

ZAXIS48U



Shown equipped with 1.69 m arm, additional counterweight, armrests, extra piping and pedal as optional items.

HYDRAULIC EXCAVATOR

Model Code : ZX48U-5A

Engine Rated Power : 28.2 kW (37.8 HP)

Operating Weight : Canopy 4 450 - 4 620 kg

Cab 4 580 - 4 750 kg

Backhoe Bucket : ISO Heaped : 0.13 m³

Shown equipped with 1.69 m arm, additional counterweight, extra piping and cab as optional items.

SPECIFICATIONS

ENGINE

Model	Yanmar 4TNV88
Type	4-cycle water-cooled, direct injection
No. of cylinders	4
Rated power	
ISO 9249, net	28.2 kW (37.8 HP) at 2 400 min ⁻¹ (rpm)
EEC 80/1269, net	28.2 kW (37.8 HP) at 2 400 min ⁻¹ (rpm)
SAE J1349, net	28.2 kW (37.8 HP) at 2 400 min ⁻¹ (rpm)
Maximum torque	139.6 Nm (14.2 kgfm) at 1 100 min ⁻¹ (rpm)
Piston displacement	2.189 L
Bore and stroke	88 mm x 90 mm
Batteries	1 x 12 V / 72 Ah

HYDRAULIC SYSTEM

Hydraulic Pumps

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

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	18.3 MPa (187 kgf/cm ²)
Travel circuit	24.5 MPa (250 kgf/cm ²)
Pilot circuit	5.9 MPa (60.2 kgf/cm ²)

Hydraulic Cylinders

	Quantity	Bore	Rod diameter	Stroke
Boom	1	90 mm	55 mm	699 mm
Arm	1	80 mm	50 mm	698 mm
Bucket	1	70 mm	40 mm	551 mm
Blade	1	105 mm	50 mm	140 mm
Boom swing	1	90 mm	50 mm	666 mm

UPPERSTRUCTURE

Revolving Frame

D-section frame for resistance to deformation.

Swing Device

Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed	9.0 min ⁻¹ (rpm)
Swing torque	8.6 kNm (877 kgfm)

Operator's Cab

Independent spacious cab, 1 049 mm wide by 1 611 mm high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat.

* International Organization for Standardization

UNDERCARRIAGE

Tracks

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

Numbers of Rollers on Each Side

Upper roller	1
Lower rollers	4

Travel Device

Each track driven by 2-speed axial piston motor. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.

Travel speeds	High : 0 to 4.2 km/h
	Low : 0 to 2.5 km/h

Maximum traction force 38.3 kN (3 905 kgf)

Gradeability

58% (30 degree) continuous

SERVICE REFILL CAPACITIES

Fuel tank	70.0 L
Engine coolant	4.7 L
Engine oil	8.6 L
Travel device (each side)	0.9 L
Hydraulic system	66.0 L
Hydraulic oil tank	42.0 L

WEIGHTS AND GROUND PRESSURE

Operating Weight and Ground Pressure

4-PILLAR CANOPY

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm ²)
Rubber shoe	400 mm	1.38 m	4 450	26 (0.26)
		1.69 m	4 660*	27 (0.27)*
Grouser shoe	400 mm	1.38 m	4 560	26 (0.27)
		1.69 m	4 770*	27 (0.28)*
Pad crawler shoe	400 mm	1.38 m	4 620	27 (0.27)
		1.69 m	4 830*	28 (0.28)*

Including 0.13 m³ (ISO heaped), bucket weight (109 kg) .

* Including 0.10 m³ (ISO heaped), bucket weight (96 kg), additional counterweight (200 kg).

CAB

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm ²)
Rubber shoe	400 mm	1.38 m	4 580	26 (0.27)
		1.69 m	4 790*	27 (0.28)*
Grouser shoe	400 mm	1.38 m	4 690	27 (0.28)
		1.69 m	4 900*	28 (0.29)*
Pad crawler shoe	400 mm	1.38 m	4 750	27 (0.28)
		1.69 m	4 960*	29 (0.29)*

Including 0.13 m³ (ISO heaped), bucket weight (109 kg) .

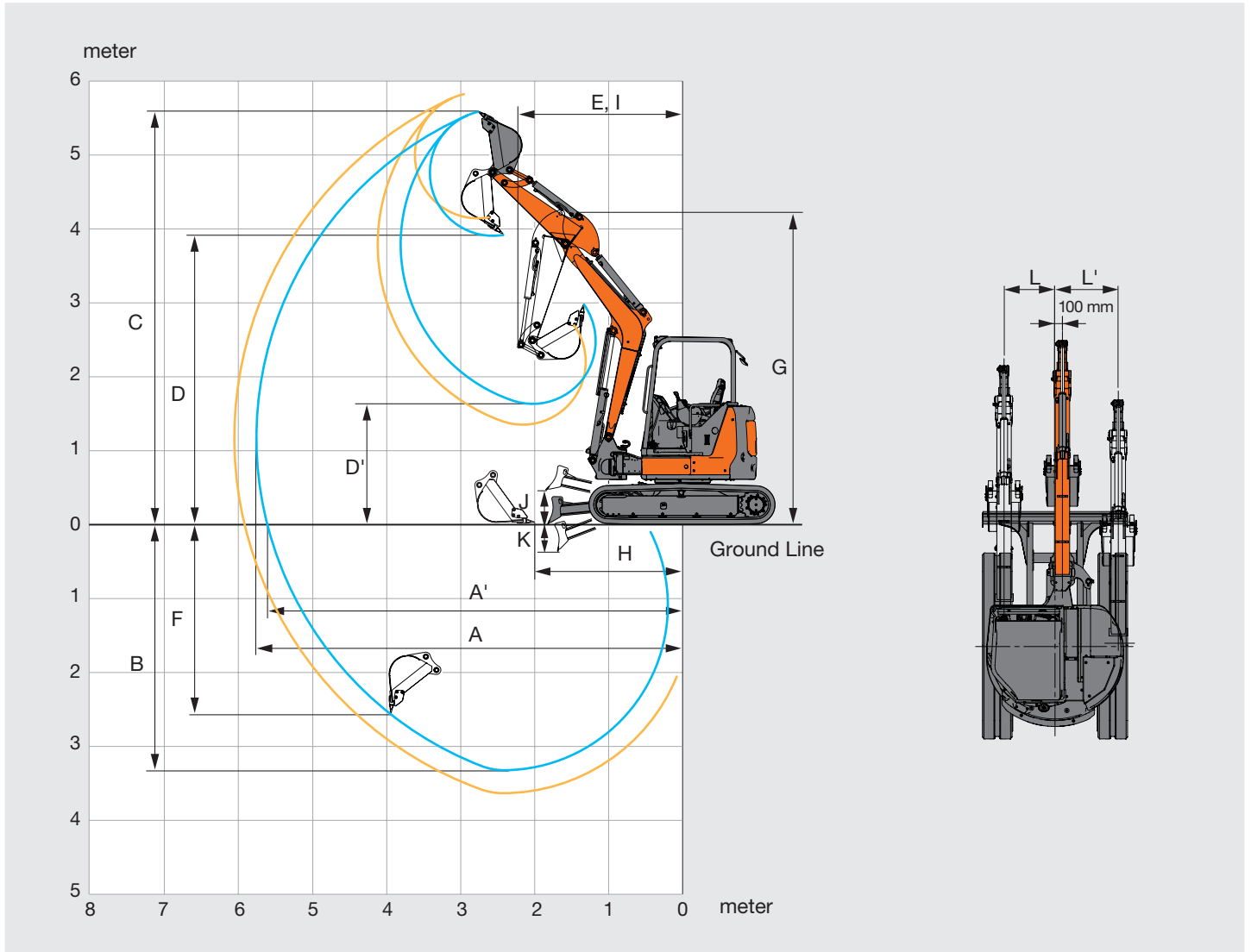
* Including 0.10 m³ (ISO heaped), bucket weight (96 kg), additional counterweight (200 kg).

BUCKET AND ARM DIGGING FORCE

Arm length	1.38 m	1.69 m
Bucket digging force ISO	32.1 kN (3 270 kgf)	
Bucket digging force SAE : PCSA	27.9 kN (2 850 kgf)	
Arm crowd force ISO	24.0 kN (2 450 kgf)	21.0 kN (2 140 kgf)
Arm crowd force SAE : PCSA	22.8 kN (2 330 kgf)	20.1 kN (2 050 kgf)

SPECIFICATIONS

WORKING RANGES

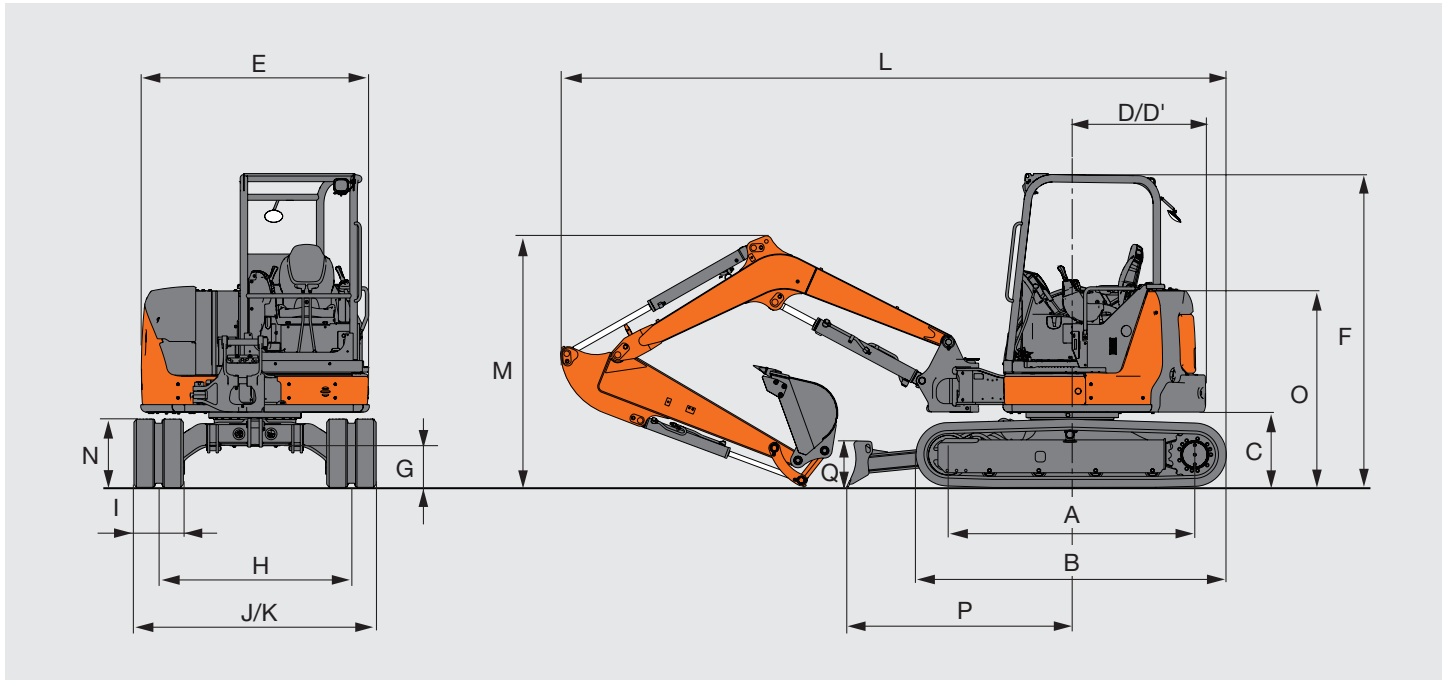


Unit: mm

Arm length	1.38 m	1.69 m
A Max. digging reach	5 760	6 060
A' Max. digging reach (on ground)	5 610	5 920
B Max. digging depth	3 320	3 630
C Max. cutting height	5 590	5 820
D Max. dumping height	3 910	4 140
D' Min. dumping height	1 630	1 350
E Min. swing radius	2 240	2 370
F Max. vertical wall digging depth	2 550	2 880
G Front height at Min. swing radius	4 250	4 250
H Min. level crowding distance	2 000	1 870
I Working radius at Min. swing radius (Max. boom-swing angle)	1 750	1 860
J Blade bottom highest position above ground	460	460
K Blade bottom lowest position above ground	365	365
L/L' Offset distance (Max. boom-swing angle)	690 / 850	690 / 850
Max. boom-swing angle (deg.)	80 / 60	80 / 60

Excluding track shoe lug.

DIMENSIONS



Unit: mm













	ZX48U-5A
A Distance between tumblers	2 000 (1 990)
B Undercarriage length	2 500 (2 490)
* C Counterweight clearance	610 (590)
D Rear-end swing radius	980 (1 080 with additional counterweight)
D' Rear-end length	1 080
E Overall width of upperstructure	1 850
F Overall height of cab	2 530
* G Min. ground clearance	340 (320)
H Track gauge	1 560
I Track shoe width	400
J Undercarriage width	1 960
K Overall width (Blade width)	1 960
L Overall length	
With 1.38 m arm	5 350
With 1.69 m arm	5 390
* M Overall height of boom	
With 1.38 m arm	1 840
With 1.69 m arm	2 035
N Track height	550 (530)
O Engine cover-height	1 590 (1 570)
P Horizontal distance to blade	1 820
Q Blade height	375

* Excluding track shoe lug Data in () are dimensions of grouser shoe.

LIFTING CAPACITIES (Without Bucket)













ZX48U-5A 4-Pillar Canopy Version, Blade above Ground

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


Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
														
Boom 2.68 m	3							0.97	0.79			0.71	0.58	4.80
Arm 1.69 m	2					*1.44	1.18	0.94	0.76	0.66	0.53	0.63	0.51	5.13
Additional counterweight 200 kg	1					1.39	1.09	0.90	0.72	0.64	0.52	0.60	0.49	5.21
Rubber shoe 400 mm	0 (Ground)					1.34	1.04	0.87	0.69	0.63	0.51	0.63	0.50	5.04
	-1	*1.92	*1.92	*2.58	1.99	1.33	1.03	0.86	0.68			0.71	0.57	4.60
	-2			*2.63	2.04	1.35	1.05					0.97	0.77	3.76













ZX48U-5A 4-Pillar Canopy Version, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
														
Boom 2.68 m	3							*0.98	0.79			*0.85	0.58	4.80
Arm 1.69 m	2					*1.44	1.18	*1.14	0.76	*1.01	0.53	*0.86	0.51	5.13
Additional counterweight 200 kg	1					*2.01	1.09	*1.35	0.72	*1.07	0.52	*0.92	0.49	5.21
Rubber shoe 400 mm	0 (Ground)					*2.25	1.04	*1.47	0.69	*1.08	0.51	*1.06	0.50	5.04
	-1	*1.92	*1.92	*2.58	1.99	*2.12	1.03	*1.40	0.68			*1.09	0.57	4.60
	-2			*2.63	2.04	*1.60	1.05					*1.07	0.77	3.76













ZX48U-5A 4-Pillar Canopy Version, Blade above Ground

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

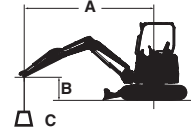
Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
														
Boom 2.68 m	3					*1.19	1.13	0.87	0.71			0.73	0.59	4.47
Arm 1.38 m	2					1.34	1.05	0.85	0.68			0.63	0.51	4.83
Rubber shoe 400 mm	1					1.25	0.97	0.81	0.65			0.60	0.48	4.91
	0 (Ground)					1.21	0.94	0.79	0.63			0.63	0.50	4.73
	-1			2.53	1.83	1.21	0.94	0.79	0.63			0.73	0.58	4.25
	-2			*2.05	1.88	1.25	0.97					1.09	0.86	3.28

ZX48U-5A 4-Pillar Canopy Version, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
														
Boom 2.68 m	3					*1.19	1.13	*1.11	0.71			*1.06	0.59	4.47
Arm 1.38 m	2					*1.66	1.05	*1.25	0.68			*1.07	0.51	4.83
Rubber shoe 400 mm	1					*2.16	0.97	*1.43	0.65			*1.14	0.48	4.91
	0 (Ground)					*2.28	0.94	*1.50	0.63			*1.17	0.50	4.73
	-1			*3.06	1.83	*2.04	0.94	*1.34	0.63			*1.19	0.58	4.25
	-2			*2.05	1.88	*1.31	0.97					*1.10	0.86	3.28

- 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 the center-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. 0 m = Ground.



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

For lifting capacities, subtract bucket and quick hitch weight from lifting capacities without bucket.

ZX48U-5A Cab Version, Blade above Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
Boom 2.68 m	3							*0.98	0.82			0.74	0.60	4.80
Arm 1.69 m	2					*1.44	1.22	0.98	0.79	0.68	0.55	0.66	0.53	5.13
Additional counterweight 200 kg	1					1.44	1.13	0.93	0.75	0.67	0.54	0.63	0.51	5.21
Rubber shoe 400 mm	0 (Ground)					1.39	1.08	0.91	0.72	0.66	0.53	0.65	0.52	5.04
	-1	*1.92	*1.92	*2.58	2.07	1.38	1.07	0.90	0.71			0.74	0.59	4.60
	-2			*2.63	2.12	1.41	1.09					1.00	0.80	3.76

ZX48U-5A Cab Version, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
Boom 2.68 m	3							*0.98	0.82			*0.85	0.60	4.80
Arm 1.69 m	2					*1.44	1.22	*1.14	0.79	*1.01	0.55	*0.86	0.53	5.13
Additional counterweight 200 kg	1					*2.01	1.13	*1.35	0.75	*1.07	0.54	*0.92	0.51	5.21
Rubber shoe 400 mm	0 (Ground)					*2.25	1.08	*1.47	0.72	*1.08	0.53	*1.06	0.52	5.04
	-1	*1.92	*1.92	*2.58	2.07	*2.12	1.07	*1.40	0.71			*1.09	0.59	4.60
	-2			*2.63	2.12	*1.60	1.09					*1.07	0.80	3.76

ZX48U-5A Cab Version, Blade above Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
Boom 2.68 m	3					*1.19	1.17	0.91	0.73			0.76	0.61	4.47
Arm 1.38 m	2					1.39	1.09	0.88	0.71			0.66	0.53	4.83
Rubber shoe 400 mm	1					1.30	1.01	0.85	0.68			0.63	0.50	4.91
	0 (Ground)					1.26	0.98	0.83	0.65			0.65	0.52	4.73
	-1			2.64	1.90	1.27	0.98	0.83	0.65			0.76	0.61	4.25
	-2			*2.05	1.96	1.30	1.01					*1.10	0.89	3.28

ZX48U-5A Cab Version, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				meter
Boom 2.68 m	3					*1.19	1.17	*1.11	0.73			*1.06	0.61	4.47
Arm 1.38 m	2					*1.66	1.09	*1.25	0.71			*1.07	0.53	4.83
Rubber shoe 400 mm	1					*2.16	1.01	*1.43	0.68			*1.14	0.50	4.91
	0 (Ground)					*2.28	0.98	*1.50	0.65			*1.17	0.52	4.73
	-1			*3.06	1.90	*2.04	0.98	*1.34	0.65			*1.19	0.61	4.25
	-2			*2.05	1.96	*1.31	1.01					*1.10	0.89	3.28

EQUIPMENT

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

● : Standard equipment

○ : Optional equipment

ENGINE	
Auto idle system	●
Cartridge-type engine oil filter	●
Dust-Proof indoor net	○
Electrical fuel feed pump	●
Fuel main filter	●
Radiator reserve tank	●
Water-separator for engine fuel	●

HYDRAULIC SYSTEM	
Boom anti-drift valve	●
Full-flow filter	●
Hose rupture valve	○
Hydraulic pilot type control levers	●
Pilot control shut-off lever with neutral engine start system	●
Pilot filter	●
Suction filter	●
Swing parking brake	●
Travel parking brake	●
Two-speed travel system	●
Valve for extra piping	●

4-PILLAR CANOPY

Anti-slip plate	●
Armrests	○
Auxiliary function lever (AFL)	○
Drink holder	●
Electric horn	●
Floor mat	●
Reclining seat	○
Retractable seat belt	○
ROPS/OPG canopy	●
Spare power supply	○
Suspension seat	○

CAB	
Air conditioner	○
AM/FM radio	○
Anti-slip plate	●
Armrests	○
Auxiliary function lever (AFL)	○
Defroster	●
Drink holder	●
Electric horn	●
Floor mat	●
Heater	●
Reclining seat	●
Retractable seat belt	○
ROPS/OPG cab	●
Spare power supply	○
Suspension seat	○
Window washer	●
Wiper	●

UPPERSTRUCTURE	
Auxiliary overload relief valve	○

Electric fuel refilling pump	○
Pilot accumulator	○
Rear view mirror	●
Stack muffler	○
Tool box	●
200 kg additional counterweight	○

UNDERCARRIAGE	
400 mm grouser shoe	○
400 mm pad crawler shoe	○
400 mm rubber shoe	●

FRONT ATTACHMENTS	
Assist piping	○
Extra piping	○

HN bushing	●
1.38 m arm	●
1.69 m arm	○

MISCELLANEOUS	
Theft deterrent system*	○

* Hitachi Construction Machinery cannot be held liable for theft, any system will just minimize the risk of theft.