

ZAXIS

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HYDRAULIC EXCAVATOR

- **Model Code:** ZX30 / ZX35 / ZX40 / ZX50
- **Engine Rated Power:** 19.9 kW (26.7 HP) / 19.9 kW (26.7 HP) / 26.5 kW (35.5HP) / 26.5 kW (35.5HP)
- **Operating Weight:** 2 880 - 3 030 kg / 3 110 - 3 260 kg / 4 290 - 4 520 kg / 4 590 - 4 810 kg
- **Backhoe Bucket:** 0.055 - 0.11 m³ / 0.055 - 0.13 m³ / 0.10 - 0.17 m³ / 0.10 - 0.17 m³

THE HITACHI MINI EXCAVATORS: DESIGNED FROM



EXPERIENCE



Hitachi has developed the new series of ZAXIS 30, ZAXIS 35, ZAXIS 40 and ZAXIS 50 excavators for heavy-duty applications. These compact excavators can be used in a limited space and, by the use of the swing boom, work can be carried out both accurately and flexibly.

The European market places special requirements on excavators and Hitachi have tailored the new mini excavators to meet these. The excavators are equipped with all modern comforts, including a completely newly designed operator's cabin. The cabin now has a wider entrance, a larger glass surface and is designed to be as ergonomic as possible.

The performance of the mini excavators has also been improved. The operator's cabin is mounted on a floor plate, just as with the larger excavators, giving fewer vibrations and lower noise level. In addition to this the excavators have an even greater lifting power, a greater excavating range and a more accurate operation.

DESIGNED FOR COMFORT



Cabin

The operator's cabin of the mini excavators has been redesigned according to European standards. The interior has been completely restyled and given a luxurious finish and the neatly fitted heating in both the cabin and canopy provides extra comfort during cold weather. The operator's cabin space has been made larger and is easier to access due to its wider entrance. The operator's cabin and the canopy on four pillars are ROPS and FOPS tested to guarantee the safety of the operator. For extra safety a seat belt has been fitted and an evacuation hammer is present in the cabin.



The operator's cabin and canopy both have a comfortable seat that can be widely adjusted. Under this there is storage space for a tools and manuals.

The control levers of the mini excavators are hydraulically controlled. The excavators are fitted with arm supports as standard, which provides extra operating comfort. Under the left arm support is an LCD control panel, which clearly shows the fuel level and the engine oil pressure, etc. Under the right arm support is the operating switch for the heating and the key switch.



The option to demist windows along with an extra window on the bottom right side has further optimised the view of the operator, plus the front screen can be fully moved upwards and locked in place. The canopy is fitted with a rear window giving the operator improved protection against wind and light rain.

The operator's cabin is prepared for a radio connection with the antenna fitted on the outside and enough room inside for two loudspeaker cabinets, which are easy to connect.

DESIGNED FOR POWER



Frame

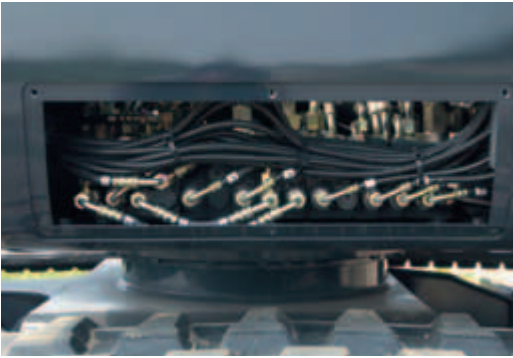
The robust frame of the mini excavators has been designed to perform heavy work. The bulldozer blade, which gives extra stability during excavating, is placed well within the field of vision of the operator.

The vertical holes of the swing boom are fitted with bushes, so that wear is reduced and the useful life is increased. The hoses of the bucket cylinder run through the arm for protection limiting possible external damage. Besides this, the hoses at the base of the swing boom are covered to protect the operator against possible oil leakage.

Engine

The Hitachi mini excavators are equipped with environmentally friendly, highly reliable, low-emission engines from Kubota. These engines have been developed according to the latest standards for diesel engines and have an exceptionally low fuel consumption. The mounting of the engine, the engine hood and the exhaust are designed so that they produce as little noise as possible for improved working comfort.

DESIGNED FOR QUALITY



Hydraulic system

The Hitachi mini excavators are provided with a new hydraulic system, including a circuit that regenerates the hydraulic energy, which greatly improves the efficiency. The system works with three pumps: two variable piston pumps and a gear pump. The two variable pumps provide optimum oil flow to the main functions; the gear pump provides oil for the swing circuit, the blade and the swing boom. This makes it possible to operate the excavator very accurately and allows fast and smooth combined movements to be made, including the driving.



The travel levers of the excavators are now also hydraulically controlled. This makes the operation both lighter and more accurate. If long distances have to be driven, pedals can be used.

The left console and safety lever can be pivoted far to the cabin rear. This improves accessibility to the cabin entrance. The safety lever prevents the excavator from unexpectedly operating if the handles are accidentally touched when the operator sits down.

The mini excavators are provided as standard with two extra hoses that go through to the arm. Optional equipment such as a crusher or breaker can be connected to these.



DESIGNED FOR EFFICIENCY

Maintenance

The periodic maintenance of the new mini excavators has been simplified, partly because the engine hood can be opened widely so that all components are easily accessed. The battery is situated separately and is easy to reach.

The main valve block is placed under the easily opened floor plate in the operator's cabin and can be accessed on the side.

A water separator is fitted as standard in the fuel system to ensure no water can enter the system.

An air filter indicator shows when the air filter needs to be replaced, which is very easy to do.

A loose rubber mat in the operator's cabin and canopy allows the floor to be cleaned quickly and easily.

The excavators are fitted with an aluminium radiator and oil cooler, greatly reducing the chance of corrosion.

Furthermore, the pivots in the boom are fitted with Hitachi HN self-lubricating bushings, and as a result, less maintenance is required. The HN bushings only need to be lubricated after 500 hours of operation.



Engine

Model	Kubota V1505
Type	Water-cooled, 4-cycle, 4-cylinder swirl chamber type diesel engine
Rated flywheel power	19.9 kW (27.1 PS)
ISO 3046	at 2 300 min ⁻¹ (rpm)
Rated flywheel power	19.9 kW (26.7 HP)
SAE J1349, net	at 2 300 min ⁻¹ (rpm)
Maximum torque	86.2 Nm (8.8 kgf/m)
	at 1 800 min ⁻¹ (rpm)
Piston displacement	1.498 l
Bore and stroke	78 mm x 78.4 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 39.1 l/min
Third pump	One gear pump
Maximum oil flow	1 x 24.2 l/min
Pilot pump	One gear pump
Maximum oil flow	1 x 10.4 l/min

RELIEF VALVE SETTINGS

Implement circuit	20.6 MPa (210 kgf/cm ²)
Swing circuit	16.7 MPa (170 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, arm crowd and dump circuits to absorb shocks at stroke ends.

DIMENSIONS

	Qty.	Bore	Rod diameter	Stroke
Boom	1	80 mm	45 mm	558 mm
Arm	1	75 mm	40 mm	560 mm
Bucket	1	65 mm	40 mm	440 mm
Boom swing	1	85 mm	45 mm	535 mm
Blade	1	90 mm	45 mm	130 mm

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	8.8 min ⁻¹ (rpm)
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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 speeds (rubber shoes)	High: 0 - 4.3 km/h
	Low: 0 - 2.9 km/h
Travel speeds (grouser shoes)	High: 0 - 4.3 km/h
	Low: 0 - 2.9 km/h
Gradeability	30 degrees (58%) continuous

Weights and ground pressure

ZX30

Equipped with 1.27 m arm and 0.09 m³ (ISO 7451) bucket.

	Operating weight	Ground pressure
4-Pillar canopy version		
300 mm rubber shoes	2 880 kg	26 kPa (0.27 kgf/cm ²)
300 mm grouser shoes	2 950 kg	27 kPa (0.28 kgf/cm ²)
Cabin version		
300 mm rubber shoes	2 960 kg	27 kPa (0.28 kgf/cm ²)
300 mm grouser shoes	3 030 kg	28 kPa (0.29 kgf/cm ²)

ZX35

Equipped with 1.35 m arm and 0.11 m³ (ISO 7451) bucket.

	Operating weight	Ground pressure
4-Pillar canopy version		
300 mm rubber shoes	3 110 kg	28 kPa (0.29 kgf/cm ²)
300 mm grouser shoes	3 180 kg	29 kPa (0.30 kgf/cm ²)
Cabin version		
300 mm rubber shoes	3 190 kg	29 kPa (0.30 kgf/cm ²)
300 mm grouser shoes	3 260 kg	30 kPa (0.31 kgf/cm ²)

Front-end attachments

BACKHOE BUCKETS

ZX30

ISO 7451 capacity	Width		No. of teeth	Weight	Use	
	Without side cutters	With side cutters			1.27 m Short arm	1.57 m Long arm
0.055 m ³	300 mm	350 mm	3	61 kg	A	A
0.065 m ³	350 mm	400 mm	3	64 kg	A	A
0.08 m ³	400 mm	450 mm	3	67 kg	A	A
0.09 m ³	450 mm	500 mm	4	71 kg	A	B
0.10 m ³	500 mm	550 mm	4	74 kg	B	C
0.11 m ³	550 mm	600 mm	4	78 kg	C	C
Arm crowd force					16.1 kN (1 640 kgf)	14.1 kN (1 440 kgf)
Bucket digging force					22.4 kN (2 290 kgf)	

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

Boom swing angle Left 80°, Right 50°

ZX35

ISO 7451 capacity	Width		No. of teeth	Weight	Use	
	Without side cutters	With side cutters			1.35 m Short arm	1.70 m Long arm
0.055 m ³	300 mm	350 mm	3	61 kg	A	A
0.065 m ³	350 mm	400 mm	3	64 kg	A	A
0.08 m ³	400 mm	450 mm	3	67 kg	A	A
0.09 m ³	450 mm	500 mm	4	71 kg	A	A
0.10 m ³	500 mm	550 mm	4	74 kg	A	A
0.11 m ³	550 mm	600 mm	4	78 kg	A	B
0.13 m ³	600 mm	650 mm	4	82 kg	B	C
Arm crowd force					18.1 kN (1 850 kgf)	16.1 kN (1 640 kgf)
Bucket digging force					25.9 kN (2 640 kgf)	

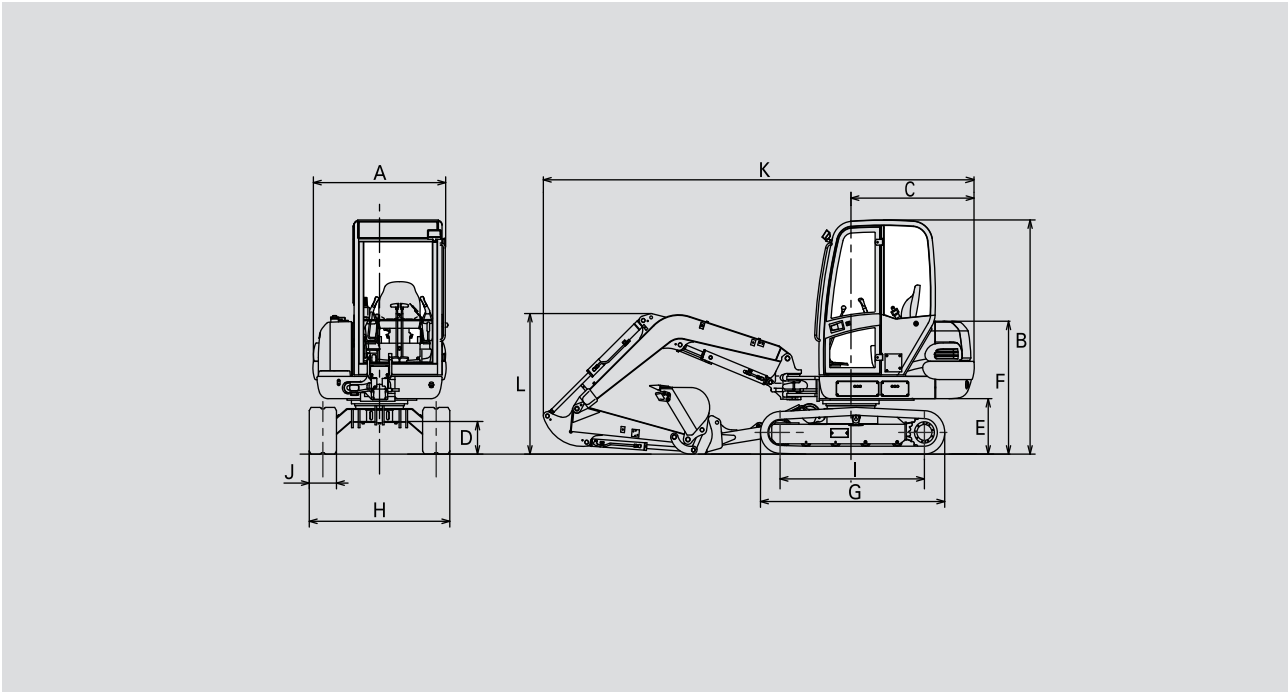
A: General digging B: Light-duty digging C: Loading

Boom swing angle Left 80°, Right 50°

Dimensions

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

They conform to TOPS (ISO 12117) and FOPS (ISO 10262, Level 1) requirements.



ZX30

Notes:

1. The illustration shows the cabin version equipped with 300 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

Unit: mm

	ZX30
A Overall width	1 470
B Canopy / Cabin height	2 420
C Rear-end swing radius	1 370
D Minimum ground clearance	330
E Counterweight clearance	575
F Engine cover height	1 370
G Undercarriage length	2 030
H Undercarriage width	1 550
I Sprocket centre to idler centre	1 600
J Track shoe width	300
K Maximum transport length	4 760
L Overall height of boom	1 450

ZX35

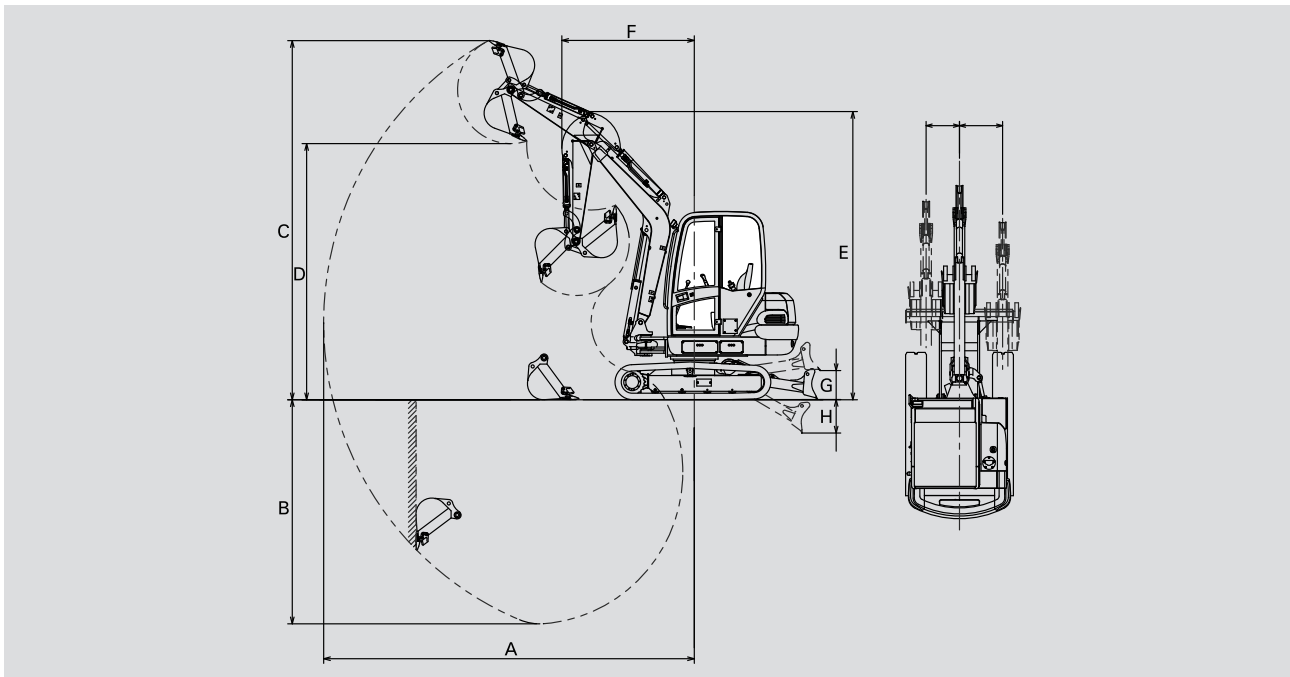
Notes:

1. The illustration shows the cabin version equipped with 300 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

Unit: mm

	ZX35
A Overall width	1 470
B Canopy / cabin height	2 420
C Rear-end swing radius	1 390
D Minimum ground clearance	330
E Counterweight clearance	575
F Engine cover height	1 370
G Undercarriage length	2 030
H Undercarriage width	1 550
I Sprocket centre to idler centre	1 600
J Track shoe width	300
K Maximum transport length	4 980
L Overall height of boom	1 390

Working ranges



ZX30

Notes:

1. The illustration shows the cabin version equipped with 0.09 m³ bucket, 1.27 m arm and 300 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

Unit: mm

	ZX30 CANOPY & CABIN	
	1.27 M ARM	1.57 M ARM
A Maximum digging reach	4 840	5 100
B Maximum digging depth	2 890	3 190
C Maximum cutting height	4 620	4 770
D Maximum dumping height	3 300	3 440
E Transport height	2 420	2 420
F Minimum swing radius	1 730	1 800
G Blade bottom highest position (above ground level)	380	380
H Blade bottom lowest position (below ground level)	430	430
Maximum boom-swing angle	L80° / R50°	L80° / R50°
Offset distance	L480 / R620	L480 / R620

ZX35

Notes:

1. The illustration shows the cabin version equipped with 0.11 m³ bucket, 1.35 m arm and 300 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

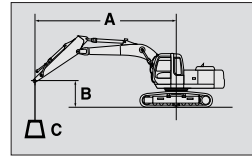
Unit: mm

	ZX35 CANOPY & CABIN	
	1.35 M ARM	1.70 M ARM
A Maximum digging reach	5 180	5 500
B Maximum digging depth	3 100	3 450
C Maximum cutting height	5 050	5 280
D Maximum dumping height	3 680	3 900
E Transport height	2 420	2 420
F Minimum swing radius	1 730	1 760
G Blade bottom highest position (above ground level)	380	380
H Blade bottom lowest position (below ground level)	430	430
Maximum boom-swing angle	L80° / R50°	L80° / R50°
Offset Distance	L480 / R620	L480 / R620

LIFTING CAPACITIES ZX30 / ZX35

Metric measure

(Equipped with cabin)



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

ZX30 SHORT ARM, DOZER BLADE ABOVE GROUND



Rating over-side or 360 degrees



Rating over-front

Unit: kN

Conditions	Load point height	Load radius								At max. reach		
		1 m		2 m		3 m		4 m		meter		
Arm 1.27 m	3 m					*5.34	*5.34			5.19	4.74	4.11
Bucket 0.09 m ³	2 m					*6.36	*6.36	5.31	4.82	4.42	4.04	4.53
Rubber shoes 300 mm	1 m					7.72	6.92	5.16	4.69	4.21	3.83	4.62
	0 m					7.39	6.61	5.02	4.56	4.40	4.01	4.42
	-1 m	*13.33	*13.33	13.65	11.77	7.32	6.54			5.29	4.79	3.85
	-2 m			*10.77	*10.77	*7.27	6.68					

ZX30 SHORT ARM, DOZER BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius								At max. reach		
		1 m		2 m		3 m		4 m		meter		
Arm 1.27 m	3 m					*5.34	*5.34			*5.59	4.74	4.11
Bucket 0.09 m ³	2 m					*6.36	*6.36	*5.98	4.82	*5.83	4.04	4.53
Rubber shoes 300 mm	1 m					*8.84	6.92	*6.69	4.69	*6.09	3.83	4.62
	0 m					*10.51	6.61	*7.30	4.56	*6.37	4.01	4.42
	-1 m	*13.33	*13.33	*14.36	11.77	*10.17	6.54			*6.51	4.79	3.85
	-2 m			*10.77	*10.77	*7.27	6.68					

ZX30 LONG ARM, DOZER BLADE ABOVE GROUND

Unit: kN

Conditions	Load point height	Load radius								At max. reach		
		1 m		2 m		3 m		4 m		meter		
Arm 1.57 m	3 m									4.74	4.33	4.41
Bucket 0.09 m ³	2 m					*5.42	*5.42	5.39	4.91	4.12	3.78	4.80
Rubber shoes 300 mm	1 m					7.86	7.06	5.23	4.76	3.93	3.60	4.89
	0 m			*11.87	11.69	7.46	6.68	5.06	4.60	4.08	3.73	4.70
	-1 m	*11.77	*11.77	13.56	11.69	7.32	6.54	4.98	4.52	4.74	4.31	4.18
	-2 m			*13.15	11.88	7.38	6.61					

ZX30 LONG ARM, DOZER BLADE ON GROUND

Unit: kN

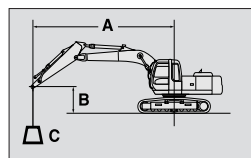
Conditions	Load point height	Load radius								At max. reach		
		1 m		2 m		3 m		4 m		meter		
Arm 1.57 m	3 m									*5.12	4.33	4.41
Bucket 0.09 m ³	2 m					*5.42	*5.42	*5.43	4.91	*5.37	3.78	4.80
Rubber shoes 300 mm	1 m					*8.02	7.06	*6.31	4.76	*5.66	3.60	4.89
	0 m			*11.87	11.69	*10.21	6.68	*7.15	4.60	*5.97	3.73	4.70
	-1 m	*11.77	*11.77	*15.22	11.69	*10.49	6.54	*7.19	4.52	*6.25	4.31	4.18
	-2 m			*13.15	11.88	*8.57	6.61					

- 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.
 5. 0 m = Ground.

LIFTING CAPACITIES ZX30 / ZX35

Metric measure

(Equipped with cabin)



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

ZX35 SHORT ARM, DOZER BLADE ABOVE GROUND



Rating over-side or 360 degrees



Rating over-front

Unit: kN

Conditions	Load point height	Load radius								At max. reach		
		1 m		2 m		3 m		4 m		meter		
Arm 1.35 m	3 m					*6.07	*6.07	6.04	5.24	5.09	4.42	4.50
Bucket 0.11 m ³	2 m			*10.18	*10.18	*7.60	*7.60	5.96	5.16	4.44	3.85	4.87
Rubber shoes 300 mm	1 m					8.56	7.26	5.75	4.95	4.26	3.69	4.95
	0 m					8.17	6.89	5.57	4.78	4.42	3.82	4.76
	-1 m			15.16	12.22	8.10	6.83	5.50	4.73	5.14	4.42	4.25
	-2 m			*11.28	*11.28	8.24	6.95					

ZX35 SHORT ARM, DOZER BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius								At max. reach		
		1 m		2 m		3 m		4 m		meter		
Arm 1.35 m	3 m					*6.07	*6.07	*6.36	5.24	*6.05	4.42	4.50
Bucket 0.11 m ³	2 m			*10.18	*10.18	*7.60	*7.60	*6.60	5.16	*6.13	3.85	4.87
Rubber shoes 300 mm	1 m					*10.34	7.26	*7.47	4.95	*6.24	3.69	4.95
	0 m					*11.76	6.89	*8.08	4.78	*6.33	3.82	4.76
	-1 m			*16.55	12.22	*11.06	6.83	*7.68	4.73	*6.21	4.42	4.25
	-2 m			*11.28	*11.28	*8.30	6.95					

ZX35 LONG ARM, DOZER BLADE ABOVE GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach		
		1 m		2 m		3 m		4 m		5 m		meter		
Arm 1.70 m	3 m							*5.54	5.39			4.62	4.02	4.86
Bucket 0.11 m ³	2 m					*6.46	*6.46	*6.00	5.28			4.11	3.58	5.20
Rubber shoes 300 mm	1 m					8.77	7.46	5.85	5.05	4.27	3.70	3.95	3.43	5.28
	0 m			*8.30	*8.30	8.27	6.99	5.62	4.83	4.18	3.62	4.07	3.53	5.10
	-1 m	*9.79	*9.79	15.03	12.10	8.09	6.83	5.51	4.73			4.59	3.96	4.64
	-2 m	*20.64	*20.64	*14.18	12.32	8.16	6.88	5.57	4.79			6.17	5.30	3.74
	-3 m													

ZX35 LONG ARM, DOZER BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach		
		1 m		2 m		3 m		4 m		5 m		meter		
Arm 1.70 m	3 m							*5.54	5.39			*5.52	4.02	4.86
Bucket 0.11 m ³	2 m					*6.46	*6.46	*6.00	5.28			*5.63	3.58	5.20
Rubber shoes 300 mm	1 m					*9.38	7.46	*7.05	5.05	*6.00	3.70	*5.77	3.43	5.28
	0 m			*8.30	*8.30	*11.50	6.99	*7.94	4.83	*6.15	3.62	*5.90	3.53	5.10
	-1 m	*9.79	*9.79	*17.78	12.10	*11.54	6.83	*7.99	4.73			*5.95	3.96	4.64
	-2 m	*20.64	*20.64	*14.18	12.32	*9.61	6.88	*6.37	4.79			*5.52	5.30	
	-3 m													

- 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.
 5. 0 m = Ground.

ZX30 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
- Pilot control shut-off levers
- Anti-drift valve for front attachments
- 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

- 300 mm rubber shoes
- Semi-long stay blade

FRONT ATTACHMENTS

- 2.38 m boom
- 1.27 m arm
- 0.09 m³ 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

- 300 mm grouser shoes
- 400 mm grouser shoes

FRONT ATTACHMENTS

- 1.57 m arm
- Backhoe buckets

ZX35 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
- Pilot control shut-off levers
- Anti-drift valve for front attachments
- 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

- 300 mm rubber shoes
- Semi-long stay blade

FRONT ATTACHMENTS

- 2.60 m boom
- 1.35 m arm
- 0.11 m³ 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

- 300 mm grouser shoes
- 400 mm grouser shoes

FRONT ATTACHMENTS

- 1.70 m arm
- Backhoe buckets

Engine

Model	Kubota V2203
Type	Water-cooled, 4-cycle, 4-cylinder swirl chamber type diesel engine
Rated flywheel power	26.5 kW (36.0 PS)
ISO 3046	at 2 100 min ⁻¹ (rpm)
Rated flywheel power	26.5 kW (35.5 HP)
SAE J1349, net	at 2 100 min ⁻¹ (rpm)
Maximum torque	125.5 Nm (12.8 kgf/m)
	at 1 700 min ⁻¹ (rpm)
Piston displacement	2.179 l
Bore and stroke	87 mm x 92.4 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 42.0 l/min
Third pump	One gear pump
Maximum oil flow	1 x 33.6 l/min
Pilot pump	One gear pump
Maximum oil flow	1 x 9.5 l/min

RELIEF VALVE SETTINGS

Implement circuit	24.5 MPa (250 kgf/cm ²)
Swing circuit	17.6 MPa (180 kgf/cm ²)
Travel circuit	24.5 MPa (250 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, arm crowd and dump circuits to absorb shocks at stroke ends.

DIMENSIONS ZX40

	Qty.	Bore	Rod diameter	Stroke
Boom	1	90 mm	55 mm	698 mm
Arm	1	80 mm	50 mm	702 mm
Bucket	1	70 mm	40 mm	551 mm
Boom swing	1	95 mm	50 mm	620 mm
Blade	1	100 mm	55 mm	150 mm

DIMENSIONS ZX50

	Qty.	Bore	Rod diameter	Stroke
Boom	1	95 mm	55 mm	695 mm
Arm	1	80 mm	50 mm	759 mm
Bucket	1	75 mm	45 mm	551 mm
Boom swing	1	95 mm	50 mm	620 mm
Blade	1	100 mm	55 mm	150 mm

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 9.3 min⁻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 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 speeds (rubber shoes)	High: 0 - 4.4 km/h
	Low: 0 - 2.5 km/h
Travel speeds (grouser shoes)	High: 0 - 4.1 km/h
	Low: 0 - 2.3 km/h
Gradeability	30 degrees (58%) continuous

Weights and ground pressure

ZX40

Equipped with 1.46 m arm and 0.14 m³ (ISO 7451) bucket.

	Operating weight	Ground pressure
4-Pillar canopy version		
400 mm rubber shoes	4 290 kg	25 kPa (0.26 kgf/cm ²)
400 mm grouser shoes	4 440 kg	26 kPa (0.27 kgf/cm ²)
Cabin version		
400 mm rubber shoes	4 370 kg	25 kPa (0.26 kgf/cm ²)
400 mm grouser shoes	4 520 kg	26 kPa (0.27 kgf/cm ²)

ZX50

Equipped with 1.50 m arm and 0.16 m³ (ISO 7451) bucket.

	Operating weight	Ground pressure
4-Pillar canopy version		
400 mm rubber shoes	4 590 kg	26 kPa (0.27 kgf/cm ²)
400 mm grouser shoes	4 740 kg	26 kPa (0.27 kgf/cm ²)
Cabin version		
400 mm rubber shoes	4 660 kg	26 kPa (0.27 kgf/cm ²)
400 mm grouser shoes	4 810 kg	27 kPa (0.28 kgf/cm ²)

Front-end attachments

BACKHOE BUCKETS

ZX40

ISO 7451 capacity	Width		No. of teeth	Weight	Use	
	Without side cutters	With side cutters			1.46 m Short arm	1.81 m Long arm
0.10 m ³	405 mm	450 mm	3	90 kg	A	A
0.11 m ³	455 mm	500 mm	3	94 kg	A	A
0.13 m ³	505 mm	550 mm	4	103 kg	A	A
0.14 m ³	555 mm	600 mm	4	108 kg	A	B
0.16 m ³	605 mm	650 mm	4	114 kg	B	C
0.17 m ³	655 mm	700 mm	4	117 kg	C	C
Arm crowd force					22.5 kN (2 300 kgf)	20.3 kN (2 070 kgf)
Bucket digging force					32.3 kN (3 300 kgf)	

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

Boom swing angle. Left 80°, Right 50°

ZX50

ISO 7451 capacity	Width		No. of teeth	Weight	Use	
	Without side cutters	With side cutters			1.50 m Short arm	1.85 m Long arm
0.10 m ³	405 mm	450 mm	3	90 kg	A	A
0.11 m ³	455 mm	500 mm	3	94 kg	A	A
0.13 m ³	505 mm	550 mm	4	103 kg	A	A
0.14 m ³	555 mm	600 mm	4	108 kg	A	A
0.16 m ³	605 mm	650 mm	4	114 kg	A	B
0.17 m ³	655 mm	700 mm	4	117 kg	B	C
Arm crowd force					24.0 kN (2 450 kgf)	21.6 kN (2 200 kgf)
Bucket digging force					36.6 kN (3 740 kgf)	

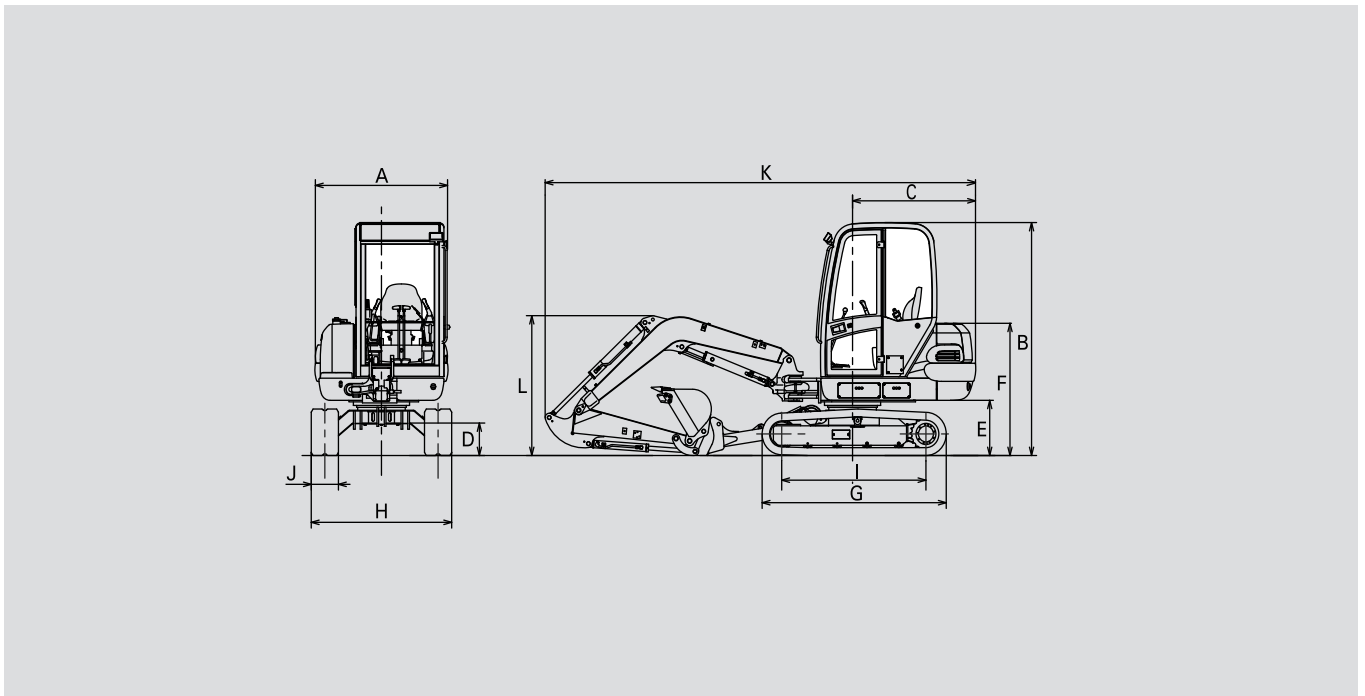
A: General digging B: Light-duty digging C: Loading

Boom swing angle. Left 80°, Right 50°

Dimensions

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

They conform to TOPS (ISO 12117) and FOPS (ISO 10262, Level 1) requirements.



ZX40

Notes:

1. The illustration shows the cabin version equipped with 400 mm rubber shoes.
2. Values are identical for cabin and canopy versions.

Unit: mm

	ZX40
A Overall width	1 690
B Canopy / Cabin height	2 590
C Rear-end swing radius	1 450
D Minimum ground clearance	335
E Counterweight clearance	640
F Engine cover height	1 540
G Undercarriage length	2 450
H Undercarriage width	1 850
I Sprocket centre to idler centre	1 960
J Track shoe width	400
K Maximum transport length	5 450
L Overall height of boom	1 810

ZX50

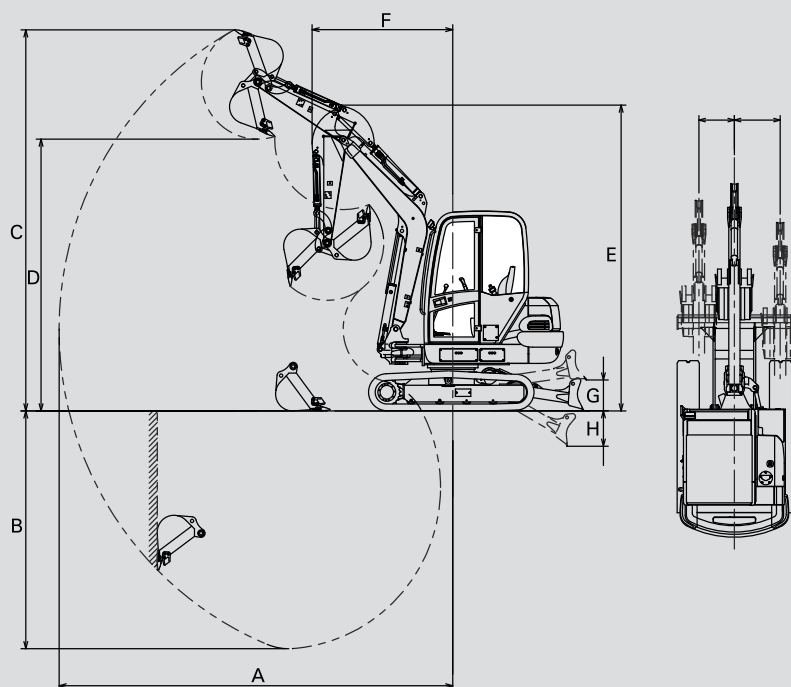
Note:

The illustration shows the cabin version equipped with 400 mm rubber shoes.

Unit: mm

	ZX50
A Overall width	1 690
B Canopy / cabin height	2 590
C Rear-end swing radius	1 450
D Minimum ground clearance	335
E Counterweight clearance	640
F Engine cover height	1 540
G Undercarriage length	2 450
H Undercarriage width	1 850
I Sprocket centre to idler centre	1 960
J Track shoe width	400
K Maximum transport length	5 590
L Overall height of boom	1 730

Working ranges



ZX40

- Notes:
1. The illustration shows the cabin version equipped with 0.14 m³ bucket, 1.46 m arm and 400 mm rubber shoes.
 2. Values are identical for cabin and canopy versions.

Unit: mm

	ZX40	
	Canopy & Cabin	
	1.46 m arm	1.81 m arm
A Maximum digging reach	5 730	6 060
B Maximum digging depth	3 360	3 710
C Maximum cutting height	5 730	5 980
D Maximum dumping height	4 050	4 300
E Transport height	4 310	4 310
F Minimum swing radius	2 040	2 310
G Blade bottom highest position (above ground level)	430	430
H Blade bottom lowest position (below ground level)	460	460
Maximum boom-swing angle	L80° / R50°	L80° / R50°
Offset distance	L590 / R760	L590 / R760

ZX50

- Note:
- The illustration shows the cabin version equipped with 0.16 m³ bucket, 1.50 m arm and 400 mm rubber shoes.

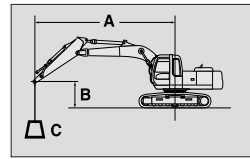
Unit: mm

	ZX50	
	Canopy & Cabin	
	1.50 m arm	1.85 m arm
A Maximum digging reach	5 920	6 240
B Maximum digging depth	3 570	3 920
C Maximum cutting height	5 820	6 050
D Maximum dumping height	4 150	4 380
E Transport height	4 440	4 440
F Minimum swing radius	2 040	2 310
G Blade bottom highest position (above ground level)	430	430
H Blade bottom lowest position (below ground level)	460	460
Maximum boom-swing angle	L80° / R50°	L80° / R50°
Offset distance	L590 / R760	L590 / R760

LIFTING CAPACITIES ZX40 / ZX50

Metric measure

(Equipped with cabin)



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

ZX40 SHORT ARM, DOZER BLADE ABOVE GROUND



Rating over-side or 360 degrees



Rating over-front

Unit: kN

Conditions	Load point height	Load radius										At max. reach					
		1 m		2 m		3 m		4 m		5 m		meter					
Arm	1.46 m																
Bucket	0.14 m ³																
Rubber shoes	400 mm																
	3 m																
	2 m																
	1 m																
	0 m																
	-1 m																
	-2 m																

ZX40 SHORT ARM, DOZER BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach					
		1 m		2 m		3 m		4 m		5 m		meter					
Arm	1.46 m																
Bucket	0.14 m ³																
Rubber shoes	400 mm																
	3 m																
	2 m																
	1 m																
	0 m																
	-1 m																
	-2 m																

ZX40 LONG ARM, DOZER BLADE ABOVE GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach					
		1 m		2 m		3 m		4 m		5 m		meter					
Arm	1.81 m																
Bucket	0.14 m ³																
Rubber shoes	400 mm																
	4 m																
	3 m																
	2 m																
	1 m																
	0 m																
	-1 m																
	-2 m																

ZX40 LONG ARM, DOZER BLADE ON GROUND

Unit: kN

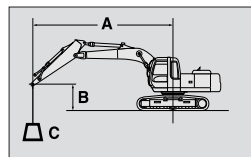
Conditions	Load point height	Load radius										At max. reach					
		1 m		2 m		3 m		4 m		5 m		meter					
Arm	1.81 m																
Bucket	0.14 m ³																
Rubber shoes	400 mm																
	4 m																
	3 m																
	2 m																
	1 m																
	0 m																
	-1 m																
	-2 m																

- 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 ZX40 / ZX50

Metric measure

(Equipped with cabin)



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

ZX50 SHORT ARM, DOZER BLADE ABOVE GROUND



Rating over-side or 360 degrees



Rating over-front

Unit: kN

Conditions	Load point height	Load radius										At max. reach		
		1 m		2 m		3 m		4 m		5 m		meter		
Arm 1.50 m	4 m					*9.15	7.49					*7.60	7.33	4.05
Bucket 0.16 m ³	3 m					*11.44	*11.44	9.41	7.52			*6.94	5.58	4.71
Rubber shoes 400 mm	2 m					14.70	11.48	9.15	7.27	6.24	4.94	6.15	4.87	5.04
	1 m					13.86	10.71	8.81	6.94	6.14	4.84	5.90	4.66	5.12
	0 m					13.47	10.36	8.57	6.73			6.16	4.85	4.96
	-1 m	*20.16	*20.16	*26.50	20.26	13.44	10.34	8.53	6.69			7.10	5.60	4.53
	-2 m			*24.20	20.67	13.70	10.56					9.84	7.72	3.71

ZX50 SHORT ARM, DOZER BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach		
		1 m		2 m		3 m		4 m		5 m		meter		
Arm 1.50 m	4 m							*9.15	7.49			*7.60	7.33	4.05
Bucket 0.16 m ³	3 m					*11.44	*11.44	*10.46	7.52			*6.94	5.58	4.71
Rubber shoes 400 mm	2 m					*16.26	11.48	*12.12	7.27	*8.75	4.94	*6.97	4.87	5.04
	1 m					*21.16	10.71	*14.01	6.94	*10.90	4.84	*7.51	4.66	5.12
	0 m					*22.61	10.36	*14.93	6.73			*8.74	4.85	4.96
	-1 m	*20.16	*20.16	*26.50	20.26	*20.87	10.34	*13.95	6.69			*10.96	5.60	4.53
	-2 m			*24.20	20.67	*15.51	10.56					*10.43	7.71	3.71

ZX50 LONG ARM, DOZER BLADE ABOVE GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach		
		1 m		2 m		3 m		4 m		5 m		meter		
Arm 1.85 m	4 m							*8.66	7.63			*7.32	6.17	4.47
Bucket 0.16 m ³	3 m							*9.09	7.56	6.30	4.99	6.14	4.86	5.06
Rubber shoes 400 mm	2 m					*13.88	11.61	9.14	7.26	6.22	4.91	5.45	4.29	5.37
	1 m					13.85	10.68	8.73	6.86	6.05	4.76	5.23	4.09	5.44
	0 m					13.26	10.14	8.40	6.56	5.91	4.62	5.40	4.23	5.29
	-1 m	*16.11	*16.11	*22.92	19.60	13.11	10.01	8.29	6.45			6.11	4.78	4.89
	-2 m	*26.46	*26.46	28.07	19.98	13.28	10.15	8.42	6.58			7.94	6.22	4.17
	-3 m			*12.55	*12.55							*7.84	*7.84	2.77

ZX50 LONG ARM, DOZER BLADE ON GROUND

Unit: kN

Conditions	Load point height	Load radius										At max. reach		
		1 m		2 m		3 m		4 m		5 m		meter		
Arm 1.85 m	4 m							*8.66	7.63			*7.32	6.17	4.47
Bucket 0.16 m ³	3 m							*9.09	7.56	*8.39	4.99	*6.81	4.86	5.06
Rubber shoes 400 mm	2 m					*13.88	11.61	*10.90	7.26	*9.56	4.91	*6.85	4.29	5.37
	1 m					*19.42	10.68	*13.09	6.86	*10.36	4.76	*7.32	4.09	5.44
	0 m					*22.14	10.14	*14.51	6.56	*10.75	4.62	*8.36	4.23	5.29
	-1 m	*16.11	*16.11	*22.92	19.60	*21.53	10.01	*14.32	6.45			*10.06	4.78	4.89
	-2 m	*26.46	*26.46	*29.14	19.99	*17.70	10.16	*11.19	6.58			*10.01	6.22	4.17
	-3 m			*12.55	*12.55							*7.84	*7.84	2.77

- 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.

ZX40 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
- Pilot control shut-off levers
- Anti-drift valve for front attachments

- 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

- 400 mm rubber shoes
- Semi-long stay blade

FRONT ATTACHMENTS

- 2.73 m boom
- 1.46 m arm
- 0.14 m³ 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

- 400 mm grouser shoes
- 550 mm grouser shoes

FRONT ATTACHMENTS

- 1.81 m arm
- Backhoe buckets

ZX50 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
- Pilot control shut-off levers
- Anti-drift valve for front attachments

- 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

- 400 mm rubber shoes
- Semi-long stay blade

FRONT ATTACHMENTS

- 2.88 m boom
- 1.50 m arm
- 0.16 m³ 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

- 400 mm grouser shoes
- 550 mm grouser shoes

FRONT ATTACHMENTS

- 1.85 m arm
- Backhoe buckets

These specifications are subject to change without notice.
Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in colour and features.
Before use, read and understand the Operator's Manual for proper operation.



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