ZAXIS-3 series

HITACHI

# ZAXIS 70LC 70LCN


## HYDRAULIC EXCAVATOR

- **Model Code:** ZX70LC-3 / ZX70LCN-3
- **Engine Rated Power:** 39.4 kW (52.8 HP)
- **Operating Weight:** ZX70LC-3: 7 280 - 7 470 kg
  ZX70LCN-3: 7 250 - 7 460 kg
- **Backhoe Bucket:** SAE, PCSA Heaped: 0.13 - 0.33 $m^3$
  CECE Heaped: 0.12 - 0.29 $m^3$

# The Power to Perform

**The ZAXIS-3 series is a new generation of excavators designed to provide more efficient power, productivity and improved operator comfort. By listening carefully to the wishes of the end-user, HITACHI not only understands your business, but also provides the reliable solutions you've been looking for.**

NEW AND IMPROVED

- ***Performance:***
  **5% higher production**

- ***Comfort:***
  **Excellent visibility**
  **Enhanced controllability**
  **Lower noise level**

- ***New equipment:***
  **Standard satellite communication system**
  **Standard theft deterrent system**
  **Rear view camera (optional)**

- ***Reduced running costs:***
  **Lower fuel consumption per $m^3$**
  **Improved durability and reliability**


- **The new engine complies with the Emission Regulations EU Stage III A**
- **The advanced low noise design complies with the EU noise regulation 2000 / 14 / EC, STAGE II**


*Notes: The pictures in this brochure show an optional 2.12 m arm and blade attachment installed.*
*Some of the pictures in this brochure show an unmanned machine with attachments in an operating position. These were taken for demonstration purposes only and the actions shown are not recommended under normal operating conditions.*

# Boosted Productivity

**Efficient hydraulic system and new intercooled turbocharger diesel engine were developed for ZAXIS-3. These advanced technologies are at work to yield bigger output with higher fuel efficiency.**

## More production, less fuel consumption

### Increased Production

A combination of the hydraulic system (HIOS*II) and new intercooled turbocharger engine allows the efficient use of hydraulic pressure to increase speeds of actuators and boost production with higher fuel efficiency. The productivity is increased 5% in comparison to previous model ZAXIS-1.

**Human & Intelligent Operation System*

### E-mode

The E mode and P mode can be selected to suit job needs. The E mode can save fuel consumption by up to 12% compared to the previous model's P mode, while yielding similar production.

### Increase in Swing Torque, Traction Force and Travel Speed

Swing torque and traction force are increased significantly.
***- Swing torque 11% UP***
***- Traction force 4% UP***
***- Travel speed 6% UP***
Sophisticated Travel Control; At climbing or steering, when the machine needs more traction force, the engine speed automatically increases which makes the machine faster.

## Efficient hydraulic control

### Hydraulic System

The Hydraulic System elicits more user satisfaction than other models due to its greater operator comfort and ease of operability. During arm roll-in operations, the hydraulics of 3 pumps are merged, allowing for quick leveling operations. Depending on the operations, usage of the 3 pumps are automatically switched, offering excellent operability. It supports stability and combined operability, such as speed balance and land clearing.

### Speed Sensing Control

A speed sensing system is used for hydraulic horsepower control. The hydraulic pump delivery flow, which varies with changes in engine RPM according to the load, is controlled. This means efficient use of engine horsepower, and also contributes to a reduction in fuel consumption.

## Development concept of new engine

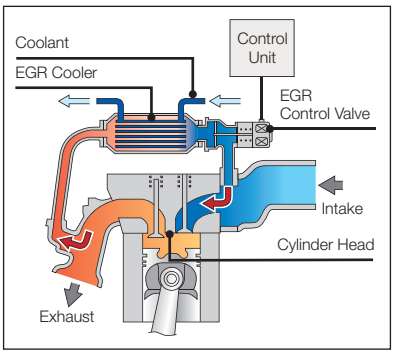
### Intercooled Turbocharger Engine

The new intercooled turbocharger engine is developed and built to comply with the rigorous Emission Regulations enforced in 2008 in U.S and EU. This new engine contributes to environmental preservation. At the same time it realizes high durability and low fuel consumption by adapting the latest advanced engine technology.

### Cooled EGR* System

Exhaust gas is partially mixed with intake air to lower combustion temperature for reducing NOx and fuel consumption. What's more, the EGR cooler cools down exhaust gas to increase air concentration for complete combustion, reducing PM** (diesel plume).

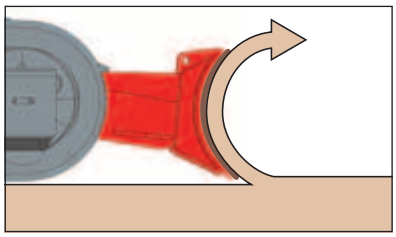
**Exhaust Gas Recirculation*
***Particulate Matter*




## Improved crowding performance

### Reshaped Blade (Optional)

The blade is reshaped for crowding without loss.



# A New Standard in Operator Comfort

**The operator's seat of the ZAXIS-3 series gives the operator an excellent view of the jobsite. Ample legroom, short stroke levers and a large seat ensure optimum working conditions for the operator during long hours.**

**The photo shows an excavator with a optional blade (blade lever) installed.*


*The photo shows an excavator with a optional blade (blade lever) installed.

The ZAXIS-3 series cab has been redesigned to meet demands of customers. From the operator's seat the operator has an excellent view of the jobsite. On the widescreen color LCD monitor the operator can see machine conditions and with the rear view camera (optional), what is behind the machine. Ample legroom, short stroke levers and a suspension seat with heating ensure optimum working conditions. The seat features horizontal, vertical adjustments and has a backrest contoured for comfort, with a HITACHI logo.

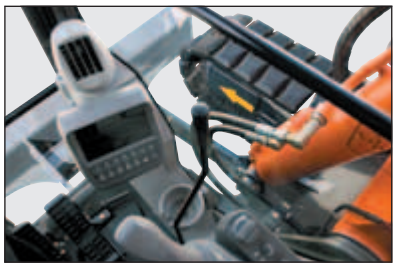

Wide adjustable armrests and a retractable seat belt are included. Short stroke levers allow for continuous operation with less fatigue. Three switches on the lever (optional) can be set to operate attachments other than buckets. The cab is pressurized to keep out dust. Noise and vibrations are kept to a minimum due to the elastic mounts, filled with silicone oil, the cab rests on.

Visibility is improved especially for the right downward view. Sliding windows on the front and side enable direct communication between operator and other workers. Visibility is increased with the blade. The blade is shaped so that the operator can visually confirm that the blade is in contact with the ground. A flat floor allows for easy cleaning. Ergonomic controls and switches, fully automatic air conditioner and a radio complete the package.

# Embedded Information Technology

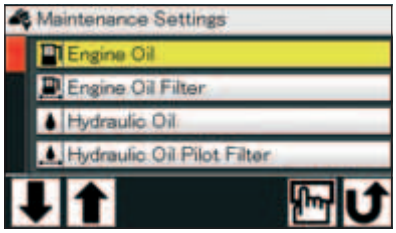
**The ZAXIS-3 series is equipped with a widescreen color LCD monitor with adjustable contrast for day and night shifts. With the monitor the operator can check maintenance intervals and connect to the rear view camera (optional). A theft deterrent system and multi-language selection is also available.**

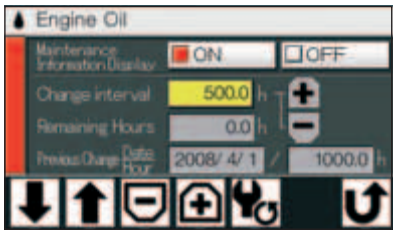
### Multi function monitor



The color LCD monitor, located in the cab, indicates coolant temperature, fuel level, and maintenance data. It also allows one-touch adjustment of the attachment. The display can also be adjusted to day or night shift.

### Maintenance support




Replacement timing of hydraulic oil and fuel filters is alerted to the operator through the LCD monitor according to the schedule preset by the user each time when turning the key switch. The scheduled maintenance can prevent the failure of the machine.

### Multi-language selection


The menu allows selection from 12 languages.

### Rear view camera (optional)

The widescreen color LCD, in tandem with the rear view camera on the counterweight, provides a convenient view of the area behind the unit.
The rear view camera automatically works when travelling backward, and can also be manually turned on with a select switch on the monitor.

### Theft deterrent system


The electronic immobiliser requires the entry of a password to the multifunctional monitor each time when starting the engine to prevent theft and vandalism.

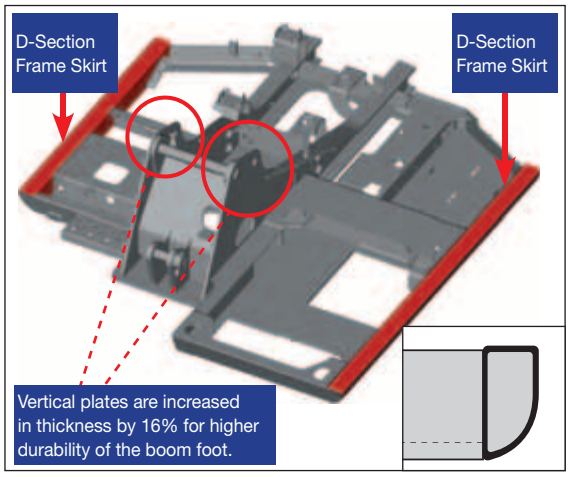
ZX70LC-3 off-set front

# A Solid Base for a Long Life

**HITACHI's technology is built on a wealth of experience and know-how from a variety of demanding conditions around the world. The undercarriage of the ZAXIS 70 has become much stronger. Improved construction and enlarged box sections make this machine more durable.**

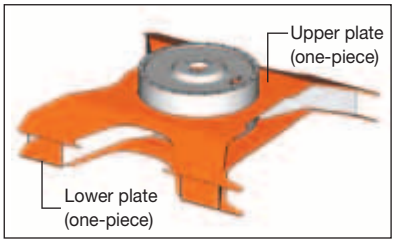
## Strengthened Upperstructure Frame

The new ZAXIS excavator now has a D-section frame skirt, which was highly acclaimed in previous models. As a result of this D-section frame skirt, rigidity and durability in the upper machinery are greatly improved. Strengthened boom foot mounting bracket, vertical plates are increased in thickness by 16% for higher durability of the boom foot.




## Strengthened X beam

One-piece upper and lower plates are utilized instead of conventional 4-piece plates, eliminating welds. This increases strength of the track frame.




## Strengthened front attachment

At arm-bucket joint, the arm top is hardened with WC thermal spraying (Tungsten-Carbide) for greater wear resistance at its contact surface with bucket, reducing jerking. Reinforced resin thrust plates designed to reduce noise and resist wear.

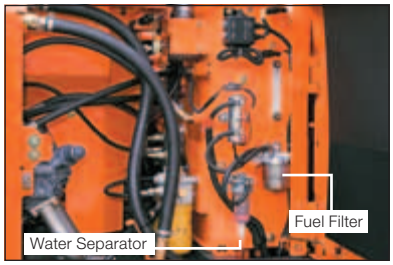
WC Thermal spraying

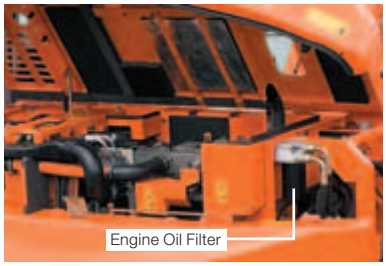
# Simplified Maintenance

**The ZAXIS-3 series meet customer demands for simplified maintenance. Regular maintenance is the key for keeping equipment in top condition, which can help to prevent costly downtime. In addition, a regular serviced machine has higher residual value. There are many service features to be found on the ZAXIS-3 series.**

## Conveniently located inspection points

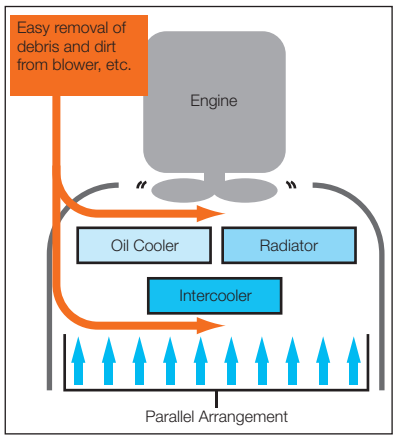
Wide doors give access, from ground level, to the fuel filter, water separator and engine oil filter.




## Parallel arrangement of the cooling pack

The oil cooler and radiator are laid out in a parallel arrangement, instead of the conventional in-line arrangement. This parallel arrangement is significantly easier to clean around the radiator.




## Extended oil and filter change intervals

| Front Pin Lubricating Intervals and Consumables Replacement | | |
|---|---|---|
| | | New ZAXIS 70 |
| Lubricant | Bucket | 500 h |
| | Boom Foot | 500 h |
| | Front | 500 h |
| Consumables | Engine Oil | 500 h |
| | Engine Oil Filter | 500 h |
| | Hydraulic Oil | 5 000 h |
| | Hydraulic Oil Filter | 1 000 h |
| | Fuel Filter | 500 h |

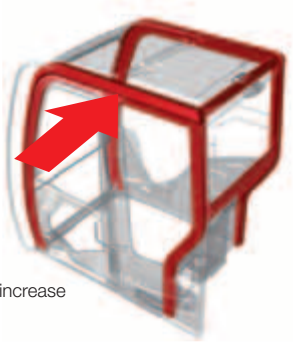
The oil and filter change intervals have been extended considerably, reducing maintenance time and expenses. Engine oil consumption is lower. Hydraulic oil can be used up to 5 000 hours.

# Safety Features

**Ensuring the safety of the operator and other workers on the jobsite is an important concern for HITACHI. That is why the ZAXIS-3 series has a number of safety features including a new reinforced cab and shut-off mechanisms for engine and pilot controls.**

## CRES II cab

The CRES II cab is designed to help with “just in case” protection for the operator. Safety in case of tipping is improved. The cab top, for instance, can withstand about 1.4 times conventional load when side load is applied to the cab top until its deformation reaches 200mm.



withstanding load: 1.4-fold increase

## Additional features

### Cab right protection bars

### Evacuation hammer

### Engine stop knob

### Pilot control shut-off lever

### OPG top guard, level II

*(optional)*

### Retractable seat belt

Other features include a retractable seat belt, evacuation hammer and emergency engine stop knob. A shut-off lever for pilot control helps to prevent unintentional movements. In addition a Falling Object Protective Structure (OPG top guard, Level II) guard is optionally available. For the cab windows there is a choice of laminated or tempered glass.

# Environmental Features

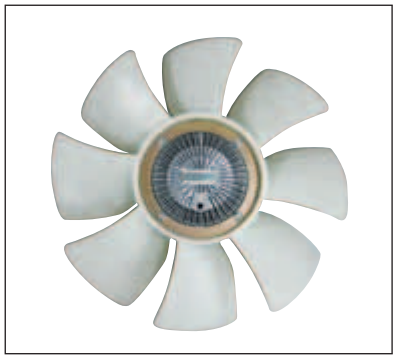
**HITACHI acts responsibly when it comes to the environment. Our production facilities have ISO 14001 certification. The HITACHI machine is lead free and has a low-noise design, therefore HITACHI customers get one of the most environmentally considerate hydraulic excavators available today.**

## A cleaner machine

The ZAXIS-3 series is equipped with a clean but powerful engine to comply with Tier 3, and Stage III A. An engine emission regulations effective in the U.S. EPA and European Union from 2008. Exhaust gas is partly re-combusted to reduce particulate matter (PM) output and lower nitrogen oxide (NOx) levels.

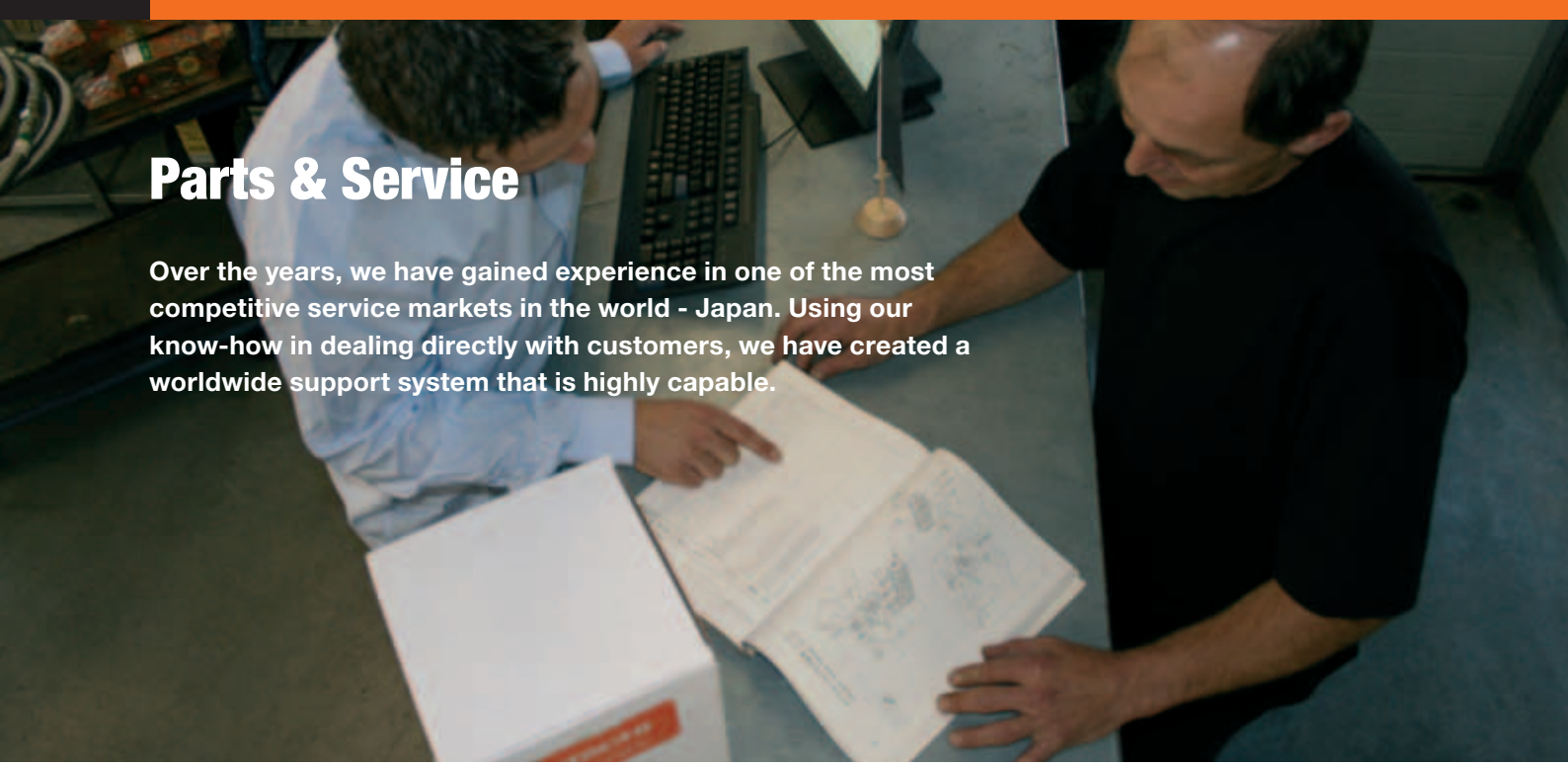
## A quieter machine

Many features contribute to noise reduction in the new ZAXIS. Firstly, the fan with linear clutch responds to the engine temperature: the rotational speed of the fan increases smoothly as the temperature of the engine increases. This control reduces noise in light-load operations, as the fan rotational speed does not increase beyond what is necessary. This also means that no load is placed on the engine, reducing fuel consumption. The cylinder block and ladder frame in the new engine are strengthened, reducing engine noise. Due to intercooled turbo charging and the optimization of fuel injection timing, exhaust noise is reduced by 10 dB (compared to previous models).



## A recyclable machine

All resin parts are marked to facilitate recycling. The machine is completely lead-free. The radiator and oil cooler are made from aluminium and all wires are lead-less. In addition, biodegradable hydraulic oil is available for jobsites where special environmental care is required.



# Parts & Service

**Over the years, we have gained experience in one of the most competitive service markets in the world - Japan. Using our know-how in dealing directly with customers, we have created a worldwide support system that is highly capable.**

## Parts

HITACHI only offers genuine high quality parts. We guarantee that these parts have high performance and long life. We manage around 1 000 000 types of parts all around the world. They are designed and built to be the best match for your HITACHI equipment. HITACHI has a global parts distribution network that makes sure you get what you need as quickly as possible. We have more than 150 dealers worldwide who provide the closest support for your needs. In most cases, your dealer will have the replacement part that you require. If a dealer does not have a certain part, he can order it from four fully stocked parts depots located across the world. These distribution centres are all connected by an on-line system that gives them access to shared information on stocks, such as the number and type of available parts. The depots, which in turn are stocked by a parts center in Japan, minimize delivery time and enable you to get your parts as efficiently and quickly as possible.

## Service

Our goal is to “keep customer equipment at a maximum performance level”. To fulfil this goal, we have set more than 150 dealers all over the world. They have highly trained technicians, and provide a number of support programs. HITACHI provides a unique extended warranty program called HITACHI Extended Life Program, or HELP. To minimize downtime during troubleshooting, we developed a PDA based diagnostic system called “Dr.ZX”. To keep our customers’ equipment in top running shape, good service is indispensable. We believe personnel training is the key to providing the best service. If you would like more information regarding parts and/or service, please ask your nearest HITACHI dealer. Not all programs and/or services are available in every market or region.

# Remote fleet management with e-Service Owner's Site

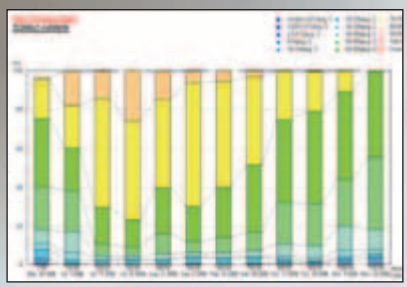
**Reduce maintenance effort and costs for your machine fleet with e-Service Owner's Site; latest machine information of each of your machines available on-line, in your office.**

OWNER'S
e-Service Owner's Site

ZX-3 and ZW Series Fleet Management System
e-Service Owner's Site

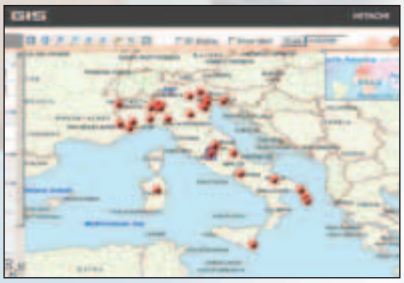
## e-Service Owner's Site features

### Operation
Remote access to all relevant machine operation information such as daily operating hours and machine fuel level as well as historically cumulated temperatures and pressures.



### Maintenance
For each machine, maintenance history as well as recommended maintenance due is displayed in one view, allowing for accurate and efficient fleet maintenance management.

### Location
In addition to any general GPS function, GIS (Geographical Information System) will not only show the geographical position of each machine with immediate serial number identification, it will also allow for dedicated multiple machine searches using specific operational information as search criteria.



***Check and monitor each of your machines from your office***

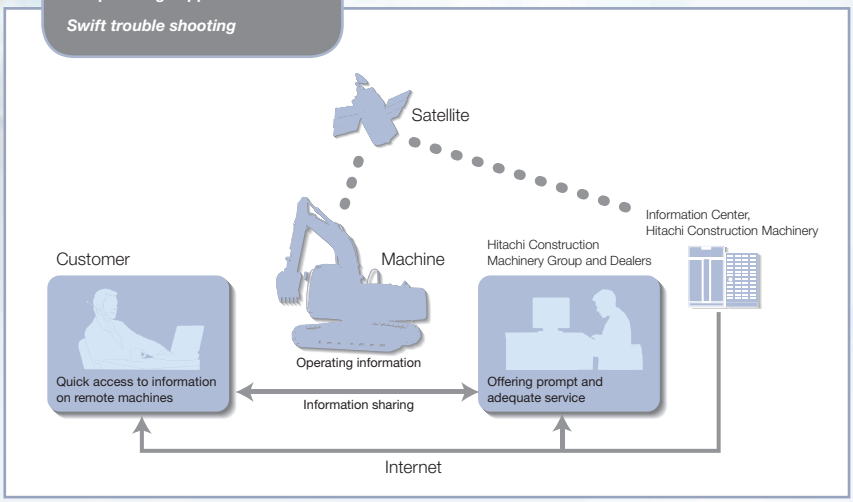
***Enhanced service support from your local dealer***

***Actual geographical location of each of your machines***

e-Service Owner's Site is an on-line fleet management tool offered by HCME to each of its customers. It will present all operational information and location of your machines on a PC in your office, giving you an up to date overview of your machines, allowing for full fleet control. Each machine will regularly send its operational data to a satellite and from there, via a ground station to a Hitachi server. The data collected in the server will then be processed and directed to each customer around the world. Your machine information will be available through a secure internet connection for you and your dealer. This communication chain is operational 24h a day, each day of the year. It will support your job planning, help you maintain your machine and allow for enhanced service and trouble shooting support by your local dealer, all directly contributing to reduce downtime and increase the cost performance of your fleet.

All new ZAXIS-3 and ZW machines supplied by HCME will have a satellite communication unit installed as standard*, meaning each owner can directly enjoy the benefits of e-Service Owner's Site. Your local dealer will be able to give you access to e-Service Owner's Site.

***Optimizing fleet management***
***Accurate maintenance planning***
***Job planning support tool***
***Swift trouble shooting***




** (1) Satellite communication may be forbidden by the local regulatory standards (including safety standards) and legal requirements of the particular country where you wish to use it. Please contact HITACHI dealer for details.*
*(2) Satellite communication basically allows for worldwide coverage. Contact your local dealer for the latest situation on actual satellite communication availability for your country or specific jobsite.*
*(3) If transmission of the satellite signal is hindered in any way, satellite communication may not be possible.*

# SPECIFICATIONS

## ENGINE

| | |
|---|---|
| Model | Isuzu AU-4LE2X |
| Type | 4-cycle water-cooled, direct injection |
| Aspiration | Turbocharged, intercooled |
| No. of cylinders | 4 |
| Rated power | |
| ISO 9249, net | 39.4 kW (52.8 HP) at 2 000 $min^{-1}$ (rpm) |
| EEC 80/1269, net | 39.4 kW (52.8 HP) at 2 000 $min^{-1}$ (rpm) |
| SAE J1349, net | 39.4 kW (52.8 HP) at 2 000 $min^{-1}$ (rpm) |
| Maximum torque | 215 N·m (21.9 kgf·m) at 1 500 $min^{-1}$ (rpm) |
| Piston displacement | 2.179 L |
| Bore and stroke | 85 mm x 96 mm |
| Batteries | 2 x 12 V / 52 Ah |

## HYDRAULIC SYSTEM

- Swing-independent 3-pump hydraulic system
- OHS (Optimum Hydraulic System) assures fully independent and combined operations
- Automatic 2-speed motor increases traction force and travel speed
- Engine speed sensing system

| | |
|---|---|
| Main pumps | 3 variable displacement axial piston pumps |
| Maximum oil flow | 2 x 72.6 L/min |
| | 1 x 61.6 L/min |
| Pilot pump | 1 gear pump |
| Maximum oil flow | 22.0 L/min |

### Hydraulic Motors

| | |
|---|---|
| Travel | 2 variable displacement axial piston motors |
| Swing | 1 axial piston motor |

### Relief Valve Settings

| | |
|---|---|
| Implement circuit | 26.0 MPa (265 $kgf/cm^2$) |
| Swing circuit | 23.0 MPa (235 $kgf/cm^2$) |
| Travel circuit | 31.4 MPa (320 $kgf/cm^2$) |
| Pilot circuit | 3.9 MPa (40 $kgf/cm^2$) |

### Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom and arm cylinders to absorb shock at stroke ends.

### Dimensions

| | Quantity | Bore | Rod diameter |
|---|---|---|---|
| Boom | 1 | 115 mm | 65 mm |
| Arm | 1 | 95 mm | 60 mm |
| Bucket | 1 | 85 mm | 55 mm |
| Off-set (optional) | 1 | 105 mm | 40 mm |

### Hydraulic Filters

Hydraulic circuits use high-quality hydraulic filters. A suction filter is incorporated in the suction line, and full-flow filters in the return line and swing/travel motor drain lines.

## CONTROLS

Pilot controls. Hitachi's original shockless valve.

| | |
|---|---|
| Implementl evers | 2 |
| Travel levers with pedals | 2 |
| Blade lever (optional) | 1 |
| Off-set front pedal (optional) | 1 |

## UPPERSTRUCTURE

### Revolving Frame

Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. 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, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type.

| | |
|---|---|
| Swing speed | 10.5 $min^{-1}$ (rpm) |
| Swing torque | 14.3 kN·m (1 460 kgf·m) |

### Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat with armrests; adjustable with or without control levers.

* International Standardization Organization

## UNDERCARRIAGE

### Tracks

Tractor-type undercarriage. Welded track frame using selected materials. Side frame welded to track frame. Lubricated track rollers, idlers, and sprockets with floating seals. Track shoes with triple grousers made of induction-hardened rolled alloy. Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.

### Numbers of Rollers and Shoes on Each Side

| | |
|---|---|
| Upper rollers | 1 |
| Lower rollers | 5 |
| Track shoes | 40 |

### Travel Device

Each track driven by 2-speed axial piston motor through planetary reduction gear for counterrotation of the tracks. Sprockets are replaceable. Parking brake is spring-set/hydraulic-released disc type. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel.
Automatic transmission system: High-Low.

| | |
|---|---|
| Travel speeds | High: 0 to 5.3 km/h |
| | Low: 0 to 3.4 km/h |
| Maximum traction force | 58.9 kN (6 010 kgf) |
| Gradeability | 70% (35 degree) continuous |

## WEIGHTS AND GROUND PRESSURE

### ZX70LC-3 with Blade:

Equipped with 3.72 m monoblock boom, 1.62 m arm and 0.33 $m^3$ (SAE, PCSA heaped) bucket.

| Shoe type | Shoe width | Operating weight | Ground pressure |
|---|---|---|---|
| Triple grouser | 450 mm | 7 280 kg | 31 kPa (0.32 kgf/$cm^2$) |
| | 600 mm | 7 470 kg | 25 kPa (0.25 kgf/$cm^2$) |
| Pad | 450 mm | 7 270 kg | 31 kPa (0.32 kgf/$cm^2$) |
| Rubber | 450 mm | 7 300 kg | 31 kPa (0.32 kgf/$cm^2$) |

### ZX70LCN-3 with Blade:

Equipped with 3.72 m monoblock boom, 1.62 m arm, 0.33 $m^3$ (SAE, PCSA heaped) bucket and narrow track.

| Shoe type | Shoe width | Operating weight | Ground pressure |
|---|---|---|---|
| Triple grouser | 450 mm | 7 270 kg | 31 kPa (0.32 kgf/$cm^2$) |
| | 600 mm | 7 460 kg | 25 kPa (0.25 kgf/$cm^2$) |
| Pad | 450 mm | 7 260 kg | 31 kPa (0.32 kgf/$cm^2$) |
| Rubber | 450 mm | 7 290 kg | 31 kPa (0.32 kgf/$cm^2$) |

### ZX70LC-3 with Off-Set Front and Blade:

Equipped with off-set front, 1.62 m arm and 0.28 $m^3$ (SAE, PCSA heaped) bucket.

| Shoe type | Shoe width | Operating weight | Ground pressure |
|---|---|---|---|
| Triple grouser | 450 mm | 7 700 kg | 33 kPa (0.34 kgf/$cm^2$) |
| | 600 mm | 7 890 kg | 25 kPa (0.26 kgf/$cm^2$) |
| Pad | 450 mm | 7 690 kg | 33 kPa (0.34 kgf/$cm^2$) |
| Rubber | 450 mm | 7 730 kg | 33 kPa (0.34 kgf/$cm^2$) |

### ZX70LCN-3 with Off-Set Front and Blade:

Equipped with off-set front, 1.62 m arm, 0.28 $m^3$ (SAE, PCSA heaped) bucket and narrow track.

| Shoe type | Shoe width | Operating weight | Ground pressure |
|---|---|---|---|
| Triple grouser | 450 mm | 7 690 kg | 33 kPa (0.34 kgf/$cm^2$) |
| | 600 mm | 7 880 kg | 25 kPa (0.26 kgf/$cm^2$) |
| Pad | 450 mm | 7 680 kg | 33 kPa (0.34 kgf/$cm^2$) |
| Rubber | 450 mm | 7 710 kg | 33 kPa (0.34 kgf/$cm^2$) |

Weights of the basic machines [including 850 kg counterweight, triple grouser shoes and blade, excluding front-end attachment, fuel, hydraulic oil, engine oil and coolant etc.] are:

ZX70LC-3 ..... 5 860 kg with 450 mm shoes
ZX70LCN-3 ..... 5 850 kg with 450 mm shoes

## SERVICE REFILL CAPACITIES

Fuel tank ..... 135 L
Engine coolant ..... 10.3 L
Engine oil ..... 12.1 L
Travel device (each side) ..... 1.2 L
Hydraulic system ..... 100 L
Hydraulic oil tank ..... 60 L

## BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design. 3.72 m monoblock boom, 1.62 m and 2.12 m arms are available.

### Buckets

| Capacity SAE, PCSA heaped | Width without side cutters | Weight |
|---|---|---|
| 0.24 $m^3$ | 500 mm | 231 kg |
| 0.27 $m^3$ | 600 mm | 251 kg |
| 0.32 $m^3$ | 700 mm | 286 kg |
| 0.38 $m^3$ | 800 mm | 306 kg |

## SOUND LEVEL RESULTS (2000/14/EC)

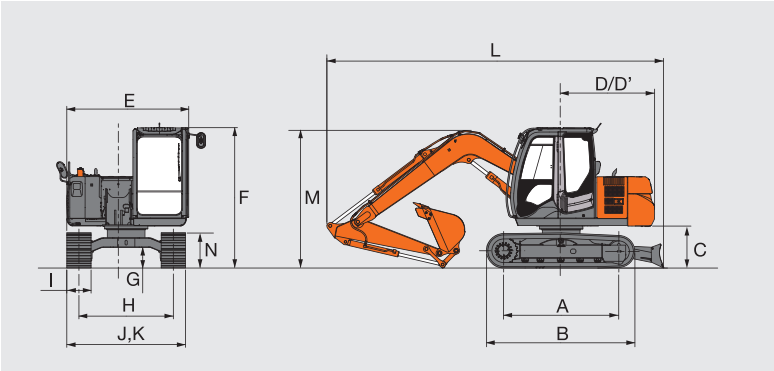
LwA: sound-power level of airborne noise
LpA: sound level at operator's station

Unit: dB(A)

| | LwA | LpA |
|---|---|---|
| ZX70LC-3 / ZX70LCN-3 | 97 | 69 |

# SPECIFICATIONS

## DIMENSIONS

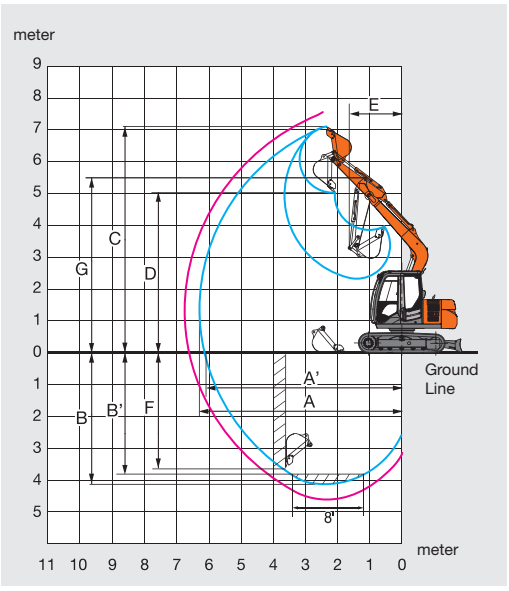



Unit: mm

| | | ZX70LC-3 | ZX70LCN-3 |
|---|---|---|---|
| A | Distance between tumblers | 2 290 | |
| B | Undercarriage length | 2 920 | |
| * C | Counterweight clearance | *760 | |
| D | Rear-end swing radius | 1 750 | |
| D' | Rear-end length | 1 750 | |
| E | Overall width of upperstructure | 2 260 | |
| F | Overall height of cab | 2 600 | |
| * G | Min. ground clearance | *360 | |
| H | Track gauge | 1 870 | 1 750 |
| I | Track shoe width | G450 | |
| J | Undercarriage width | 2 320 | 2 220 |
| K | Overall width | 2 320 | 2 260 |
| L | Overall length | | |
| | With 1.62 m arm | 6 270 | |
| | With 2.12 m arm | 6 320 | |
| M | Overall height of boom | | |
| | With 1.62 m arm | 2 550 | |
| | With 2.12 m arm | 2 880 (2 700 without Bucket) | |
| * N | Track height with triple grouser shoes | 655 | |

* Excluding track shoe lug G: Triple grouser shoe

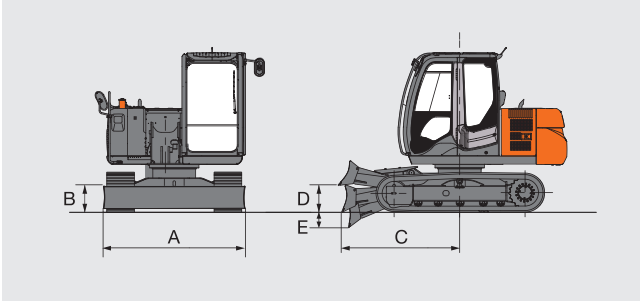
## WORKING RANGES




Unit: mm

| | | ZX70LC-3 / ZX70LCN-3 | |
|---|---|---|---|
| Arm length | | 1.62 m | 2.12 m |
| A | Max. digging reach | 6 320 | 6 810 |
| A' | Max. digging reach (on ground) | 6 170 | 6 670 |
| B | Max. digging depth | 4 170 | 4 670 |
| B' | Max. digging depth (8' level) | 3 820 | 4 390 |
| C | Max. cutting height | 7 150 | 7 550 |
| D | Max. dumping height | 5 060 | 5 450 |
| E | Min. swing radius | 1 720 | 2 080 |
| F | Max. vertical wall | 3 730 | 4 280 |
| G | Min. swing radius height | 5 530 | 5 550 |
| Bucket digging force | ISO | 55 kN (5 600 kgf) | |
| | SAE: PCSA | 47 kN (4 800 kgf) | |
| Arm crowd force | ISO | 38 kN (3 900 kgf) | 32 kN (3 300 kgf) |
| | SAE: PCSA | 36 kN (3 700 kgf) | 31 kN (3 200 kgf) |

Excluding track shoe lug

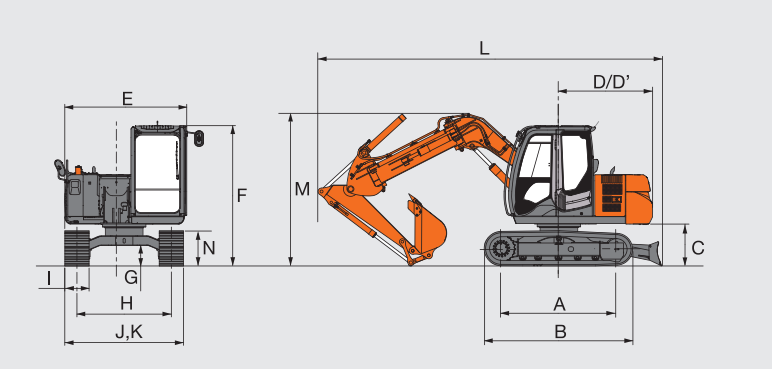



### With Blade

A Overall width of blade ..... ZX70LC-3: 2 320 mm
ZX70LCN-3: 2 200 mm
B Overall height of blade ..... 460 mm
C Blade distance ..... 1 880 mm
*D Max. raising height above ground ..... 360 mm
*E Max. lowering depth from ground ..... 300 mm

* Excluding track shoe lug

## DIMENSIONS: OFF-SET FRONT

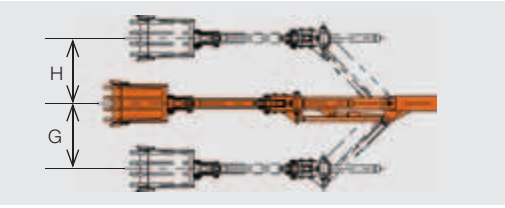


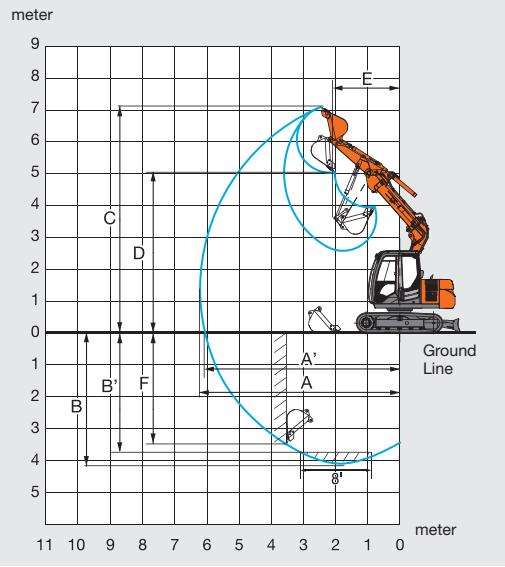

Unit: mm

| | | ZX70LC-3 | ZX70LCN-3 |
|---|---|---|---|
| A | Distance between tumblers | 2 290 | |
| B | Undercarriage length | 2 920 | |
| * C | Counterweight clearance | *760 | |
| D | Rear-end swing radius | 1 750 | |
| D' | Rear-end length | 1 750 | |
| E | Overall width of upperstructure | 2 260 | |
| F | Overall height of cab | 2 600 | |
| * G | Min. ground clearance | *360 | |
| H | Track gauge | 1 870 | 1 750 |
| I | Track shoe width | G450 | |
| J | Undercarriage width | 2 320 | 2 220 |
| K | Overall width | 2 320 | 2 260 |
| L | Overall length | | |
| | With 1.62 m arm | 6 390 | |
| M | Overall height of boom | | |
| | With 1.62 m arm | 2 810 | |
| * N | Track height with triple grouser shoes | 650 | |

* Excluding track shoe lug G: Triple grouser shoe

## WORKING RANGES: OFF-SET FRONT



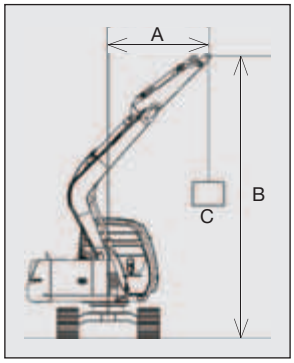

Unit: mm

| | | ZX70LC-3 / ZX70LCN-3 | |
|---|---|---|---|
| Arm length | | 1.62 m | |
| Off-set distance | | 0 m | Max. 1 150 mm |
| A Max. digging reach | | 6 320 | 5 875 |
| A' Max. digging reach (on ground) | | 6 165 | 5 710 |
| B Max. digging depth | | 4 160 | 3 710 |
| B' Max. digging depth (8' level) | | 3 780 | 3 330 |
| C Max. cutting height | | 7 130 | 6 775 |
| D Max. dumping height | | 5 050 | 4 700 |
| E Min. swing radius | | 2 150 | 2 160 / 2 310 |
| F Max. vertical wall | | 3 550 | 3 090 |
| G Left side off-set distance | | - | 1 150 |
| H Right side off-set distance | | - | 1 150 |
| Bucket digging force | ISO | 55 kN (5 600 kgf) | |
| | SAE: PCSA | 47 kN (4 800 kgf) | |
| Arm crowd force | ISO | 40 kN (4 100 kgf) | |
| | SAE: PCSA | 38 kN (3 900 kgf) | |

Excluding track shoe lug

# LIFTING CAPACITIES

Notes: 1. Ratings are based on ISO 10567.
2. Lifting capacity of the ZAXIS Series 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

**ZX70LC-3 Monoblock boom: Blade (Down)**

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

| Conditions | Load point height | Load radius | | | | | | At max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5 m | | 3.0 m | | 4.5 m | | | | |
| | | | | | | | | | | meter |
| Boom 3.72 m<br>Arm 1.62 m<br>Counterweight 850 kg<br>Grouser Shoe 450 mm | 4.5 m | | | *1 620 | *1 620 | | | *1 550 | *1 550 | 4.22 |
| | 3.0 m | | | *2 190 | *2 190 | *1 830 | 1 600 | *1 480 | 1 360 | 5.00 |
| | 1.5 m | | | *3 110 | 2 770 | *2 110 | 1 540 | *1 570 | 1 230 | 5.26 |
| | 0 (Ground) | | | *3 550 | 2 660 | *2 310 | 1 490 | *1 850 | 1 270 | 5.08 |
| | -1.5 m | *4 420 | *4 420 | *3 380 | 2 650 | | | *2 210 | 1 540 | 4.39 |
| | -3.0 m | | | | | | | | | |

**ZX70LC-3 Monoblock boom: Blade (Down)**

Unit: kg

| Conditions | Load point height | Load radius | | | | | | At max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5 m | | 3.0 m | | 4.5 m | | | | |
| | | | | | | | | | | meter |
| Boom 3.72 m<br>Arm 2.12 m<br>Counterweight 850 kg<br>Grouser Shoe 450 mm | 4.5 m | | | | | *1 480 | *1 480 | *1 300 | *1 300 | 4.81 |
| | 3.0 m | | | *1 810 | *1 810 | *1 610 | *1 610 | *1 250 | 1 170 | 5.51 |
| | 1.5 m | | | *2 780 | *2 780 | *1 940 | 1 540 | *1 300 | 1 070 | 5.75 |
| | 0 (Ground) | | | *3 430 | 2 650 | *2 230 | 1 480 | *1 480 | 1 090 | 5.58 |
| | -1.5 m | *3 530 | *3 530 | *3 470 | 2 610 | *2 250 | 1 450 | *1 920 | 1 280 | 4.97 |
| | -3.0 m | *5 020 | *5 020 | *2 800 | 2 670 | | | *2 130 | 1 970 | 3.69 |

## ZX70LCN-3 Monoblock boom: Blade (Down)

Rating over-front | Rating over-side or 360 degrees | Unit: kg

| Conditions | Load point height | Load radius | | | | | | At max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5 m | | 3.0 m | | 4.5 m | | | | |
| | | | | | | | | | | meter |
| Boom 3.72 m<br>Arm 1.62 m<br>Counterweight 850 kg<br>Grouser Shoe 450 mm | 4.5 m | | | *1 620 | *1 620 | | | *1 550 | *1 550 | 4.22 |
| | 3.0 m | | | *2 190 | *2 190 | *1 830 | 1 490 | *1 480 | 1 260 | 5.00 |
| | 1.5 m | | | *3 110 | 2 540 | *2 110 | 1 420 | *1 570 | 1 140 | 5.26 |
| | 0 (Ground) | | | *3 550 | 2 420 | *2 310 | 1 380 | *1 850 | 1 170 | 5.08 |
| | -1.5 m | *4 420 | *4 420 | *3 380 | 2 420 | | | *2 210 | 1 420 | 4.39 |
| | -3.0 m | | | | | | | | | |

## ZX70LCN-3 Monoblock boom: Blade (Down)

Unit: kg

| Conditions | Load point height | Load radius | | | | | | At max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5 m | | 3.0 m | | 4.5 m | | | | |
| | | | | | | | | | | meter |
| Boom 3.72 m<br>Arm 2.12 m<br>Counterweight 850 kg<br>Grouser Shoe 450 mm | 4.5 m | | | | | *1 480 | *1 480 | *1 300 | *1 300 | 4.81 |
| | 3.0 m | | | *1 810 | *1 810 | *1 610 | 1 500 | *1 250 | 1 080 | 5.51 |
| | 1.5 m | | | *2 780 | 2 580 | *1 940 | 1 420 | *1 300 | 990 | 5.75 |
| | 0 (Ground) | | | *3 430 | 2 420 | *2 230 | 1 360 | *1 480 | 1 010 | 5.58 |
| | -1.5 m | *3 530 | *3 530 | *3 470 | 2 380 | *2 250 | 1 340 | *1 920 | 1 180 | 4.97 |
| | -3.0 m | *5 020 | *5 020 | *2 800 | 2 440 | | | *2 130 | 1 810 | 3.69 |

## ZX70LC-3 Off-set front: Blade (Down)

Unit: kg

| Conditions | Load point height | Load radius | | | | | | At max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5 m | | 3.0 m | | 4.5 m | | | | |
| | | | | | | | | | | meter |
| Boom 3.72 m<br>Arm 1.62 m<br>Counterweight 850 kg<br>Grouser Shoe 450 mm | 4.5 m | | | *1 590 | *1 590 | | | *1 600 | *1 600 | 4.22 |
| | 3.0 m | | | *2 070 | *2 070 | *1 650 | 1 490 | *1 610 | 1 230 | 5.00 |
| | 1.5 m | | | *2 800 | 2 490 | *1 870 | 1 370 | *1 680 | 1 060 | 5.26 |
| | 0 (Ground) | | | *3 110 | 2 270 | *2 020 | 1 270 | *1 780 | 1 070 | 5.08 |
| | -1.5 m | *4 040 | *4 040 | *2 910 | 2 260 | | | *1 910 | 1 310 | 4.39 |
| | -3.0 m | | | | | | | | | |

## ZX70LCN-3 Off-set front: Blade (Down)

Unit: kg

| Conditions | Load point height | Load radius | | | | | | At max. reach | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5 m | | 3.0 m | | 4.5 m | | | | |
| | | | | | | | | | | meter |
| Boom 3.72 m<br>Arm 1.62 m<br>Counterweight 850 kg<br>Grouser Shoe 450 mm | 4.5 m | | | *1 590 | *1 590 | | | *1 600 | 1 590 | 4.22 |
| | 3.0 m | | | *2 070 | *2 070 | *1 650 | 1 370 | *1 610 | 1 130 | 5.00 |
| | 1.5 m | | | *2 800 | 2 250 | *1 870 | 1 250 | *1 680 | 970 | 5.26 |
| | 0 (Ground) | | | *3 110 | 2 030 | *2 020 | 1 150 | *1 780 | 970 | 5.08 |
| | -1.5 m | *4 040 | *4 040 | *2 910 | 2 030 | | | *1 910 | 1 190 | 4.39 |
| | -3.0 m | | | | | | | | | |

# EQUIPMENT

## STANDARD EQUIPMENT

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

### ENGINE

- E mode control
- 50 A alternator
- Dry-type air filter with evacuator valve (with air filter restriction indicator)
- Cartridge-type engine oil filter
- Cartridge-type fuel filter
- Air cleaner double filters
- Radiator, oil cooler and intercooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idle system
- Electrical fuel feed pump with auto stop

### HYDRAULIC SYSTEM

- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter
- Swing drain filter

### CAB

- CRES II (Center pillar reinforced structure) cab
- OPG top guard fitted Level I (ISO 10262) compliant cab
- All-weather sound suppressed steel cab
- Equipped with reinforced, tinted (green color) glass windows
- 4 fluid-filled elastic mounts
- Front windows on upper, lower and left side can be opened
- Intermittent windshield wipers
- Front window washer
- Adjustable reclining seat with adjustable armrests
- Footrest
- Electric horn
- AM-FM radio with digital clock
- Seat belt
- Drink holder
- Cigarette lighter
- Ashtray
- Storage box
- Glove compartment
- Fire extinguisher bracket
- Floor mat
- Short wrist control levers
- Pilot control shut-off lever
- Engine stop knob
- Auto control air conditioner
- Transparent roof with slide curtain
- Mechanical suspension seat with heater

### MONITOR SYSTEM

- Display of meters: water temperature, hour, fuel rate, clock
- Other displays: auto-idle, glow, operating conditions, etc
- Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, air filter restriction, overload, etc
- Alarm buzzers: overheat, engine oil pressure, overload

### LIGHTS

- 2 working lights

### UPPERSTRUCTURE

- Undercover
- 850 kg counterweight
- Fuel level float
- Electric fuel refilling pump with auto stop
- Hydraulic oil level gauge
- Rear view mirror (right & left side)
- Swing parking brake

### UNDERCARRIAGE

- Travel parking brake
- Travel motor covers
- Hydraulic track adjuster
- Bolt-on sprocket
- Upper and lower rollers
- Reinforced track links with pin seals
- 4 tie down hooks

### FRONT ATTACHMENTS

- HN bushing
- WC (tungsten-carbide) thermal spraying
- Flanged pin
- Dirt seal on all bucket pins

### MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel refilling cap
- Skid-resistant handrails
- Travel direction mark on track frame
- Onboard information controller

## OPTIONAL EQUIPMENT

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

### CAB

- Laminated round glass window
- OPG top guard, Level II
- Air suspension seat with heater
- Rain guard
- Sun visor
- 12 V power source

### LIGHTS

- Additional cab roof front lights
- Additional cab roof rear lights
- Rotating lamp
- Additional boom lights with cover

### UNDERCARRIAGE

- Track undercover
- Blade (Width: 2 200 mm / 2 320 mm / 2 470 mm)
- 450 mm, 600 mm triple grouser shoes
- 450 mm pad shoes
- 450 mm rubber shoes

### ATTACHMENTS

- Off-set front
- Hammer and crusher piping
- 2 pump combined flow
- Pilot accumulator
- Welded bucket link A with welded hook

### OTHERS

- Hose rupture valve
- Overload warning device
- Biodegradable oil
- Fuel double filter
- Rear view camera
- Pre-cleaner
- High-performance full flow filter

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 your Hitachi 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 optional equipment, accessories, and all standard equipment with some differences in color and features.
Before use, read and understand the Operator's Manual for proper operation.

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