

ZAXIS-6 series

HITACHI

Reliable Solutions

# ZAXIS 33U



## HYDRAULIC EXCAVATOR

Model code : ZX33U-6

Engine rated power : 18.8 kW (ISO 14396 : 2002)

Operating weight : cab 3 510 – 3 930 kg

canopy 3 350 – 3 770 kg

Bucket ISO heaped : 0.08 – 0.09 m<sup>3</sup>



# ZX33U-6

## The user-friendly excavator



6. Efficient performance



8. Exceptional comfort



10. Easy to maintain

## No compromise







# Perfect fit

The user-friendly ZX33U-6 can be used for a variety of projects, such as rental, utilities, foundation work, landscaping, indoor demolition and construction. It delivers an efficient performance, while offering exceptional operator comfort and easy maintenance. Equipped with a Stage V-compliant engine, it requires no after-treatment device, which means reduced maintenance time and costs.



## Power-assist front window

Front window opens smoothly and easily.



## Added durability

Strengthened front joints and boom cylinder guard enhance durability.



## Short-tail swing radius

The short-tail swing radius of the ZX33U-6 is ideal for urban areas, where space is limited.





**Comfortable cab**

The wide operator seat, adjustable and softer arm rest and easy access to the pressurised cab provide a comfortable work space.



**Improved safety**

Rear wiper improves visibility and safety.



**Air ventilation**

Improves heating efficiency up to 22% and rear defrosting function aids visibility in cold weather conditions. Cooling efficiency improved by up to 12%.



**Energy efficient**

LED lights on the cab and boom have a longer lifetime than halogen alternatives.



**Smooth operation**

The auxiliary function lever ensures excellent control of attachments.



**Easy maintenance**

The radiator and oil cooler are conveniently positioned side by side.

# Efficient performance

The ZX33U-6 has been built to provide an outstanding level of performance on any job site and particularly where space is limited. Fast, powerful and fuel-efficient, it has also been designed to offer reduced running costs and produce fewer emissions.

## High productivity

The ZX33U-6 delivers high levels of productivity on the job site thanks to a powerful Stage V-compliant engine, quick cycle time and an efficient hydraulic system.

## Built to last

Durable features of the ZX33U-6 – such as strengthened front joints, reinforced D-frame and boom cylinder guard – ensure a reliable performance, helping you to get the job done on time and on budget.

## Lower fuel costs

The advanced energy-saving system combines ECO mode, auto idle and isochronous control features to significantly reduce fuel consumption. It also reduces noise levels and emissions.

## Remote monitoring

ConSite Pocket and ConSite Shot apps (optional) provide maintenance and machine operational information. Global e-Service gives access to location information and operational data such as fuel, hours meter, engine data and more.



The short-tail swing radius makes the ZX33U-6 ideal for working in tight spaces.





Quick cycle time and efficient hydraulics ensure high productivity.



Multifunctional LCD monitor shows data at a glance.





A clear view from the cab.



The auxiliary function lever ensures precise control.





# Exceptional comfort

The cab of the ZX33U-6 highlights the meticulous attention to detail given to the design of Hitachi mini excavators. It offers enhanced visibility, user-friendly features and a comfortable working environment for operators.

## Spacious cab

The ROPS-compliant cab of the ZX33U-6 is spacious and easy to access via the entrance step. Fitted with a wide and adjustable sliding suspension seat, folding foot pedals and adjustable arm rest, the ZX33U-6 provides a high level of comfort for operators.

## Easy operation

User-friendly controls are in easy reach of the operator and the hydraulic pilot control levers ensure a smooth operation. The optional auxiliary function lever with proportional switch offers precise control of the front attachment. The large LCD monitor is easy to view in bright sunlight or at night, and provides all vital technical data at a glance.

## Enhanced design

The ZX33U-6 is equipped with new LED lights, which have a longer lifetime than halogen alternatives for efficient energy use. Options include a sun visor on the front window.



Controls are within easy reach.

# Easy to maintain

Ease of maintenance is an integral part of the user-friendly design of the ZX33U-6. It is fitted with a range of convenient features that allow you to carry out quick and easy cleaning and service tasks on the job site, ensuring an optimum performance at all times.

## Convenient access

The engine and radiator covers have been designed to allow easy access. More space around the fuel tank opening makes the new mini excavator easier to refuel. The battery is positioned on the same side as the radiator for easy maintenance.

## Quick cleaning

The undercarriage is easy to clean due to the soil-free truck structure from which accumulated mud and sand can be easily removed. Dozer blade openings help to minimise the build-up of dirt and make it quicker to remove.

## Safety first

The battery disconnect switch is now available as standard for safer and easier maintenance.



The battery disconnect switch allows maintenance to be carried out safely.





Easy to open covers provide quick access.



Quick coupler port connection (optional) under toolbox allows for secure retrofit installation.



The tilting floor enables easy access to the engine and control valve for quick servicing.

# SPECIFICATIONS

## ENGINE

Model .....	3TNV88
Type .....	4-cycle water-cooled, direct injection
No. of cylinders .....	3
Rated power	
ISO 14396 : 2002 .....	18.8 kW at 2 400 min <sup>-1</sup>
ISO 9249 : 2007 .....	18.0 kW at 2 400 min <sup>-1</sup>
Maximum torque .....	91.6 Nm at 1 000 min <sup>-1</sup>
Piston displacement .....	1.642 L
Bore and stroke .....	88 mm x 90 mm
Battery .....	1 x 12 V / 55 Ah

## HYDRAULIC SYSTEM

### Hydraulic Pumps

Main pumps .....	2 variable displacement axial piston pumps 1 gear pump
Maximum oil flow .....	2 x 38.4 L/min 1 x 22.8 L/min
Pilot pump .....	1 gear pump
Maximum oil flow .....	10.8 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 <sup>2</sup> )
Swing circuit .....	16.7 MPa (170 kgf/cm <sup>2</sup> )
Travel circuit .....	24.5 MPa (250 kgf/cm <sup>2</sup> )
Pilot circuit .....	3.9 MPa (40 kgf/cm <sup>2</sup> )

### Hydraulic Cylinders

	Quantity	Bore	Rod diameter	Stroke
Boom (cab)	1	80 mm	45 mm	563 mm
Boom (canopy)	1	80 mm	45 mm	579 mm
Arm	1	70 mm	40 mm	546 mm
Bucket	1	65 mm	40 mm	435 mm
Blade	1	85 mm	45 mm	135 mm
Boom swing	1	85 mm	45 mm	525 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 .....	9.1 min <sup>-1</sup> (rpm)
Swing torque .....	5.1 kNm (520 kgfm)

### Operator's Cab

Independent spacious cab, 1 049 mm wide by 1 660 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

## AIR CONDITION SYSTEM

The air conditioning system contains fluorinated greenhouse gases.  
Refrigerant type : HFC-134a, GWP : 1 430, Amount : 0.65 kg,  
CO<sub>2</sub>e: 0.93 ton

## UNDERCARRIAGE

### Tracks

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

### Numbers of Rollers on Each Side

Upper rollers .....	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 4.3 km/h Low : 0 to 2.8 km/h
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Maximum traction force.... 27 kN (2 750 kgf)

Gradeability .....

58% (30 degree) continuous

## SOUND LEVEL

Sound level in cab according to ISO 6396 : 2008 ..... LpA 75 dB(A)  
External sound level according to ISO 6395 : 2008 and  
EU Directive 2000/14/EC ..... LwA 94 dB(A)

## SERVICE REFILL CAPACITIES

Fuel tank .....	42.0 L
Engine coolant .....	3.9 L
Engine oil .....	6.7 L
Travel device (each side) .....	0.6 L
Hydraulic system .....	43.0 L
Hydraulic oil tank .....	32.0 L

## WEIGHTS AND GROUND PRESSURE

### Operating Weight and Ground Pressure

CAB

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm <sup>2</sup> )
Rubber shoe	300 mm	1.17 m	3 510	29 (0.30)
		1.52 m	3 720*	31 (0.32)
Grouser shoe	300 mm	1.17 m	3 640	30 (0.31)
		1.52 m	3 860*	32 (0.33)
Pad crawler shoe	300 mm	1.17 m	3 720	30 (0.31)
		1.52 m	3 930*	32 (0.33)

Including 0.09 m<sup>3</sup> (ISO 7451 : 2007 heaped), bucket weight (73 kg).

\*Including 0.08 m<sup>3</sup> (ISO 7451 : 2007 heaped), bucket weight (67 kg),  
additional counterweight (190 kg).

### 4-PILLAR CANOPY

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm <sup>2</sup> )
Rubber shoe	300 mm	1.17 m	3 350	28 (0.29)
		1.52 m	3 560*	30 (0.30)
Grouser shoe	300 mm	1.17 m	3 480	29 (0.29)
		1.52 m	3 700*	31 (0.31)
Pad crawler shoe	300 mm	1.17 m	3 560	29 (0.30)
		1.52 m	3 770*	31 (0.31)

Including 0.09 m<sup>3</sup> (ISO 7451 : 2007 heaped), bucket weight (73 kg).

\*Including 0.08 m<sup>3</sup> (ISO 7451 : 2007 heaped), bucket weight (67 kg),  
additional counterweight (190 kg).

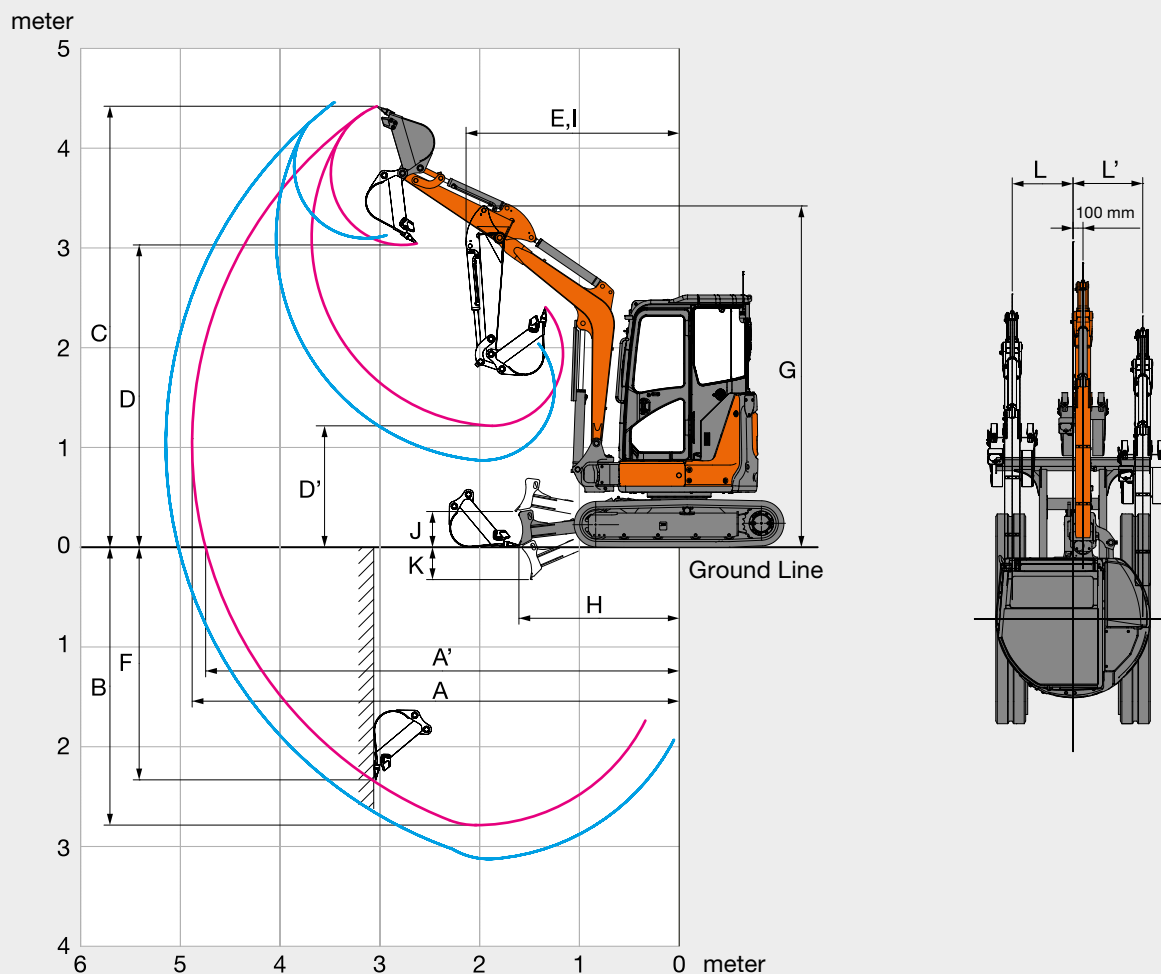
## BUCKET AND ARM DIGGING FORCE

Arm length	1.17 m	1.52 m
Bucket digging force ISO 6051 : 2006	27.2 kN (2 770 kgf)	
Arm crowd force ISO 6051 : 2006	16.9 kN (1 720 kgf)	14.6 kN (1 490 kgf)



# SPECIFICATIONS

## WORKING RANGES

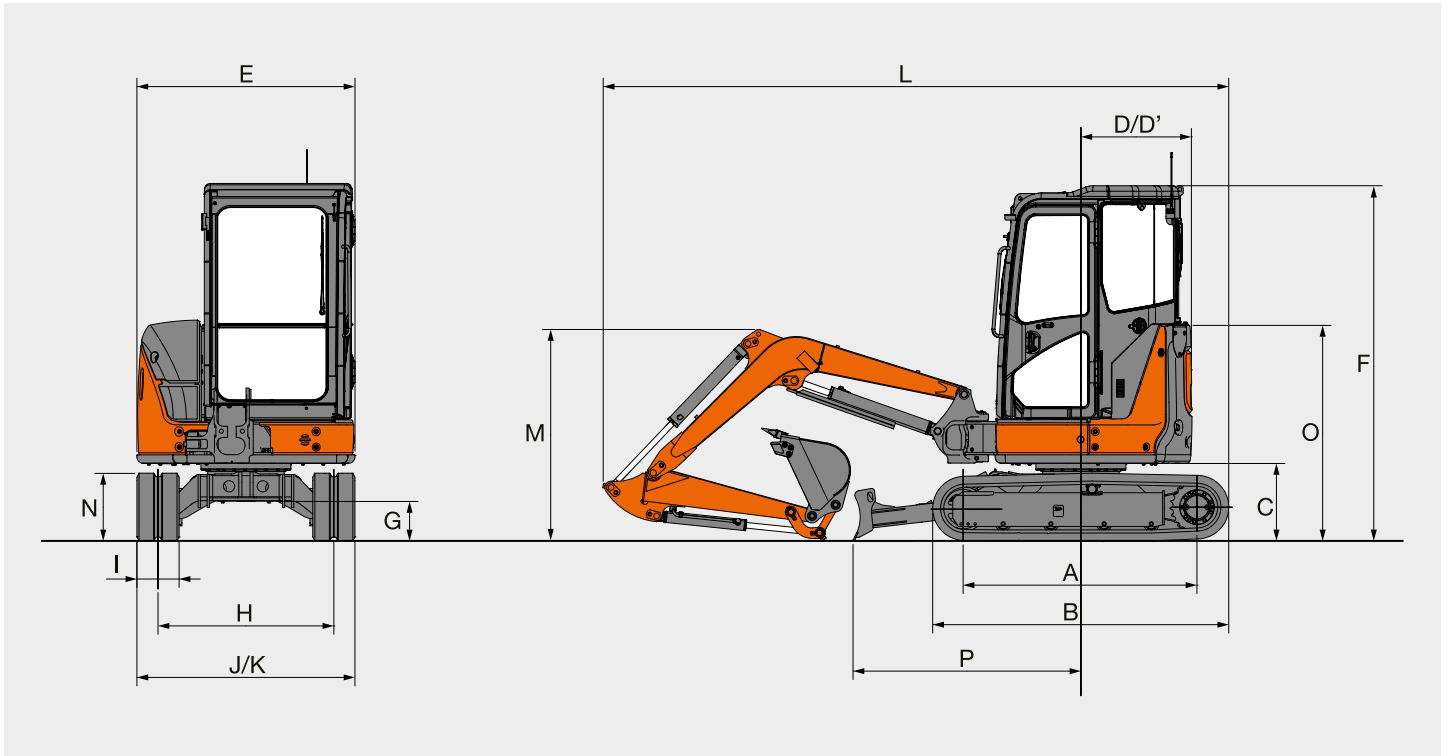


Unit: mm

Arm length	1.17 m		1.52 m	
	Cab	4-Pillar Canopy	Cab	4-Pillar Canopy
A Max. digging reach	4 890		5 170	
A' Max. digging reach (on ground)	4 750		5 040	
B Max. digging depth	2 790		3 130	
C Max. cutting height	4 420	4 620	4 470	4 700
D Max. dumping height	3 030	3 200	3 100	3 310
D' Min. dumping height	1 220	1 310	870	980
E Min. swing radius	2 150	1 970	2 180	2 090
F Max. vertical wall digging depth	2 330		2 530	
G Front height at Min. swing radius	3 440	3 530	3 460	3 560
H Min. level crowding distance	1 610		1 480	
I Working radius at Min. swing radius (Max. boom-swing angle)	1 820	1 580	1 860	1 680
J Blade bottom highest position above ground	360		360	
K Blade bottom lowest position above ground	320		320	
L/L' Offset distance	610 / 700	610 / 735	610 / 700	610 / 735
with hose rupture valve	520 / 700	520 / 735	520 / 700	520 / 735
with assist pipes	450 / 700	450 / 700	450 / 700	450 / 700
Max. boom-swing angle (deg.)	62 / 62	72 / 62	62 / 62	72 / 62
with hose rupture valve (deg.)	62 / 52	72 / 52	62 / 52	72 / 52
with assist pipes (deg.)	62 / 45	62 / 45	62 / 45	62 / 45

Excluding track shoe lug

## DIMENSIONS



Unit: mm

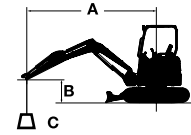
	ZAXIS 33U	
A Distance between tumblers	1 660 (1 670)	
B Undercarriage length	2 110 (2 130)	
*C Counterweight clearance	550 (540)	
D Rear-end swing radius	775 (875 with additional counterweight)	
D' Rear-end length	775 (875 with additional counterweight)	
E Overall width of upperstructure	1 550	
F Overall height of cab	Cab 2 530 (2 520)	Canopy 2 480
*G Min. ground clearance	280 (270)	
H Track gauge	1 250	
I Track shoe width	300	
J Undercarriage width	1 550	
K Overall width (Blade width)	1 550	
L Overall length		
With 1.17 m arm	4 450	
With 1.52 m arm	4 530	
*M Overall height of boom		
With 1.17 m arm	1 510	
With 1.52 m arm	1 950	
N Track height	480 (470)	
O Engine cover-height	1 530 (1 520)	
P Horizontal distance to blade	1 620	
Q Blade height	360	

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



# MACHINE CAPACITIES

- Notes:
1. Ratings are based on ISO 10567 : 2007.
  2. Machine 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

To determine lifting capacities, apply "Rating over-side or 360 degrees" machine capacities from the table and deduct weight of installed attachment and quick coupler.  
Optional feature may affect machine performance.

## ZAXIS 33U 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				meter
Boom 2.28 m Arm 1.52 m Additional counterweight 190 kg Rubber shoe 300 mm	3.0									0.57	0.44	3.94
	2.0					0.87	0.67	0.55	0.43	0.48	0.37	4.38
	1.0					0.82	0.62	0.53	0.41	0.45	0.34	4.50
	0 (Ground)			1.48	1.05	0.78	0.59	0.52	0.40	0.46	0.35	4.35
	-1.0	*1.65	*1.65	1.48	1.05	0.77	0.58			0.54	0.41	3.87
	-2.0	*2.87	*2.87	1.53	1.09					0.85	0.64	2.87

## ZAXIS 33U 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				meter
Boom 2.28 m Arm 1.17 m Rubber shoe 300 mm	3.0											
	2.0			*1.48	1.09	0.76	0.58	0.48	0.37	0.48	0.36	4.03
	1.0					0.72	0.54	0.47	0.36	0.44	0.34	4.17
	0 (Ground)			1.32	0.93	0.69	0.52			0.46	0.35	4.00
	-1.0	*1.86	*1.86	1.34	0.94	0.70	0.52			0.57	0.43	3.47
	-2.0			*0.98	0.98					*0.84	*0.84	2.19

## ZAXIS 33U 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				meter
Boom 2.28 m Arm 1.52 m Additional counterweight 190 kg Rubber shoe 300 mm	3.0									0.54	0.42	3.94
	2.0					0.82	0.63	0.52	0.40	0.45	0.34	4.38
	1.0					0.77	0.58	0.50	0.38	0.42	0.32	4.50
	0 (Ground)			1.39	0.98	0.73	0.55	0.48	0.37	0.43	0.33	4.35
	-1.0	*1.65	*1.65	1.39	0.98	0.72	0.54			0.51	0.39	3.87
	-2.0	*2.87	*2.87	1.43	1.02					0.80	0.60	2.87

## ZAXIS 33U 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				meter
Boom 2.28 m Arm 1.17 m Rubber shoe 300 mm	3.0											
	2.0			1.41	1.02	0.71	0.54	0.45	0.34	0.44	0.34	4.03
	1.0					0.67	0.50	0.44	0.33	0.41	0.31	4.17
	0 (Ground)			1.23	0.86	0.64	0.48			0.43	0.32	4.00
	-1.0	*1.86	*1.86	1.24	0.83	0.64	0.48			0.53	0.40	3.47
	-2.0			*0.98	0.93					*0.84	0.80	2.19

# EQUIPMENT

● : Standard equipment

○ : Optional equipment

## ENGINE

Air cleaner double filters	○
Alternator 12V - 40 A	●
Auto idle system	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
ECO/PWR mode control	●
Electrical fuel feed pump	●
Radiator reserve tank	●
Water-separator for engine fuel	●

## HYDRAULIC SYSTEM

Boom anti-drift valve	●
Full-flow filter	●
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	●

## CAB

Air conditioner*	●
AM/FM radio	●
Anti-slip plate	●
Armrest	●
Defroster (Front, Rear)	●
Drink holder	●
Electric horn	●
Front window power-assisted with gas damper	●
Floor mat	●
Heater	●
OPG top guard, Level I (ISO 10262 : 1998) compliant cab	●
Retractable seat belt	●
ROPS (ISO 12117-2 : 2008 + A1 : 2016) compliant cab	●
Seat with height adjustment	●
Spare power supply 12V (inside)	●
Spare power supply 12V (outside)	○
Sun visor (front window (rigid type))	○
Suspension seat with reclining (fabric)	●
Window washer	●
Wiper (Front, Rear)	●

## 4-PILLAR CANOPY

Anti-slip plate	●
Armrests	●
Drink holder	●
Electric horn	●
Floor mat	●
OPG top guard, Level I (ISO 10262 : 1998) compliant canopy	●
Retractable seat belt	●
ROPS (ISO 12117-2 : 2008 + A1 : 2016) compliant canopy	●
Spare power supply 12V (inside)	○
Suspension seat with reclining (vinyl)	●

## LIGHTS

Additional cab roof front lights	○
Additional 4-pillar canopy roof front lights	○
2 working LED lights	●

## UPPERSTRUCTURE

Auxiliary function lever (AFL)	○
Auxiliary overload relief valve	○
Batteries 1 x 70 Ah	●
Battery disconnect switch	●
GSM mobile communication system***	●
Pilot accumulator	○
Rearview mirror	●
Stack muffler	○
190 kg additional counterweight	○

## UNDERCARRIAGE

300 mm grouser shoe	○
300 mm pad crawler shoe	○
300 mm rubber shoe	●

## FRONT ATTACHMENTS

Assist piping	○
Extra piping	●
HN bushing	●
Hose rupture valve for arm	●
Hose rupture valve for boom	●
1.17 m arm	○
1.52 m arm	●

## MISCELLANEOUS

Theft deterrent system**	○
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Standard and optional equipment may vary by country, so please consult authorized dealer for details.

\* Contains fluorinated greenhouse gases, Refrigerant type: HFC-134a, GWP: 1430, Amount: 0.65 kg, CO<sub>2</sub>e: 0.93 ton.

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

\*\*\* It is possible to obtain information by connecting to Global e-service with a Hitachi genuine mobile terminal.











Prior to operating this machine, including satellite communication system, in a country other than a country of its intended use, it may be necessary to make modifications to it so that it complies with the local regulatory standards (including safety standards) and legal requirements of that particular country. Please do not export or operate this machine outside the country of its intended use until such compliance has been confirmed. Please contact authorized dealer in case of questions about compliance.

These specifications are subject to change without notice. Illustrations and photos show the standard models, and may or may not include the latest feature updates, 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.

