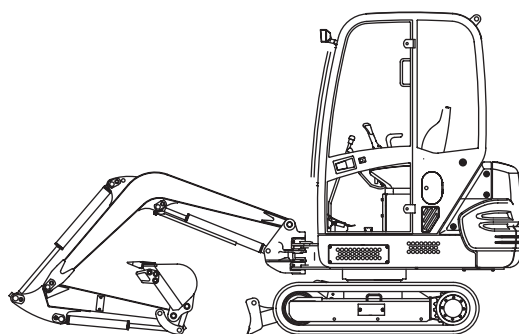


HITACHI ZAXIS18

engine rated power
8.8 kW / 11.8 HP

operating weight
1 710 kg (canopy)
1 780 kg (cabin)

bucket capacity
0.02 - 0.05 m³



HITACHI

Engine

Model	Isuzu 3YB1
Type	Water-cooled, 4-cycle, 3-cylinder swirl chamber type diesel engine
Rated flywheel power	8.7 kW (11.9 PS)
DIN 6271, net	at 2 300 min ⁻¹ (rpm)
Rated flywheel power	8.8 kW (11.8 HP)
SAE J1349, net	at 2 300 min ⁻¹ (rpm)
Maximum torque	38.8 Nm (3.96 kgf/m)
	at 1 700 min ⁻¹ (rpm)
Piston Displacement	0.761 l
Bore and stroke	67 mm x 72 mm
Battery	1 x 12 V, 36 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 16.1 l/min
Third pump	1 gear pump
Maximum oil flow	10.4 l/min
Pilot pump	1 gear pump
Maximum oil flow	6.2 l/min

RELIEF VALVE SETTINGS

Implement circuit	20.6 MPa (210 kgf/cm ²)
Swing circuit	12.3 MPa (125 kgf/cm ²)
Travel circuit	20.6 MPa (210 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)

HYDRAULIC CYLINDERS

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom raise circuit to absorb shocks at stroke ends.

DIMENSIONS

	Qty.	Bore	Rod dia.	Stroke
Boom	1	55 mm	30 mm	427 mm
Arm	1	55 mm	30 mm	420 mm
Bucket	1	50 mm	30 mm	311 mm
Boom swing	1	60 mm	30 mm	358 mm
Blade	1	65 mm	35 mm	97 mm
Span	1	50 mm	30 mm	310 mm

Controls

Hydraulic pilot control levers for boom, arm, bucket, swing and travel. Mechanical linkage control levers for boom swing, blade/track width and hydraulic PTO.

Swing mechanism

High-torque, orbit motor. 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 9.1 min⁻¹ (9.1 rpm)

Undercarriage

TRACKS

Tractor-type undercarriage. Welded track frame using carefully selected materials. Side frame extended by span cylinder.

NUMBERS OF ROLLERS ON EACH SIDE

Upper guide plate	2
Lower rollers	3

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 speeds (rubber shoes)	High: 0 - 4.0 km/h Low: 0 - 2.0 km/h
Travel speeds (grouser shoes)	High: 0 - 4.0 km/h Low: 0 - 2.0 km/h
Gradeability	30° (58%) continuous

Weights and ground pressure

Equipped with 0.93 m arm and 0.044 m³ (PCSA heaped) bucket.

	Operating weight	Ground pressure
4-Pillar canopy version		
230 mm rubber shoes	1 710 kg	29 kPa (0.30 kgf/cm ²)
230 mm grouser shoes	1 770 kg	30 kPa (0.31 kgf/cm ²)
Cabin version		
230 mm rubber shoes	1 780 kg	30 kPa (0.31 kgf/cm ²)
230 mm grouser shoes	1 840 kg	31 kPa (0.32 kgf/cm ²)

Front-end attachments

BACKHOE BUCKETS

ISO 7451 capacity	Width		No. of teeth	Weight	Use	
	Without side cutters	With side cutters			0.93 m Short arm	1.13 m Long arm
0.02 m ³	225 mm	250 mm	2	25 kg	A	A
0.035 m ³	325 mm	350 mm	3	29 kg	A	A
0.04 m ³	385 mm	410 mm	3	31 kg	A	A
0.044 m ³	425 mm	450 mm	3	32 kg	A	B
0.05 m ³	475 mm	500 mm	4	36 kg	B	C
Arm crowd force					8.9 kN (910 kgf)	8.1 kN (820 kgf)
Bucket digging force					13.5 kN (1 380 kgf)	

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

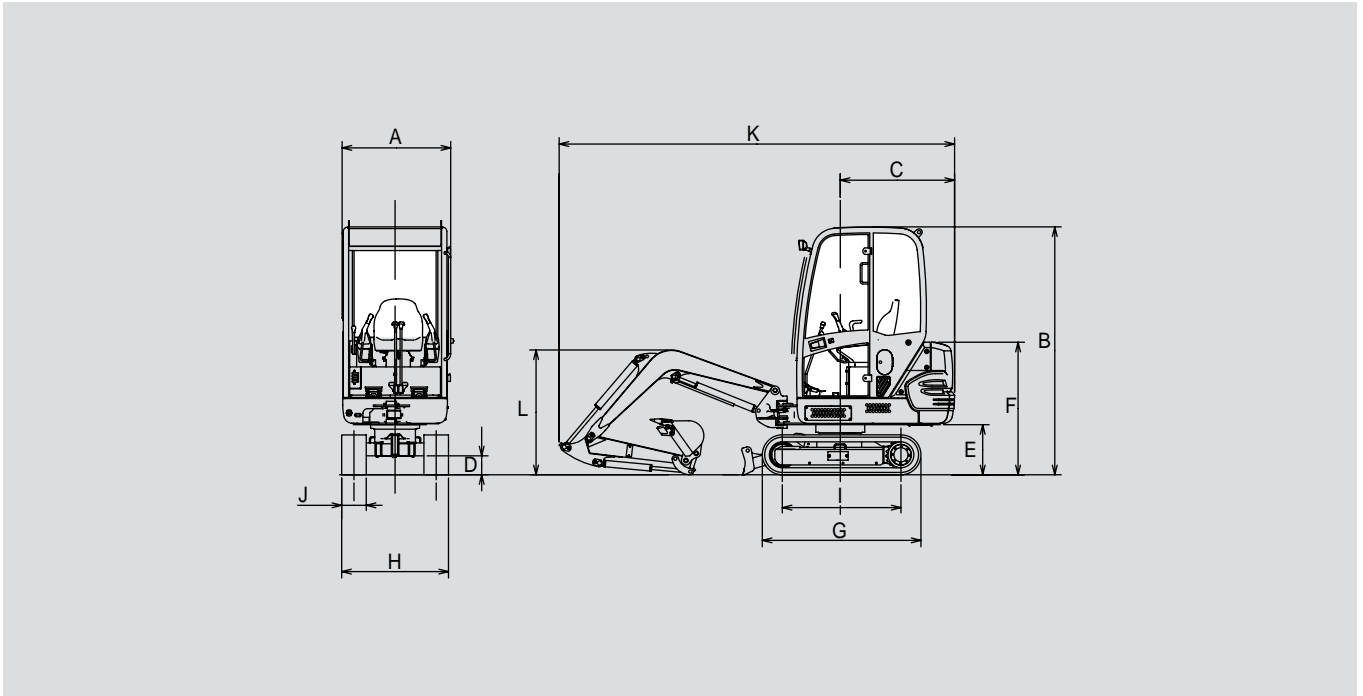
Boom swing angle. Left 70°, Right 50°

Dimensions

Unit: mm

The 4-pillar canopy or cabin can be mounted on the upper structure according to job needs and applicable regulations.

The 4-pillar canopy and cabin conform to TOPS (ISO 12117) and FOPS (ISO 10262, Level I) requirements.



Notes:

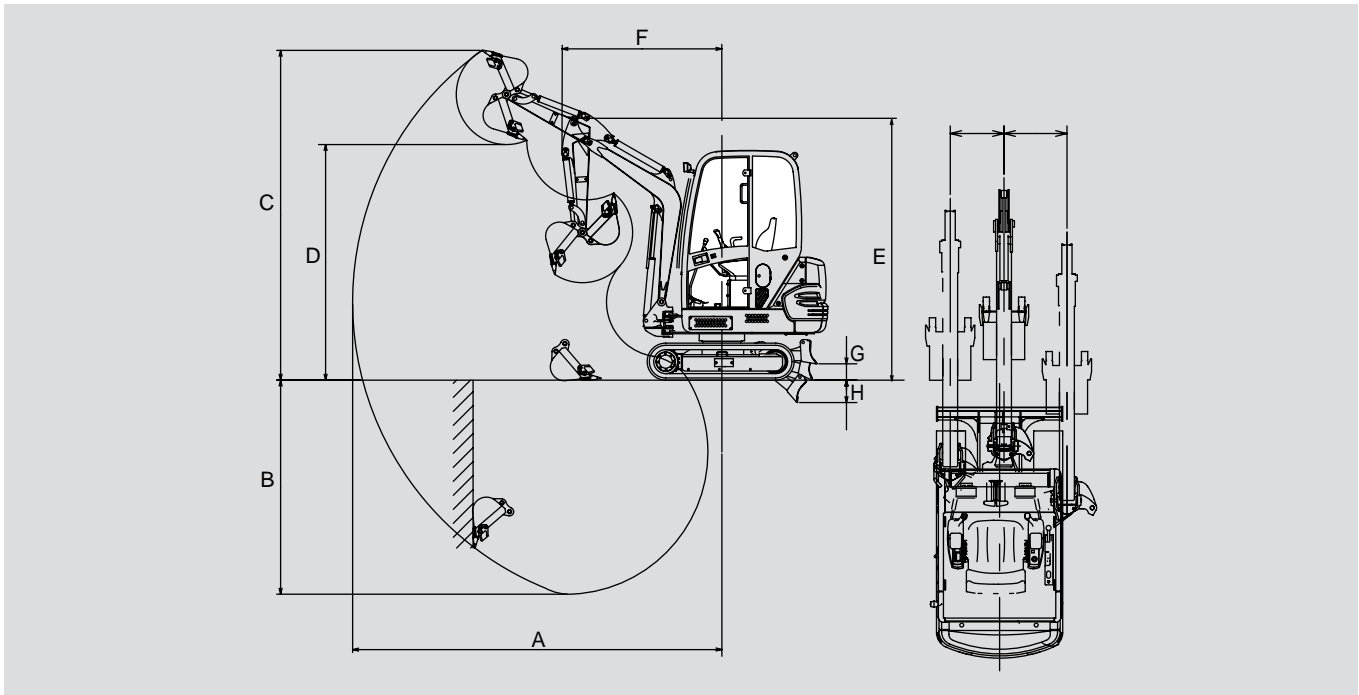
1. The illustration shows the cabin version equipped with 230 mm rubber shoes.
2. Values are identical to the cabin and canopy versions.

Unit: mm

	ZAXIS18
A Overall width	1 050
B Canopy / Cabin height	2 310
C Rear-end swing radius	1 070
D Minimum ground clearance	175
E Counterweight clearance	470
F Engine cover height	1 240
G Undercarriage length	1 470
H Undercarriage width extended / retracted	1 300 / 1 000
I Sprocket centre to idler centre	1 110
J Track shoe width	230
K Maximum transport length	3 690
L Overall height of boom	1 150

Working ranges

Unit: mm



Notes:

1. The illustration shows the cabin version equipped with 0.044 m³ bucket, 0.93 m arm and 230 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

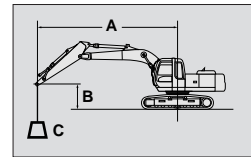
Unit: mm

	ZAXIS18	
	Canopy & Cabin	
	0.93 m arm	1.13 m arm
A Maximum digging reach	3 740	3 920
B Maximum digging depth	2 200	2 400
C Maximum cutting height	3 300	3 390
D Maximum dumping height	2 350	2 440
E Transport height	2 640	2 640
F Minimum swing radius	1 620	1 660
G Blade bottom highest position (above ground level)	170	170
H Blade bottom lowest position (below ground level)	220	220
Maximum boom-swing angle	L70° / R50°	L70° / R50°
Offset distance	L490 / R400	L490 / R400

LIFTING CAPACITIES

Metric measure

(Equipped with cabin)



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

ZAXIS18 WITH BLADE ABOVE GROUND, UNDERCARRIAGE RETRACTED 1.00 M



Rating over-side or 360 degrees



Rating over-front

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 0.93 m	2 m			*2.61	2.10	2.30	1.74	3.38
Bucket 0.044 m ³	1 m	*4.90	3.66	2.70	2.02	2.04	1.52	3.59
Rubber shoes 230 mm	0 m	4.67	3.41	2.60	1.93	2.17	1.62	3.40
	-1 m	4.68	3.43					

ZAXIS18 WITH BLADE ON GROUND, UNDERCARRIAGE RETRACTED 1.00 M

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 0.93 m	2 m			*2.61	2.10	*2.51	1.74	3.38
Bucket 0.044 m ³	1 m	*4.90	3.66	*3.01	2.02	*2.65	1.52	3.59
Rubber shoes 230 mm	0 m	*6.27	3.41	*3.43	1.93	*2.79	1.62	3.40
	-1 m	*5.15	3.43					

ZAXIS18 WITH BLADE ABOVE GROUND, UNDERCARRIAGE EXTENDED 1.30 M

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 0.93 m	2 m			*2.61	*2.61	*2.51	2.30	3.38
Bucket 0.044 m ³	1 m	*4.90	*4.90	2.96	2.70	2.25	2.04	3.59
Rubber shoes 230 mm	0 m	5.14	4.67	2.86	2.60	2.39	2.17	3.40
	-1 m	*5.15	4.68					

ZAXIS18 WITH BLADE ON GROUND, UNDERCARRIAGE EXTENDED 1.30 M

Unit: kN

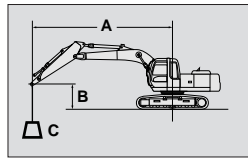
Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 0.93 m	2 m			*2.61	*2.61	*2.51	*2.51	3.38
Bucket 0.044 m ³	1 m	*4.90	*4.90	2.96	*3.01	2.25	2.65	3.59
Rubber shoes 230 mm	0 m	5.14	6.27	2.86	*3.43	2.39	*2.79	3.40
	-1 m	*5.15	*5.15					

- 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 a hook (not standard equipment) located on the back of the bucket.
 4. An asterisk mark (*) indicates load limited by hydraulic capacity.
 5. 0 m = Ground.

LIFTING CAPACITIES

Metric measure

(Equipped with cabin)



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

ZAXIS18 WITH BLADE ABOVE GROUND, UNDERCARRIAGE RETRACTED 1.00 M



Rating over-side or 360 degrees



Rating over-front

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 1.13 m	2 m			*2.28	2.13	2.11	1.59	3.57
Bucket 0.044 m ³	1 m	*4.26	3.74	2.71	2.04	1.88	1.40	3.77
Rubber shoes 230 mm	0 m	4.67	3.41	2.59	1.92	1.99	1.47	3.59
	-1 m	4.64	3.39	2.57	1.90	*2.66	1.98	2.95

ZAXIS18 WITH BLADE ON GROUND, UNDERCARRIAGE RETRACTED 1.00 M

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 1.13 m	2 m			*2.28	2.13	*2.28	1.59	3.57
Bucket 0.044 m ³	1 m	*4.26	3.74	*2.79	2.04	*2.43	1.40	3.77
Rubber shoes 230 mm	0 m	*6.21	3.41	*3.37	1.92	*2.60	1.47	3.59
	-1 m	*5.56	3.39	*3.02	1.90	*2.66	1.98	2.95

ZAXIS18 WITH BLADE ABOVE GROUND, UNDERCARRIAGE EXTENDED 1.30 M

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 1.13 m	2 m			*2.28	*2.28	2.11	2.32	3.57
Bucket 0.044 m ³	1 m	*4.26	*4.26	2.71	2.79	1.88	2.08	3.77
Rubber shoes 230 mm	0 m	4.67	5.15	2.59	2.85	1.99	2.20	3.59
	-1 m	4.64	5.12	2.57	2.83	*2.66	*2.66	2.95

ZAXIS18 WITH BLADE ON GROUND, UNDERCARRIAGE EXTENDED 1.30 M

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 1.13 m	2 m			*2.28	*2.28	*2.28	*2.32	3.57
Bucket 0.044 m ³	1 m	*4.26	*4.26	*2.79	*2.79	2.43	2.08	3.77
Rubber shoes 230 mm	0 m	*6.21	5.15	*3.37	2.85	2.60	*2.20	3.59
	-1 m	*5.56	5.12	*3.02	2.83	*2.66	*2.66	2.95

- Notes:
1. Ratings are based on ISO 10567.
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 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.
 5. 0 m = Ground.

Standard Equipment

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

ENGINE

- Water-separator for engine fuel system

HYDRAULIC SYSTEM

- Hydraulic pilot type control levers for boom, arm, bucket, swing and travel
- Mechanical linkage type control levers for boom swing, blade and hydraulic PTO

- Pilot control shut-off levers for boom, arm, bucket, swing and travel
- Two-speed travel system
- Swing parking brake
- Hydraulic piping for breaker

CANOPY (CABIN)

- One work lamp
- Heater*
- Windshield wiper*
- Windshield washer*

- Windshield defroster*
- Evacuation hammer*
- Seat belt
- Wrist rest
- 12 V outlet

Note: * For Cabin version

FRONT ATTACHMENTS

- 1.80 m boom
- 0.93 m arm
- 0.044 m³ hoe bucket
- O-ring type pin-seals for hoe bucket
- HN bushing

UNDERCARRIAGE

- 230 mm rubber shoes
- Short stay blade

Optional Equipment

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

CANOPY (CABIN)

- One work lamp

UNDERCARRIAGE

- 230 mm grouser shoes

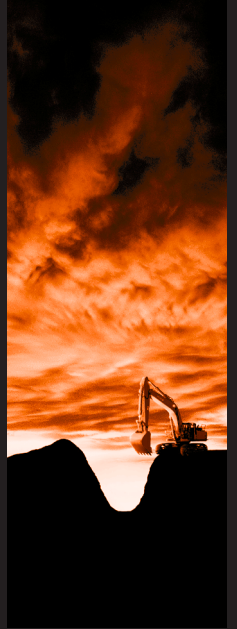
FRONT ATTACHMENTS

- 1.13 m arm

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**Breaking
new
ground**

HITACHI