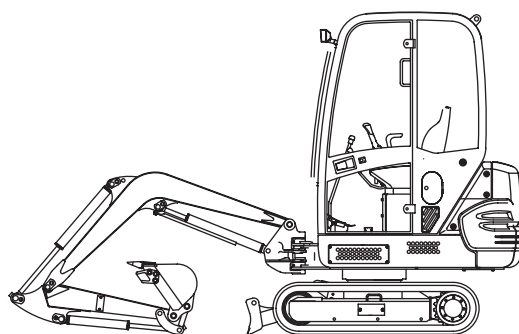


# HITACHI ZAXIS16

engine rated power  
**8.8 kW / 11.8 HP**

operating weight  
**1 590 kg (canopy)**  
**1 660 kg (cabin)**

bucket capacity  
**0.02 - 0.05 m<sup>3</sup>**



# 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 <sup>-1</sup> (rpm)
Rated flywheel power	8.8 kW (11.8 HP)
SAE J1349, net	at 2 300 min <sup>-1</sup> (rpm)
Maximum torque	38.8 Nm (3.96 kgf/m)
	at 1 700 min <sup>-1</sup> (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	One gear pump
Maximum oil flow	10.4 l/min
Pilot pump	One gear pump
Maximum oil flow	6.2 l/min

### RELIEF VALVE SETTINGS

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

### 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

## Controls

Hydraulic pilot control levers for boom, arm, bucket, swing and travel. Mechanical linkage control levers for boom swing, blade 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<sup>-1</sup> (9.1 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 guide plate	1
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 m<sup>3</sup> (PCSA heaped) bucket.

	Operating weight	Ground pressure
<b>4-Pillar canopy version</b>		
230 mm rubber shoes	1 590 kg	27 kPa (0.28 kgf/cm <sup>2</sup> )
230 mm grouser shoes	1 650 kg	28 kPa (0.29 kgf/cm <sup>2</sup> )
<b>Cabin version</b>		
230 mm rubber shoes	1 660 kg	28 kPa (0.29 kgf/cm <sup>2</sup> )
230 mm grouser shoes	1 720 kg	29 kPa (0.30 kgf/cm <sup>2</sup> )

## 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 <sup>3</sup>	225 mm	250 mm	2	25 kg	A	A
0.035 m <sup>3</sup>	325 mm	350 mm	3	29 kg	A	A
0.04 m <sup>3</sup>	385 mm	410 mm	3	31 kg	A	A
0.044 m <sup>3</sup>	425 mm	450 mm	3	32 kg	A	B
0.05 m <sup>3</sup>	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)	

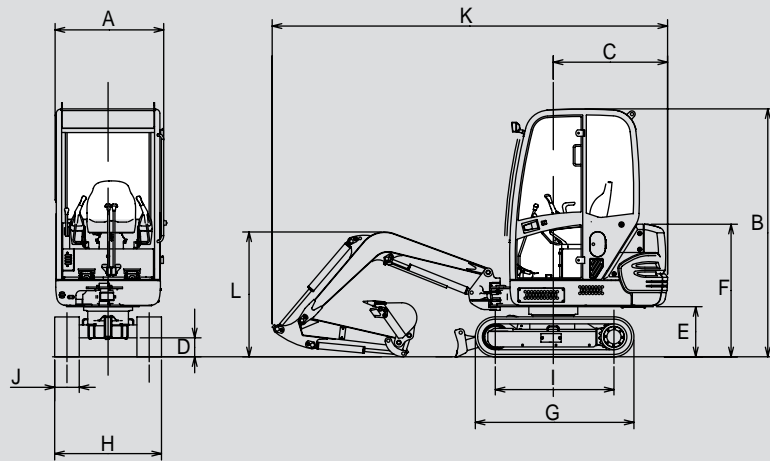
A: General digging B: Light-duty digging C: Loading

Boom swing angle. . . . . Left 70°, Right 50°

## Dimensions

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.



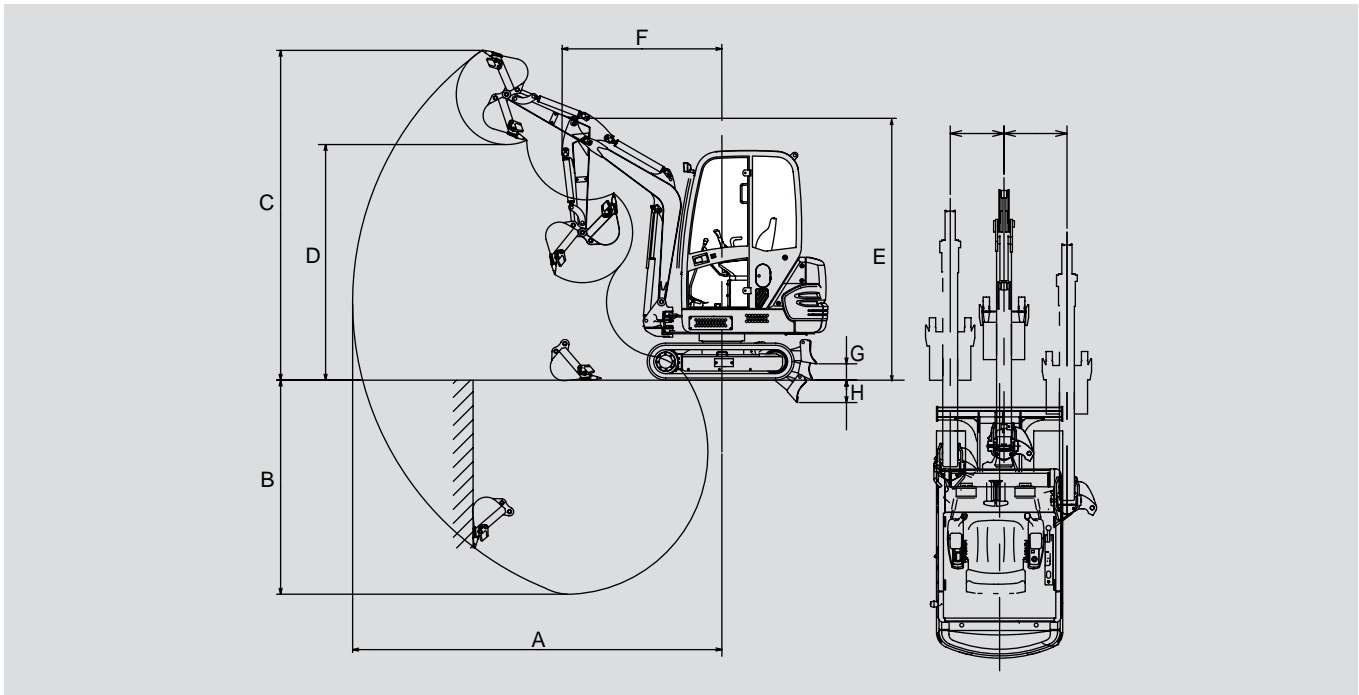
**Notes:**

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

Unit: mm

	<b>ZAXIS16</b>
A Overall width	1 050
B Canopy / Cabin height	2 280
C Rear-end swing radius	1 070
D Minimum ground clearance	235
E Counterweight clearance	435
F Engine cover height	1 210
G Undercarriage length	1 470
H Undercarriage width	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



**Notes:**

1. The illustration shows the cabin version equipped with 0.044 m<sup>3</sup> bucket, 0.93 m arm and 230 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

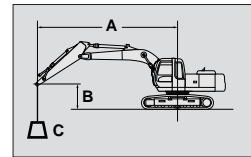
Unit: mm

	<b>ZAXIS16</b>	
	<b>Canopy &amp; Cabin</b>	
	<b>0.93 m arm</b>	<b>1.13 m arm</b>
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

### ZAXIS16 WITH BLADE ABOVE GROUND



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			2.60	1.95	2.18	1.62	3.36
Bucket 0.044 m <sup>3</sup>	1 m	4.67	3.43	2.53	1.87	1.90	1.40	3.59
Rubber shoes 230 mm	0 m	4.37	3.17	2.43	1.78	2.01	1.47	3.41
	-1 m	4.38	3.18			2.81	2.07	2.73

### ZAXIS16 WITH BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 0.93 m	2 m			*2.62	1.95	*2.50	1.62	3.36
Bucket 0.044 m <sup>3</sup>	1 m	*4.80	3.43	*2.98	1.87	*2.64	1.40	3.59
Rubber shoes 230 mm	0 m	*6.28	3.17	*3.43	1.78	*2.79	1.47	3.41
	-1 m	*5.24	3.18			*2.73	2.07	2.73

### ZAXIS16 WITH BLADE ABOVE GROUND

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 1.13 m	2 m			*2.28	1.97	1.99	1.47	3.56
Bucket 0.044 m <sup>3</sup>	1 m	*4.14	3.50	2.54	1.88	1.76	1.28	3.77
Rubber shoes 230 mm	0 m	4.38	3.17	2.42	1.78	1.84	1.34	3.61
	-1 m	4.34	3.14	2.39	1.75	2.44	1.78	2.99

### ZAXIS16 WITH BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius				At max. reach		
		2 m		3 m		meter		
Arm 1.13 m	2 m			*2.28	1.97	*2.28	1.47	3.56
Bucket 0.044 m <sup>3</sup>	1 m	*4.14	3.50	*2.77	1.88	*2.42	1.28	3.77
Rubber shoes 230 mm	0 m	*6.20	3.17	*3.36	1.78	*2.59	1.34	3.61
	-1 m	*5.62	3.14	*3.07	1.75	*2.67	1.78	2.99

- 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.

## 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

### UNDERCARRIAGE

- 230 mm rubber shoes
- Short stay blade

### FRONT ATTACHMENTS

- 1.80 m boom
- 0.93 m arm
- 0.044 m<sup>3</sup> hoe bucket
- O-ring type pin-seals for hoe bucket
- HN bushing

## 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

**Hitachi Construction Machinery (Europe) NV**

Souvereinstraat 16, 4903 RH Oosterhout, P.O. Box 404, 4900 AK Oosterhout, The Netherlands  
T +31-(0)162 48 44 00, F +31-(0)162 45 74 53, [www.hcme.com](http://www.hcme.com)

Siciliëweg 5, Haven 5112, 1045 AT Amsterdam, P.O. Box 59239, 1040 KE Amsterdam, The Netherlands  
T +31-(0)20 44 76 700, F +31-(0)20 33 44 045, [www.hcme.com](http://www.hcme.com)



**Breaking  
new  
ground**