

**ZAXIS-3 series**

**HITACHI**

**Quarry Specification Excavators**

**ZAXIS**  
**520LCR**  
**670LCR**  
**870LCR**



## **HYDRAULIC EXCAVATOR**

- **Model Code:** ZX 520LCR-3 / ZX 670LCR-3 / ZX 870LCR-3
- **Engine Rated Power:** ZX 520LCR-3: 260 kW (349 hp)  
ZX 670LCR-3: 345 kW (463 hp)  
ZX 870LCR-3: 397 kW (532 hp)
- **Operating Weight:** ZX 520LCR-3: 52 500 kg  
ZX 670LCR-3: 68 400 kg  
ZX 870LCR-3: 85 500 kg
- **Backhoe Bucket:** SAE, PCSA Heaped: 1.9 - 4.3 m<sup>3</sup>  
CECE Heaped: 1.7 - 3.8 m<sup>3</sup>

# Tougher and More Powerful in Quarry

HITACHI's technology is built on a wealth of experience and know-how from limestone sites and quarries around the world.

The quarry specification concept continues to evolve in answer to increasingly demanding operational tasks.

## **Specially Designed Front Attachment for Quarry**

- Stronger Boom and Arm
- Additional Welding Increases the Strength and Durability
- Arm-End Boss and Arm Cylinder Mounting Bracket are Reinforced
- Specially Designed Bucket with Wear-Resisting Steel

## **Tougher Undercarriage for Rocky Ground Condition**

- Reinforced Travel Motor Cover and Guard
- Reinforced Idler Part of Side Frame
- Track Under Cover (Optional)
- Full Track Guard Provided Standard

## **Enhanced Safety & Operator Comfort**

- H/R Cab
- Comfort-Designed Operator Seat
- Fluid-Filled Elastic Mounts
- Pressurized Cab
- Multi-Language, Multi Function Monitor
- Rear View Camera
- Attachment Support System

## **Simplified Maintenance**

- Parallel Arrangement of Radiator and Oil Cooler
- Dual Main Fuel Filters Provided Standard
- Automatic Lubrication
- Extended Hydraulic Oil Filter Change Intervals

## **Applicable for Breaker Operation (Optional)**

- Double Accumulator (Optional)
- Ergonomic Breaker Pedal Layout (Optional)
- Breaker Hour Meter (Optional)
- Shatterproof Windshield and Window (Optional)







- Clean engine complies with the emission regulations US EPA Tier 3 and EU Stage IIIA

- Low noise design complies with the EU noise regulation 2000/14/EC, Stage II



# High Durability Means Long-Lasting Product Value

Strengthened undercarriage for higher durability  
even in heavy-duty applications.





## Specially Designed Front Attachment for Quarry

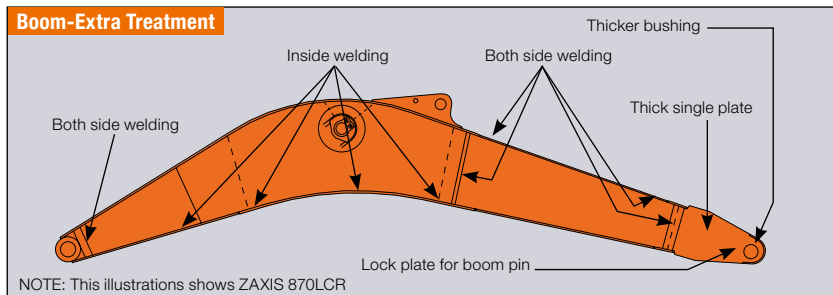
### Stronger Boom and Arm

Higher durability with special reinforcement and stressrelieved welding.

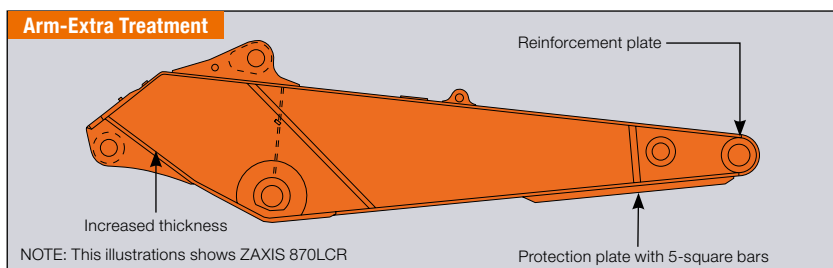
### Additional Welding Increases the Strength and Durability

The boom-end rigidity through the use of a thick single plate and increased boom-end bushing thickness also contribute increasing durability.

### Arm-End Boss and Arm Cylinder Mounting Bracket are Reinforced

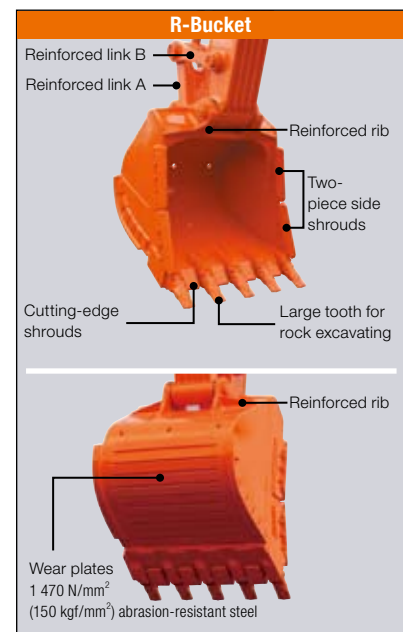


Reinforced arm-end boss and arm cylinder mounting bracket provides higher durability. Protection plate with 5-square bars also enhances reliability in heavy duty operation.



### Specially Designed Bucket with Wear-Resisting Steel

The R-bucket is made of wear resisting steel, and reshaped with side shrouds, cutting-edge shrouds, and large bucket teeth for enhanced durability. Easily replaceable lateral wear plates help reduce downtime. The limestone bucket has similar features except number of side shrouds and size of tooth.



## Tougher Undercarriage for Rocky Ground Condition

### Reinforced Travel Motor Cover and Guard (1)

The reinforced travel motor cover with square bars and reinforced travel guard protect travel motor from damage by stone projectiles.

### Reinforced Idler Part of Side Frame (2)

Rigid structure of side frame withstands frequent shock caused by rock hitting.

### Track Under Cover (Optional)

Track under cover protects travel pipings and hoses.

### Full Track Guard Provided Standard

On the R-specification machine, full track guards are provided standard. Full track guards protect track links and lower rollers from damage and deformation. Moreover, they also keep out stones, preventing overload to the undercarriage to reduce wear and damage.



ZX 520LCR-3

# Enhanced Safety & Operator Comfort

An array of safety devices for enhanced safety. The spacious cab is ergonomically designed with excellent visibility to reduce operator fatigue and burden.

## H/R Cab



The H/R cab utilizes the reinforced front window and FOPS\* at the roof for protection against falling objects. The front window, made of straight-laminated glass, is fixed to shut out dirt and debris. The cab provided with a full guard satisfies the OPG\*\* (Level II) cab requirements stipulated by ISO.

\*Falling Object Protective Structure

\*\*Operator Protective Guards

## Comfort-Designed Operator Seat

The operator seat is ergonomically designed for long-hour pleasant operation. The seatback is widened to hold the operator securely, and the headrest is reshaped. The operator seat is strengthened to reduce vibration and shocks, and increase durability.

## Fluid-Filled Elastic Mounts

The cab rests on fluid-filled elastic mounts that absorb shocks and vibration to enhance operator comfort.

## Pressurized Cab

The pressurized cab shuts out debris and dirt.

## Multi-Language, Multi Function Monitor

A large multi-language, multi function monitor is well positioned for easy reading.



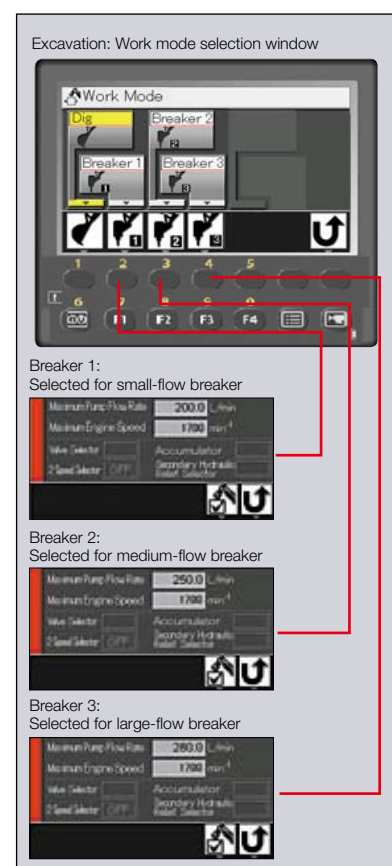
## Rear View Camera

The large color LCD monitor, teamed up with the rear view camera on the counterweight, gives the operator unobstructed rearward view. This system enhances safety during swing and reversing.



## Attachment Support System

The work mode can be selected from the multi function monitor inside the cab. Pump flow in the selected work mode can be monitored.





# Simplified Maintenance

Focusing on simplified maintenance, including easy inspection, service and cleaning.



## Parallel Arrangement of Radiator and Oil Cooler

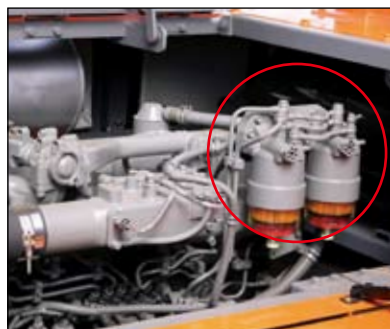
The radiator and oil cooler are laid out in parallel arrangement for easy demounting, instead of conventional in-line arrangement. This new arrangement significantly helps facilitate cleaning around the engine.



ZX 520LCR-3

## Dual Main Fuel Filters Provided Standard

In addition to a prefilter, dual main fuel filters are provided standard to reduce clogging of the fuel line to the engine.



ZX 520LCR-3

## Automatic Lubrication

The front attachment is automatically lubricated, except for bucket lubricating points at the top of arm.

## Extended Hydraulic Oil Filter Change Intervals

Hydraulic oil filter change intervals are extended from 500 hours (Conventional model) to 1 000 hours to help reduce running costs.



ZX 670LCR-3

## Applicable for Breaker Operation (Optional)

### Double Accumulator (Optional) (1)

Double accumulator protects hydraulic pumps from pulse beat from breaker.

### Ergonomic breaker pedal layout (Optional) (2)

### Breaker Hour Meter (Optional) (3)

Breaker hour meter is convenient for managing filter and hydraulic oil replacement in accordance with breaker operation hour.

### Shatterproof windshield and window (Optional) (4)

Laminated film on the front windshield and right side window to prevent shattering.



ZX 520LCR-3



1



2



3



4

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

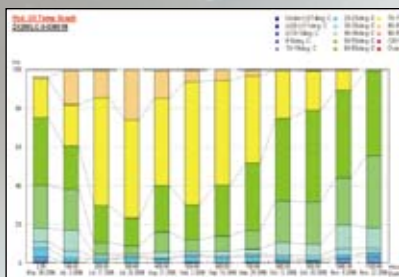
Reduce maintenance effort and costs for your machine fleet with e-Service Owner's Site; latest machine information of each of your machines available on-line, in your office.



## e-Service Owner's Site features

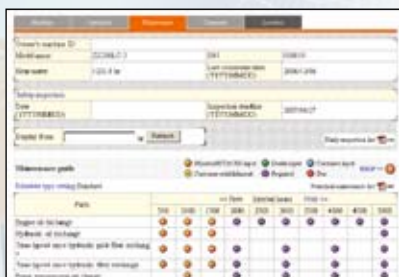
### Operation

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*

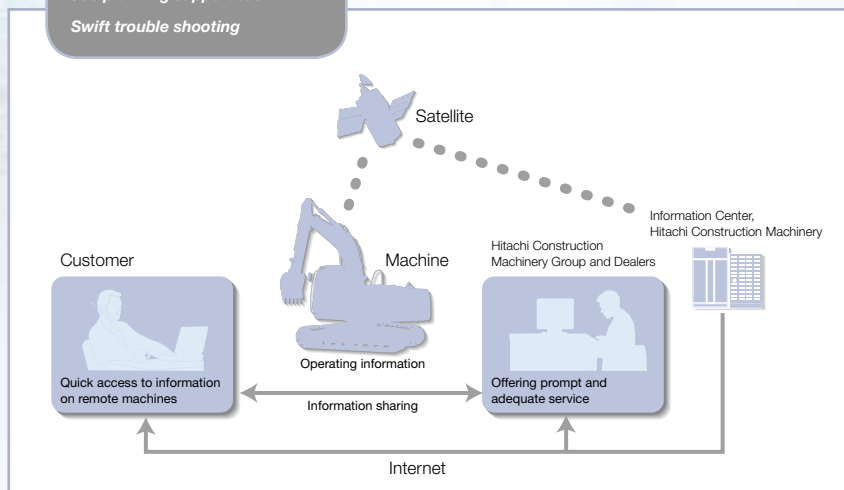
*Enhanced service support from your local dealer*

*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 units can not be installed in machines for countries that currently do not have Satellite Communication Services available. At the time of print however, the majority of European countries have Satellite Communication Services available and full European coverage is expected.  
(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.





# 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 con-

nected by an online 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 centre 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.

**ZAXIS 520LCR****ENGINE**

|                                 |   |
|---------------------------------|---|
| Model                           | Isuzu AH-6WG1XYSA-01  |
| Type                            | 4-cycle water-cooled, direct injection                        |
| Aspiration                      | Turbocharged  |
| No. of cylinders                | 6   |
| Rated power                     |   |
| ISO 9249,<br>Without Fan net    | H/P mode:<br>260 kW (349 hp) at 1 800 min <sup>-1</sup> (rpm) |
| EEC 80/1269,<br>Without Fan net | H/P mode:<br>260 kW (349 hp) at 1 800 min <sup>-1</sup> (rpm) |
| Maximum torque                  | 1 580 Nm (161 kgf·m) at 1 500 min <sup>-1</sup>               |
| Piston displacement             | 15.681 L  |
| Bore and stroke                 | 147 mm x 154 mm   |
| Batteries                       | 2 x 12 V / 170 Ah   |

**HYDRAULIC SYSTEM**

- Work mode selector  
General purpose mode / Attachment mode

- Engine speed sensing system

|                  |  |
|------------------|--|
| Main pumps       | 2 variable displacement axial piston pumps |
| Maximum oil flow | 2 x 360 L/min                              |
| Pilot pump       | 1 gear pump                                |
| Maximum oil flow | 30 L/min                                   |

**Hydraulic Motors**

|        |  |
|--------|--|
| Travel | 2 axial piston motors with parking brake |
| Swing  | 2 axial piston motor                     |

**Relief Valve Settings**

|                   |                                     |
|-------------------|-------------------------------------|
| Implement circuit | 31.9 MPa (325 kgf/cm <sup>2</sup> ) |
| Swing circuit     | 27.9 MPa (285 kgf/cm <sup>2</sup> ) |
| Travel circuit    | 34.3 MPa (350 kgf/cm <sup>2</sup> ) |
| Pilot circuit     | 3.9 MPa (40 kgf/cm <sup>2</sup> )   |
| Power boost       | 34.3 MPa (350 kgf/cm <sup>2</sup> ) |

**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   | 2        | 170 mm | 115 mm       |
| Arm    | 1        | 190 mm | 130 mm       |
| Bucket | 1        | 170 mm | 120 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.

|                           |   |
|---------------------------|---|
| Implement levers          | 2 |
| Travel levers with pedals | 2 |

**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 | 9.0 min <sup>-1</sup> (rpm) |
|-------------|-----------------------------|

**Operator's Cab**

Independent spacious cab, 1 005 mm wide by 1 795 mm high, conforming to ISO\* Standards. (OPG top guard fitted Level II (ISO 10262) compliant cab)

Reinforced glass windows on 4 sides for visibility. 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 bolted to track frame. Lubricated track rollers, idlers, and sprockets with floating seals.

Track shoes with double 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           | 3  |
| Lower rollers           | 8  |
| Track shoes             | 49 |
| Full length track guard | 1  |

**Travel Device**

Each track driven by axial piston motor through reduction gears for counter rotation of the tracks. Sprockets are replaceable. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.

|               |                     |
|---------------|---------------------|
| Travel speeds | High: 0 to 4.0 km/h |
|               | Low: 0 to 2.9 km/h  |

|                        |                     |
|------------------------|---------------------|
| Maximum traction force | 415 kN (42 300 kgf) |
|------------------------|---------------------|

|              |                      |
|--------------|----------------------|
| Gradeability | 35° (70%) continuous |
|--------------|----------------------|



**WEIGHTS AND GROUND PRESSURE**

Equipped with 7.0 m R-boom, 3.4 m R-arm and 1.9 m<sup>3</sup> R-bucket.

| Shoe type      | Shoe width | Operating weight | Ground pressure                   |
|----------------|------------|------------------|-----------------------------------|
| Double grouser | 600 mm     | 52 500 kg        | 93 kPa (0.95 kg/cm <sup>2</sup> ) |

**SERVICE REFILL CAPACITIES**

|                           | liters |
|---------------------------|--------|
| Fuel tank                 | 725.0  |
| Engine coolant            | 55.0   |
| Engine oil                | 57.0   |
| Swing device (each side)  | 6.5    |
| Travel device (each side) | 11.0   |
| Hydraulic system          | 560.0  |
| Hydraulic oil tank        | 330.0  |

**BACKHOE ATTACHMENTS**

Boom and arms are of all-welded, box-section design. A number of booms and arms are available. Bucket is of all-welded, high-strength steel structure.

The ZAXIS 520LCR is a heavy duty type and can be equipped with a reinforced R-boom or BER-boom and R-arm or BER-arm.

**BUCKETS**

| Capacity           |                | Width mm             |                   | No of teeth | Weight kg | ZAXIS 520LCR   |               |               |             |
|--------------------|----------------|----------------------|-------------------|-------------|-----------|----------------|---------------|---------------|-------------|
|                    |                |                      |                   |             |           | 6.3 m BER-boom |               | 7.0 m R-boom  |             |
|                    |                |                      |                   |             |           | 2.5 m BER-arm  | 2.9 m BER-arm | 2.9 m BER-arm | 3.4 m R-arm |
| SAE, PCSA heaped   | CECE heaped    | Without side cutters | With side cutters |             |           |                |               |               |             |
| m <sup>3</sup>     | m <sup>3</sup> |                      |                   |             |           |                |               |               |             |
| * <sup>1</sup> 1.9 | 1.7            | 1 480                | 1 500             | 5           | 2 070     | ●              | ●             | ●             | ●           |
| * <sup>1</sup> 2.1 | 1.8            | 1 560                | 1 580             | 5           | 2 170     | ●              | ●             | ●             | ●           |
| * <sup>1</sup> 2.3 | 2.0            | 1 680                | 1 700             | 5           | 2 260     | ●              | ●             | ●             | X           |
| * <sup>1</sup> 2.5 | 2.2            | 1 800                | 1 820             | 5           | 2 360     | ●              | ●             | X             | X           |
| * <sup>2</sup> 1.3 | 1.2            | 1 170                | –                 | 3           | 2 330     | ●              | ●             | ●             | ●           |
| One-point ripper   |                |                      |                   | 1           | 1 260     | ●              | ●             | ●             | ●           |

● Heavy-duty

\*<sup>1</sup> R-bucket

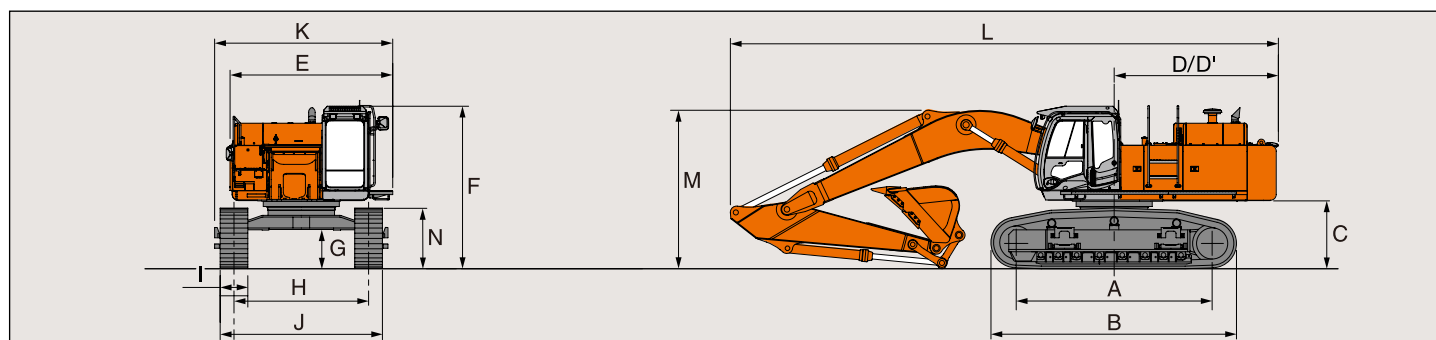
X Cannot be installed

\*<sup>2</sup> Ripper bucket

# SPECIFICATIONS / LIFTING CAPACITIES

## ZAXIS 520LCR

### DIMENSIONS



Unit: mm

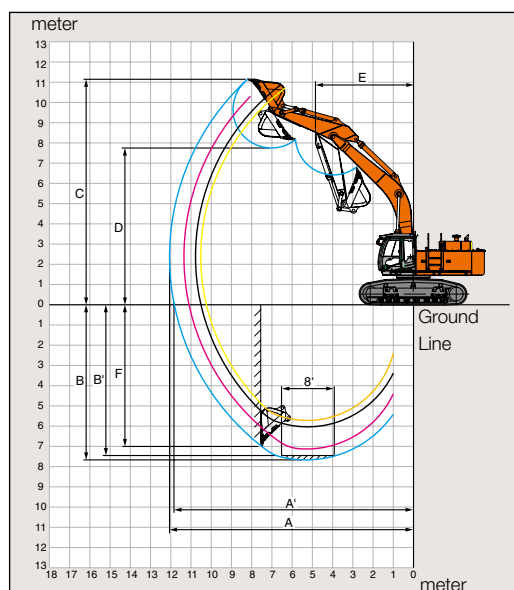
|  | ZAXIS 520LCR* <sup>2</sup> |
|--|----------------------------|
| A Distance between tumbler                   | 4 250                      |
| B Undercarriage length                       | 5 330                      |
| * <sup>1</sup> C Counterweight clearance     | 1 435                      |
| D Rear-end swing radius                      | 3 645                      |
| D' Rear-end length                           | 3 560                      |
| E Overall width of upperstructure            | 3 530                      |
| F Overall height of cab                      | 3 520                      |
| * <sup>1</sup> G Min. ground clearance       | 810                        |
| H Track gauge                                | 2 920                      |
| I Track shoe width                           | G 600                      |
| J Undercarriage width : Extended / Retracted | 3 520 / 3 020              |
| K Overall width                              | 3 860                      |
| L Overall length                             | 11 890                     |
| M Overall height of boom                     | 3 500                      |
| N Track height                               | 1 290                      |

\*<sup>1</sup> Excluding track shoe lug G: 600 mm Double grouser shoe

\*<sup>2</sup> Equipped with 7.0 m R-boom and 3.4 m R-arm

### WORKING RANGES

Unit: mm



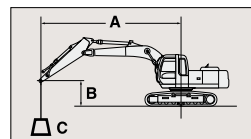
|                                    | ZAXIS 520LCR           |                        |                        |                        |
|------------------------------------|------------------------|------------------------|------------------------|------------------------|
| Boom length                        | 6.3 m BER-boom         |                        | 7.0 m R-boom           |                        |
| Arm length                         | 2.5 m BER-arm          | 2.9 m BER-arm          | 2.9 m BER-arm          | 3.4 m R-arm            |
| A Max. digging reach               | 10 460                 | 10 750                 | 11 330                 | 12 060                 |
| A' Max. digging reach (on ground)  | 10 190                 | 10 490                 | 11 080                 | 11 820                 |
| B Max. digging depth               | 5 720                  | 6 050                  | 7 130                  | 7 690                  |
| B' Max. digging depth (8' level)   | 5 540                  | 5 890                  | 6 920                  | 7 550                  |
| C Max. cutting height              | 10 730                 | 10 870                 | 10 240                 | 11 130                 |
| D Max. dumping height              | 7 390                  | 7 520                  | 7 170                  | 7 730                  |
| E Min. swing radius                | 4 090                  | 3 930                  | 5 020                  | 4 840                  |
| F Max. vertical wall               | 4 180                  | 4 570                  | 4 200                  | 7 030                  |
| Bucket digging force* ISO          | 287 kN<br>(29 300 kgf) | 287 kN<br>(29 300 kgf) | 287 kN<br>(29 300 kgf) | 288 kN<br>(29 400 kgf) |
| Bucket digging force* SAE:<br>PCSA | 258 kN<br>(26 300 kgf) | 258 kN<br>(26 300 kgf) | 258 kN<br>(26 300 kgf) | 250 kN<br>(25 500 kgf) |
| Arm crowd force* ISO               | 293 kN<br>(29 900 kgf) | 256 kN<br>(26 100 kgf) | 256 kN<br>(26 100 kgf) | 218 kN<br>(22 200 kgf) |
| Arm crowd force* SAE: PCSA         | 286 kN<br>(29 200 kgf) | 249 kN<br>(25 400 kgf) | 249 kN<br>(25 400 kgf) | 209 kN<br>(21 300 kgf) |
| Equipped bucket SAE: PCSA          | 2.5 m <sup>3</sup>     | 2.5 m <sup>3</sup>     | 2.1 m <sup>3</sup>     | 2.1 m <sup>3</sup>     |

Excluding track shoe lug \* At power boost



## Metric measure

The lifting capacity is defined by the overload alarm device set pressure.  
When the hydraulic pressure reaches the set pressure, the alarm buzzer sounds.  
Values in the table are with the overload alarm device switched off and with retracted bucket cylinder.



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

### ZAXIS 520LCR (WITHOUT BUCKET)

















Rating over-front



Rating over-side or 360 degrees

Unit: 1 000 kg

| Conditions                                     | Load point height | Load radius   |   |   |   |   |   |   |   |   |   |   |   | At max. reach   |   |       |
|--|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
|  |                   | 3.0 m   |   | 4.0 m   |   | 5.0 m   |   | 6.0 m   |   | 8.0 m   |   | 10.0 m  |   |   |   |       |
|  |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | meter |
| BER-boom 6.3 m<br>BER-arm 2.5 m<br>Shoe 600 mm | 8.0 m             |   |   |   |   |   |   | *14.23  | *14.23  |   |   |   |   | *12.43  | *12.43  | 6.63  |
|  | 6.0 m             |   |   |   |   | *16.89  | *16.89  | *15.15  | *15.15  |   |   |   |   | *11.89  | 10.91   | 7.89  |
|  | 4.0 m             |   |   |   |   | *20.81  | 20.76   | *17.41  | 15.85   | *13.89  | 10.37   |   |   | *13.27  | 9.45  | 8.50  |
|  | 2.0 m             |   |   |   |   | *23.65  | 19.33   | *19.34  | 14.92   | *14.52  | 10.00   |   |   | 13.10   | 9.02  | 8.61  |
|  | 0                 |   |   |   |   | *23.51  | 18.87   | *19.59  | 14.48   | *14.25  | 9.81  |   |   | *13.67  | 9.45  | 8.24  |
|  | -2.0 m            |   |   |   |   | *20.70  | 19.03   | *17.49  | 14.55   |   |   |   |   | *13.51  | 11.17   | 7.32  |
| BER-boom 6.3 m<br>BER-arm 2.9 m<br>Shoe 600 mm | 8.0 m             |   |   |   |   |   |   | *13.54  | *13.54  | *10.50  | *10.50  |   |   | *8.06   | *8.06   | 7.00  |
|  | 6.0 m             |   |   |   |   | *16.22  | *16.22  | *14.65  | *14.65  | *13.67  | 10.52   |   |   | *7.75   | *7.75   | 8.20  |
|  | 4.0 m             |   |   |   |   | *20.29  | *20.29  | *17.07  | 16.15   | *14.48  | 10.13   |   |   | *8.00   | *8.00   | 8.79  |
|  | 2.0 m             |   |   |   |   | *23.59  | 19.77   | *19.27  | 15.21   | 14.48   | 9.90  |   |   | *8.80   | 8.70  | 8.90  |
|  | 0                 |   |   | *29.16  | 27.39   | *24.00  | 19.18   | *19.87  | 14.71   |   |   |   |   | *10.45  | 9.07  | 8.54  |
|  | -2.0 m            | *30.59  | *30.59  | *25.88  | *25.88  | *21.68  | 19.22   | *18.23  | 14.68   |   |   |   |   | *13.37  | 10.56   | 7.66  |
| R-boom 7.0 m<br>BER-arm 2.9 m<br>Shoe 600 mm   | 8.0 m             |   |   |   |   |   |   |   |   |   |   |   |   | *9.08   | *9.08   | 7.73  |
|  | 6.0 m             |   |   |   |   |   |   | *11.60  | *11.60  | *9.38   | 9.34  |   |   | *8.88   | 7.70  | 8.83  |
|  | 4.0 m             |   |   |   |   | *17.49  | *17.49  | *13.99  | *13.99  | *10.33  | 8.94  |   |   | *8.96   | 6.66  | 9.38  |
|  | 2.0 m             |   |   |   |   | *19.79  | 17.50   | *15.77  | 13.33   | *11.19  | 8.51  |   |   | *9.19   | 6.34  | 9.48  |
|  | 0                 |   |   | *12.64  | *12.64  | *19.49  | 17.16   | *16.06  | 12.88   | *11.40  | 8.24  |   |   | *9.48   | 6.63  | 9.14  |
|  | -2.0 m            | *19.67  | *19.67  | *20.59  | *20.59  | *17.53  | *17.33  | *14.79  | 12.90   | *10.38  | 8.24  |   |   | *9.70   | 7.76  | 8.32  |
|  | -4.0 m            |   |   | *15.61  | *15.61  | *13.51  | *13.51  | *11.35  | *11.35  |   |   |   |   | *9.39   | *9.39   | 6.84  |
| R-boom 7.0 m<br>R-arm 3.4 m<br>Shoe 600 mm     | 8.0 m             |   |   |   |   |   |   |   |   | *11.14  | *11.14  |   |   | *7.77   | *7.77   | 8.53  |
|  | 6.0 m             |   |   |   |   |   |   |   |   | *11.65  | 10.95   |   |   | *7.60   | *7.60   | 9.54  |
|  | 4.0 m             |   |   |   |   | *19.83  | *19.83  | *16.40  | 15.95   | *12.80  | 10.48   | *8.41   | 7.47  | *7.83   | 7.41  | 10.05 |
|  | 2.0 m             |   |   |   |   | *23.23  | 19.30   | *18.79  | 14.92   | *13.92  | 10.00   | 10.51   | 7.28  | *8.46   | 7.14  | 10.14 |
|  | 0                 |   |   |   |   | *23.74  | 18.72   | *19.62  | 14.38   | 14.23   | 9.68  |   |   | *9.67   | 7.34  | 9.83  |
|  | -2.0 m            |   |   |   |   | *22.13  | 18.72   | *18.71  | 14.28   | *13.77  | 9.61  |   |   | *11.52  | 8.17  | 9.07  |
|  | -4.0 m            |   |   | *21.36  | *21.36  | *18.32  | *18.32  | *15.65  | 14.54   |   |   |   |   | *11.23  | 10.32   | 7.73  |

- 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.

**ZAXIS 670LCR****ENGINE**

|                                 |   |
|---------------------------------|---|
| Model                           | Isuzu AH-6WG1XYSA-02  |
| Type                            | 4-cycle water-cooled, direct injection                        |
| Aspiration                      | Turbocharged  |
| No. of cylinders                | 6   |
| Rated power                     |   |
| ISO 9249,<br>Without Fan net    | H/P mode:<br>345 kW (463 hp) at 1 800 min <sup>-1</sup> (rpm) |
| EEC 80/1269,<br>Without Fan net | H/P mode:<br>345 kW (463 hp) at 1 800 min <sup>-1</sup> (rpm) |
| Maximum torque                  | 1 980 Nm (202 kgf·m) at 1 500 min <sup>-1</sup> (rpm)         |
| Piston displacement             | 15.681 L  |
| Bore and stroke                 | 147 mm x 154 mm   |
| Batteries                       | 2 x 12 V / 170 Ah   |

**HYDRAULIC SYSTEM**

- Work mode selector  
General purpose mode / Attachment mode

- Engine speed sensing system

|                  |  |
|------------------|--|
| Main pumps       | 2 variable displacement axial piston pumps |
| Maximum oil flow | 2 x 456 L/min                              |
| Pilot pump       | 1 gear pump                                |
| Maximum oil flow | 30 L/min                                   |

**Hydraulic Motors**

|        |  |
|--------|--|
| Travel | 2 axial piston motors with parking brake |
| Swing  | 2 axial piston motor                     |

**Relief Valve Settings**

|                   |                                     |
|-------------------|-------------------------------------|
| Implement circuit | 31.9 MPa (325 kgf/cm <sup>2</sup> ) |
| Swing circuit     | 29.4 MPa (300 kgf/cm <sup>2</sup> ) |
| Travel circuit    | 34.3 MPa (350 kgf/cm <sup>2</sup> ) |
| Pilot circuit     | 3.9 MPa (40 kgf/cm <sup>2</sup> )   |
| Power boost       | 34.3 MPa (350 kgf/cm <sup>2</sup> ) |

**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        | 2        | 190 mm | 130 mm       |
| Arm         | 1        | 200 mm | 140 mm       |
| Bucket      | 1        | 180 mm | 130 mm       |
| Bucket (BE) | 1        | 190 mm | 130 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 and quick warm-up system built in the pilot circuit.

|                           |   |
|---------------------------|---|
| Implement levers          | 2 |
| Travel levers with pedals | 2 |

**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 | 9.5 min <sup>-1</sup> (rpm) |
|-------------|-----------------------------|

**Operator's Cab**

Independent spacious cab, 1 005 mm wide by 1 795 mm high, conforming to ISO\* Standards. (OPG top guard fitted Level II (ISO 10262) compliant cab)

Reinforced glass windows on 4 sides for visibility. 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 bolted to track frame. Lubricated track rollers, idlers, and sprockets with floating seals.

Track shoes with double 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           | 3  |
| Lower rollers           | 8  |
| Track shoes             | 47 |
| Full length track guard | 1  |

**Travel Device**

Each track driven by axial piston motor through reduction gears for counterrotation of the tracks. Sprockets are replaceable.

Parking brake is spring-set/hydraulic-released disc type.

Automatic transmission system: High-Low.

|               |                     |
|---------------|---------------------|
| Travel speeds | High: 0 to 4.9 km/h |
|               | Low: 0 to 3.4 km/h  |

|                        |                     |
|------------------------|---------------------|
| Maximum traction force | 460 kN (46 920 kgf) |
|------------------------|---------------------|

|              |                      |
|--------------|----------------------|
| Gradeability | 35° (70%) continuous |
|--------------|----------------------|



**WEIGHTS AND GROUND PRESSURE****ZAXIS 670LCR:**

Equipped with 7.8 m R-boom, 3.6 m R-arm and 2.9 m<sup>3</sup> R-bucket.

| Shoe type      | Shoe width | Operating weight | Ground pressure                    |
|----------------|------------|------------------|------------------------------------|
| Double grouser | 650 mm     | 68 400 kg        | 103 kPa (1.05 kg/cm <sup>2</sup> ) |

**ZAXIS 670LCR (BER):**

Equipped with 6.8 m BER-boom, 2.9 m BER-arm and 3.3 m<sup>3</sup> R-bucket (SAE, PCSA heaped).

| Shoe type      | Shoe width | Operating weight | Ground pressure                     |
|----------------|------------|------------------|-------------------------------------|
| Double grouser | 650 mm     | 68 200 kg        | 102 kPa (1.04 kgf/cm <sup>2</sup> ) |

**SERVICE REFILL CAPACITIES**

|                           | liters |
|---------------------------|--------|
| Fuel tank                 | 900.0  |
| Engine coolant            | 57.0   |
| Engine oil                | 57.0   |
| Pump drive                | 6.7    |
| Swing device (each side)  | 10.5   |
| Travel device (each side) | 16.0   |
| Hydraulic system          | 680.0  |
| Hydraulic oil tank        | 380.0  |

**BACKHOE ATTACHMENTS**

Boom and arms are of all-welded, box-section design. A number of booms and arms are available. Bucket is of all-welded, high strength steel structure.

The ZAXIS 670LCR is a heavy duty type and can be equipped with a reinforced R-boom or BER-boom and R-arm or BER-arm.

**BUCKETS**

| Capacity         |             | Width mm             |                   | No of teeth | Weight kg | ZAXIS 670LCR   |              |
|------------------|-------------|----------------------|-------------------|-------------|-----------|----------------|--------------|
| SAE, PCSA heaped | CECE heaped | Without side cutters | With side cutters |             |           | 6.8 m BER-boom | 7.8 m R-boom |
|                  |             |                      |                   |             |           | 2.9 m BER-arm  | 3.6 m R-arm  |
| m³               | m³          |                      |                   |             |           |                |              |
| *¹ 2.9           | 2.5         | 1 680                | 1 680             | 5           | 3 300     | X              | ●            |
| *¹ 3.3           | 2.9         | 1 790                | 1 790             | 5           | 3 610     | ●              | X            |
| One-point ripper |             |                      |                   | 1           | 1 800     | ●              | ●            |

● Heavy-duty

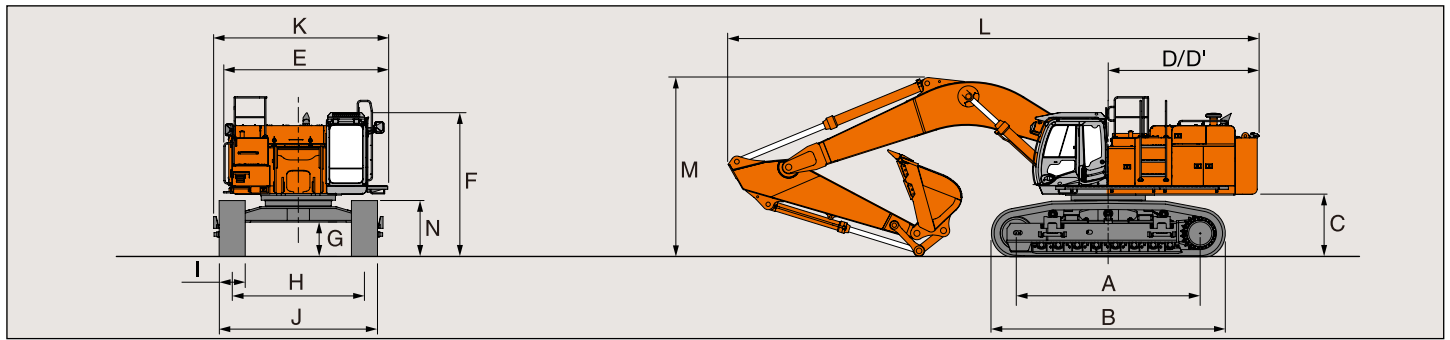
\*1 R-bucket

X Cannot be installed

# SPECIFICATIONS / LIFTING CAPACITIES

## ZAXIS 670LCR

### DIMENSIONS



Unit: mm

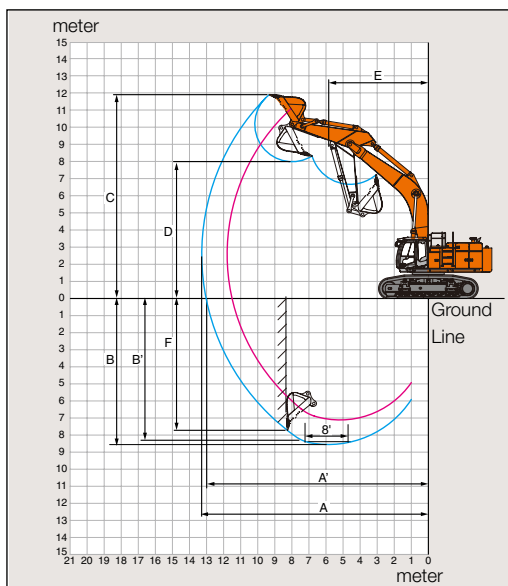
|   | ZAXIS 670LCR <sup>*2</sup> |
|---|----------------------------|
| A Distance between tumblers             | 4 590                      |
| B Undercarriage length                  | 5 840                      |
| <sup>*1</sup> C Counterweight clearance | 1 530                      |
| D Rear-end swing radius                 | 3 850                      |
| D' Rear-end length                      | 3 720                      |
| E Overall width of upperstructure       | 4 100                      |
| F Overall height of cab                 | 3 590                      |
| <sup>*1</sup> G Min. ground clearance   | 860                        |
| H Track gauge                           | 3 300                      |
| I Track shoe width                      | G 650                      |
| J Undercarriage width                   | 3 950                      |
| K Overall width                         | 4 340                      |
| L Overall length                        | 13 200                     |
| M Overall height of boom                | 4 460                      |
| N Track height                          | 1 390                      |

<sup>\*1</sup> Excluding track shoe lug      G: Double grouser shoe

<sup>\*2</sup> Equipped with 7.8 m R-boom and 3.6 m R-arm

### WORKING RANGES

Unit: mm



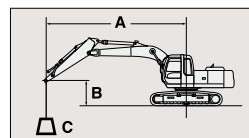
|                                   | ZAXIS 670LCR        |                     |
|-----------------------------------|---------------------|---------------------|
| Boom length                       | 6.8 m BER-boom      | 7.8 m R-boom        |
| Arm length                        | 2.9 m BER-arm       | 3.6 m R-arm         |
| A Max. digging reach              | 11 800              | 13 280              |
| A' Max. digging reach (on ground) | 11 500              | 13 030              |
| B Max. digging depth              | 7 120               | 8 560               |
| B' Max. digging depth (8' level)  | 6 970               | 8 420               |
| C Max. cutting height             | 11 190              | 11 940              |
| D Max. dumping height             | 7 330               | 8 020               |
| E Min. swing radius               | 5 240               | 5 780               |
| F Max. vertical wall              | 5 280               | 7 720               |
| Bucket digging force* ISO         | 369 kN (37 700 kgf) | 324 kN (33 100 kgf) |
| Bucket digging force* SAE: PCSA   | 332 kN (33 900 kgf) | 286 kN (29 200 kgf) |
| Arm crowd force* ISO              | 306 kN (31 200 kgf) | 255 kN (26 000 kgf) |
| Arm crowd force* SAE: PCSA        | 297 kN (30 300 kgf) | 246 kN (25 100 kgf) |
| Equipped bucket                   | 3.3 m <sup>3</sup>  | 2.9 m <sup>3</sup>  |

Excluding track shoe lug    \* At power boost



## Metric measure

The lifting capacity is defined by the overload alarm device set pressure.  
When the hydraulic pressure reaches the set pressure, the alarm buzzer sounds.  
Values in the table are with the overload alarm device switched off and with retracted bucket cylinder.



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

### ZAXIS 670LCR (WITHOUT BUCKET)

Rating over-front

Rating over-side or 360 degrees

Unit: 1 000 kg

| Conditions                                     | Load point height | Load radius |        |        |        |        |        |        |        |        |       |        |      | At max. reach |        |       |
|--|-------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|------|---------------|--------|-------|
|  |                   | 3.0 m       |        | 4.0 m  |        | 5.0 m  |        | 6.0 m  |        | 8.0 m  |       | 10.0 m |      |               |        |       |
|  |                   |             |        |        |        |        |        |        |        |        |       |        |      |               |        | meter |
| BER-boom 6.8 m<br>BER-arm 2.9 m<br>Shoe 650 mm | 8.0 m             |             |        |        |        |        |        |        |        |        |       |        |      | *12.70        | *12.70 | 7.9   |
|  | 6.0 m             |             |        |        |        |        |        | *19.70 | *19.70 | *17.1  | 13.80 |        |      | *12.20        | 11.30  | 9.0   |
|  | 4.0 m             |             |        |        |        |        |        | *23.70 | 20.40  | 18.30  | 13.10 |        |      | *12.50        | 10.00  | 9.5   |
|  | 2.0 m             |             |        |        |        |        |        | *27.10 | 18.80  | 17.60  | 12.40 |        |      | 13.30         | 9.50   | 9.6   |
|  | 0                 |             |        |        |        | *34.10 | 23.90  | 26.80  | 18.10  | 17.10  | 12.00 |        |      | 13.90         | 9.80   | 9.3   |
|  | -2.0 m            | *26.80      | *26.80 | *37.60 | 35.60  | *31.60 | 24.00  | *26.70 | 18.00  | 17.10  | 12.00 |        |      | 15.90         | 11.20  | 8.4   |
|  | -4.0 m            |             |        | *29.70 | *29.70 | *25.30 | 24.70  | *21.30 | 18.60  |        |       |        |      | *17.20        | 15.20  | 6.9   |
|  | -6.0 m            |             |        |        |        |        |        |        |        |        |       |        |      |               |        |       |
| R-boom 7.8 m<br>R-arm 3.6 m<br>Shoe 650 mm     | 9.0 m             |             |        |        |        |        |        |        |        |        |       |        |      | *9.50         | *9.50  | 9.0   |
|  | 8.0 m             |             |        |        |        |        |        |        |        |        |       |        |      | *9.30         | *9.30  | 9.7   |
|  | 6.0 m             |             |        |        |        |        |        |        |        | *15.10 | 13.80 | 13.10  | 9.50 | *9.30         | 8.60   | 10.5  |
|  | 4.0 m             |             |        |        |        | *28.40 | 26.10  | *22.70 | 19.90  | *17.10 | 12.90 | 12.70  | 9.10 | *9.70         | 7.70   | 11.0  |
|  | 2.0 m             |             |        |        |        |        |        | *26.20 | 18.20  | *17.30 | 12.10 | 12.30  | 8.70 | 10.50         | 7.40   | 11.1  |
|  | 0                 |             |        |        |        | *21.20 | *21.20 | 26.10  | 17.40  | 16.60  | 11.50 | 12.00  | 8.40 | 10.70         | 7.50   | 10.8  |
|  | -2.0 m            | *16.50      | *16.50 | *22.00 | *22.00 | *31.60 | 23.10  | 25.90  | 17.30  | 16.40  | 11.30 | 11.90  | 8.30 | 11.70         | 8.20   | 10.1  |
|  | -4.0 m            | *29.10      | *29.10 | *32.70 | *32.70 | *27.90 | 23.50  | *24.00 | 17.50  | 16.60  | 11.50 |        |      | 14.30         | 10.00  | 8.9   |
|  | -6.0 m            |             |        |        |        | *20.70 | *20.70 | *17.70 | *17.70 |        |       |        |      | *14.70        | *14.70 | 6.9   |

- 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.

## ZAXIS 870LCR

| ENGINE                          |   |
|---------------------------------|---|
| Model                           | Isuzu AH-6WG1XYSA-03  |
| Type                            | 4-cycle water-cooled, direct injection                        |
| Aspiration                      | Turbocharged  |
| No. of cylinders                | 6   |
| Rated power                     |   |
| ISO 9249,<br>Without Fan net    | H/P mode:<br>397 kW (532 hp) at 1 800 min <sup>-1</sup> (rpm) |
| EEC 80/1269,<br>Without Fan net | H/P mode:<br>397 kW (532 hp) at 1 800 min <sup>-1</sup> (rpm) |
| Maximum torque                  | 2 250 Nm (230 kgf·m) at 1 500 min <sup>-1</sup> (rpm)         |
| Piston displacement             | 15.681 L  |
| Bore and stroke                 | 147 mm x 154 mm   |
| Batteries                       | 2 x 12 V / 170 Ah   |

## HYDRAULIC SYSTEM

- Work mode selector  
General purpose mode / Attachment mode

- Engine speed sensing system

|                  |  |
|------------------|--|
| Main pumps       | 2 variable displacement axial piston pumps |
| Maximum oil flow | 2 x 528 L/min                              |
| Pilot pump       | 1 gear pump                                |
| Maximum oil flow | 30 L/min                                   |

## Hydraulic Motors

|        |  |
|--------|--|
| Travel | 2 axial piston motors with parking brake |
| Swing  | 2 axial piston motor                     |

## Relief Valve Settings

|                   |                                     |
|-------------------|-------------------------------------|
| Implement circuit | 31.9 MPa (325 kgf/cm <sup>2</sup> ) |
| Swing circuit     | 27.9 MPa (300 kgf/cm <sup>2</sup> ) |
| Travel circuit    | 34.3 MPa (350 kgf/cm <sup>2</sup> ) |
| Pilot circuit     | 3.9 MPa (40 kgf/cm <sup>2</sup> )   |
| Power boost       | 34.3 MPa (350 kgf/cm <sup>2</sup> ) |

## 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        | 2        | 215 mm | 150 mm       |
| Arm         | 1        | 225 mm | 160 mm       |
| Bucket      | 1        | 200 mm | 140 mm       |
| Bucket (BE) | 1        | 215 mm | 150 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 and quick warm-up system built in the pilot circuit.

|                           |   |
|---------------------------|---|
| Implement levers          | 2 |
| Travel levers with pedals | 2 |

## 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 | 7.3 min <sup>-1</sup> (rpm) |
|-------------|-----------------------------|

## Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 795 mm high, conforming to ISO\* Standards. (OPG top guard fitted Level II (ISO 10262) compliant cab)

Reinforced glass windows on 4 sides for visibility. 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 bolted to track frame. Lubricated track rollers, idlers, and sprockets with floating seals.

Track shoes with double 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           | 3  |
| Lower rollers           | 9  |
| Track shoes             | 51 |
| Full length track guard | 1  |

## Travel Device

Each track driven by axial piston motor through reduction gears for counterrotation of the tracks. Sprockets are replaceable.

Parking brake is spring-set/hydraulic-released disc type.

Automatic transmission system: High-Low.

|               |                     |
|---------------|---------------------|
| Travel speeds | High: 0 to 4.1 km/h |
|               | Low: 0 to 3.1 km/h  |

|                        |                     |
|------------------------|---------------------|
| Maximum traction force | 560 kN (57 100 kgf) |
|------------------------|---------------------|

|              |                      |
|--------------|----------------------|
| Gradeability | 35° (70%) continuous |
|--------------|----------------------|



## WEIGHTS AND GROUND PRESSURE

### ZAXIS 870LCR:

Equipped with 8.4 m R-boom, 3.7 m R-arm and 3.5 m<sup>3</sup> R-bucket (SAE, PCSA heaped).

| Shoe type      | Shoe width | Operating weight | Ground pressure                     |
|----------------|------------|------------------|-------------------------------------|
| Double grouser | 650 mm     | 85 500 kg        | 116 kPa (1.19 kgf/cm <sup>2</sup> ) |

### ZAXIS 870LCR (BER):

Equipped with 7.1 m BER-boom, 2.95 m BER-arm and 4.3 m<sup>3</sup> R-bucket (SAE, PCSA heaped).

| Shoe type      | Shoe width | Operating weight | Ground pressure                     |
|----------------|------------|------------------|-------------------------------------|
| Double grouser | 650 mm     | 85 800 kg        | 117 kPa (1.19 kgf/cm <sup>2</sup> ) |

Equipped with 7.1 m BER-boom, 3.7 m R-arm and 3.7 m<sup>3</sup> R-bucket (SAE, PCSA heaped).

| Shoe type      | Shoe width | Operating weight | Ground pressure                     |
|----------------|------------|------------------|-------------------------------------|
| Double grouser | 650 mm     | 85 500 kg        | 116 kPa (1.19 kgf/cm <sup>2</sup> ) |

## SERVICE REFILL CAPACITIES

|                           | liters  |
|---------------------------|---------|
| Fuel tank                 | 1 120.0 |
| Engine coolant            | 116.0   |
| Engine oil                | 57.0    |
| Pump drive                | 6.2     |
| Swing device (each side)  | 15.0    |
| Travel device (each side) | 11.0    |
| Hydraulic system          | 790.0   |
| Hydraulic oil tank        | 500.0   |

## BACKHOE ATTACHMENTS

Boom and arms are of all-welded, box-section design. A number of booms and arms are available. Bucket is of all-welded, high strength steel structure.

The ZAXIS 870LCR is a heavy duty type and can be equipped with a reinforced R-boom or BER-boom and R-arm or BER-arm.

## BUCKETS

| Capacity         |                | Width mm             |                   | No of teeth | Weight kg | ZAXIS 870LCR   |             |              |
|------------------|----------------|----------------------|-------------------|-------------|-----------|----------------|-------------|--------------|
|                  |                |                      |                   |             |           | 7.1 m BER-boom |             | 8.4 m R-boom |
|                  |                |                      |                   |             |           | 2.95 m BER-arm | 3.7 m R-arm | 3.7 m R-arm  |
| SAE, PCSA heaped | CECE heaped    | Without side cutters | With side cutters |             |           |                |             |              |
| m <sup>3</sup>   | m <sup>3</sup> |                      |                   |             |           |                |             |              |
| *1 3.5           | 3.1            | 1 870                | 1 890             | 5           | 4 870     | X              | ●           | ●            |
| *1 3.7           | 3.2            | 1 950                | 1 970             | 5           | 4 970     | X              | ●           | X            |
| *1 4.3           | 3.8            | 2 090                | 2 110             | 5           | 5 690     | ●              | X           | X            |
| One-point ripper |                |                      |                   | 1           | 2 680     | ●              | ●           | ●            |

● Heavy-duty

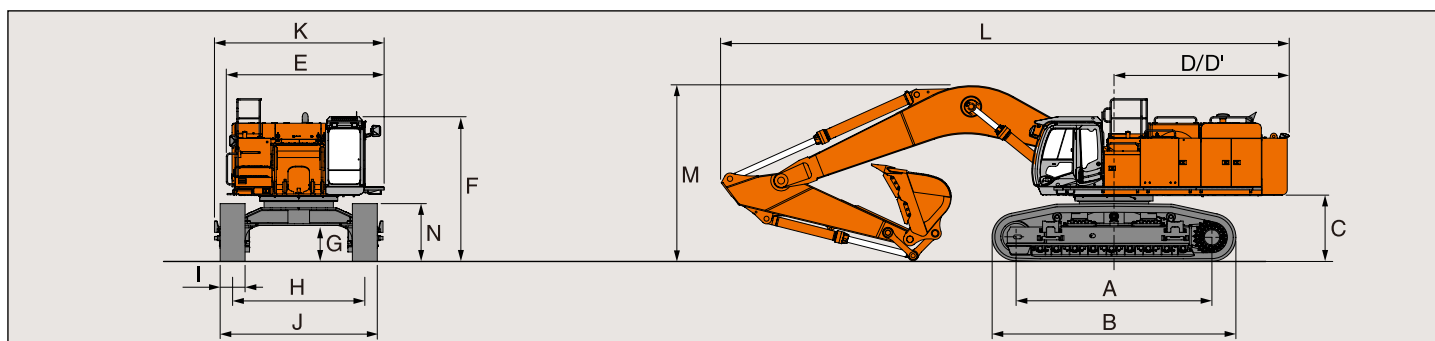
\*1 R-bucket

X Cannot be installed

# SPECIFICATIONS / LIFTING CAPACITIES

## ZAXIS 870LCR

### DIMENSIONS



Unit: mm

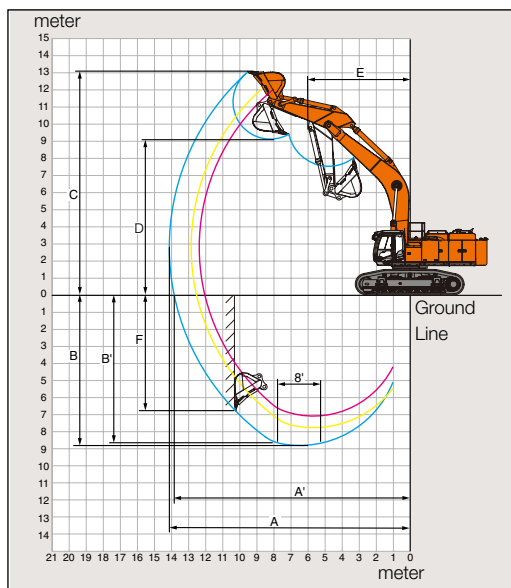
|   | ZAXIS 870LCR <sup>*2</sup> |
|---|----------------------------|
| A Distance between tumblers             | 5 110                      |
| B Undercarriage length                  | 6 360                      |
| <sup>*1</sup> C Counterweight clearance | 1 680                      |
| D Rear-end swing radius                 | 4 600                      |
| D' Rear-end length                      | 4 520                      |
| E Overall width of upperstructure       | 4 120                      |
| F Overall height of cab                 | 3 780                      |
| <sup>*1</sup> G Min. ground clearance   | 890                        |
| H Track gauge                           | 3 450                      |
| I Track shoe width                      | G 650                      |
| J Undercarriage width                   | 4 100                      |
| K Overall width                         | 4 430                      |
| L Overall length                        | 14 770                     |
| M Overall height of boom                | 4 570                      |
| N Track height                          | 1 500                      |

<sup>\*1</sup> Excluding track shoe lug    G: Double grouser shoe

<sup>\*2</sup> Equipped with 8.4 m R-boom and 3.7 m R-arm

### WORKING RANGES

Unit: mm



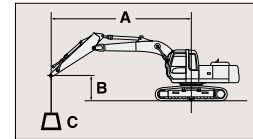
|                                   | ZAXIS 870LCR        |                     |                     |
|-----------------------------------|---------------------|---------------------|---------------------|
| Boom length                       | 7.1 m BER-boom      |                     | 8.4 m R-boom        |
| Arm length                        | 2.95 m BER-arm      | 3.7 m R-arm         | 3.7 m R-arm         |
| A Max. digging reach              | 12 340              | 12 820              | 14 100              |
| A' Max. digging reach (on ground) | 12 020              | 12 510              | 13 820              |
| B Max. digging depth              | 7 140               | 7 820               | 8 870               |
| B' Max. digging depth (8' level)  | 7 000               | 7 690               | 8 740               |
| C Max. cutting height             | 12 010              | 12 130              | 13 000              |
| D Max. dumping height             | 8 130               | 8 180               | 9 080               |
| E Min. swing radius               | 5 210               | 5 090               | 5 950               |
| F Max. vertical wall              | 4 100               | 6 090               | 6 840               |
| Bucket digging force* ISO         | 472 kN (48 200 kgf) | 402 kN (41 000 kgf) | 402 kN (41 000 kgf) |
| Bucket digging force* SAE: PCSA   | 411 kN (41 900 kgf) | 359 kN (36 600 kgf) | 359 kN (36 600 kgf) |
| Arm crowd force* ISO              | 394 kN (40 200 kgf) | 324 kN (33 100 kgf) | 324 kN (33 100 kgf) |
| Arm crowd force* SAE: PCSA        | 378 kN (38 600 kgf) | 316 kN (32 200 kgf) | 316 kN (32 200 kgf) |
| Equipped bucket SAE: PCSA         | 4.3 m <sup>3</sup>  | 3.7 m <sup>3</sup>  | 3.5 m <sup>3</sup>  |

Excluding track shoe lug    \* At power boost



## Metric measure

The lifting capacity is defined by the overload alarm device set pressure.  
When the hydraulic pressure reaches the set pressure, the alarm buzzer sounds.  
Values in the table are with the overload alarm device switched off and with retracted bucket cylinder.



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

### ZAXIS 870LCR (WITHOUT BUCKET)



Rating over-front



Rating over-side or 360 degrees

Unit: 1 000 kg

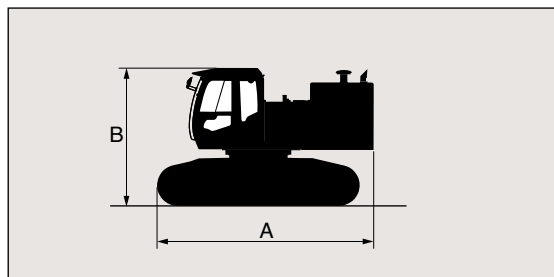
| Conditions     | Load point height | Load radius |        |        |        |        |        |        |        |        |        |        |        | At max. reach |        |       |
|----------------|-------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|--------|-------|
|                |                   | 3.0 m       |        | 4.0 m  |        | 5.0 m  |        | 6.0 m  |        | 8.0 m  |        | 10.0 m |        |               |        |       |
|                |                   |             |        |        |        |        |        |        |        |        |        |        |        |               |        | meter |
| BER-boom 7.1 m | 9.0 m             |             |        |        |        |        |        |        |        |        |        |        |        | *17.60        | *17.60 | 7.8   |
| BER-arm 2.95 m | 8.0 m             |             |        |        |        |        |        |        |        | *21.30 | *21.30 |        |        | *16.90        | *16.90 | 8.6   |
| Shoe 650 mm    | 6.0 m             |             |        |        |        | *31.10 | *31.10 | *26.90 | *26.90 | *22.30 | 22.00  |        |        | *16.40        | *16.40 | 9.5   |
|                | 4.0 m             |             |        |        |        |        |        | *32.40 | 32.10  | *24.50 | 21.00  | *17.10 | 14.90  | *16.80        | 14.80  | 10.0  |
|                | 2.0 m             |             |        |        |        |        |        | *36.30 | 30.10  | *26.50 | 19.90  | *20.00 | 14.50  | *18.00        | 14.30  | 10.1  |
|                | 0                 |             |        |        |        | *36.00 | *36.00 | *36.90 | 29.10  | *27.00 | 19.30  |        |        | *20.60        | 14.80  | 9.7   |
|                | -2.0 m            | *28.70      | *28.70 | *40.20 | *40.20 | *40.20 | 38.70  | *34.30 | 28.90  | *25.20 | 19.10  |        |        | *21.50        | 16.70  | 8.9   |
|                | -4.0 m            |             |        | *36.80 | *36.80 | *32.00 | *32.00 | *27.40 | *27.40 |        |        |        |        | *20.50        | *20.50 | 7.4   |
| BER-boom 7.1 m | 9.0 m             |             |        |        |        |        |        |        |        | *14.90 | *14.90 |        |        | *11.20        | *11.20 | 8.5   |
| R-arm 3.7 m    | 8.0 m             |             |        |        |        |        |        |        |        | *17.60 | *17.60 |        |        | *10.90        | *10.90 | 9.2   |
| Shoe 650 mm    | 6.0 m             |             |        |        |        |        |        |        |        | *21.00 | *21.00 | *12.10 | *12.10 | *10.80        | *10.80 | 10.1  |
|                | 4.0 m             |             |        |        |        | *37.20 | *37.20 | *30.50 | *30.50 | *23.50 | 21.50  | *17.80 | 15.30  | *11.20        | *11.20 | 10.6  |
|                | 2.0 m             |             |        |        |        | *42.70 | 40.80  | *35.40 | 31.00  | *25.90 | 20.40  | *21.10 | 14.80  | *12.20        | *12.20 | 10.6  |
|                | 0                 |             |        |        |        | *42.70 | 39.30  | *37.30 | 29.70  | *27.20 | 19.60  | *19.70 | 14.40  | *14.10        | 13.80  | 10.3  |
|                | -2.0 m            |             |        |        |        | *43.00 | 39.00  | *36.00 | 29.20  | *26.40 | 19.30  |        |        | *17.80        | 15.30  | 9.5   |
|                | -4.0 m            |             |        | *43.30 | *43.30 | *36.50 | *36.50 | *31.00 | 29.40  | *21.90 | 19.50  |        |        | *21.30        | 19.10  | 8.1   |
|                | -5.0 m            |             |        | *36.40 | *36.40 | *31.00 | *31.00 | *26.20 | *26.20 |        |        |        |        | *20.80        | *20.80 | 7.1   |
| R-boom 8.4 m   | 10.0 m            |             |        |        |        |        |        |        |        |        |        |        |        | *12.50        | *12.50 | 9.4   |
| R-arm 3.7 m    | 8.0 m             |             |        |        |        |        |        |        |        | *17.30 | *17.30 | *16.10 | 15.60  | *12.00        | *12.00 | 10.7  |
| Shoe 650 mm    | 6.0 m             |             |        |        |        | *30.10 | *30.10 | *24.90 | *24.90 | *19.60 | *19.60 | *17.00 | 15.20  | *12.10        | 12.10  | 11.4  |
|                | 4.0 m             |             |        |        |        |        |        | *31.10 | 30.40  | *22.40 | 20.20  | *18.40 | 14.50  | *12.70        | 11.20  | 11.8  |
|                | 2.0 m             |             |        |        |        |        |        | *29.40 | 28.40  | *24.70 | 19.00  | *19.60 | 13.90  | *13.80        | 10.80  | 11.9  |
|                | 0                 |             |        |        |        |        |        |        |        | *25.90 | 18.30  | *20.30 | 13.50  | *15.70        | 11.00  | 11.6  |
|                | -2.0 m            |             |        |        |        |        |        | *34.20 | 27.60  | *25.60 | 18.10  | *19.90 | 13.40  | *17.70        | 12.00  | 10.9  |
|                | -4.0 m            |             |        |        |        |        |        | *30.70 | 28.00  | *23.40 | 18.30  |        |        | *18.00        | 14.10  | 9.7   |
|                | -6.0 m            |             |        |        |        | *27.50 | *27.50 | *24.10 | *24.10 |        |        |        |        | *17.50        | *17.50 | 7.9   |

- 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.

## ZAXIS 520LCR

### TRANSPORTATION

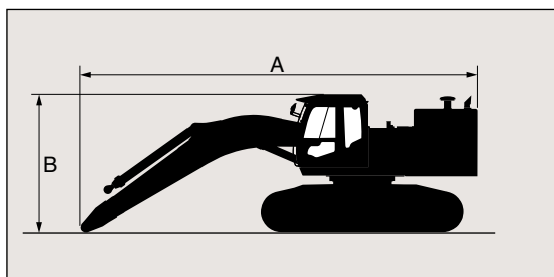
#### BASIC MACHINE WITHOUT SIDEWALK AND COUNTERWEIGHT



| Shoe width | Shoe type      | Overall width* | Weight    | A Overall length | B Overall height |
|------------|----------------|----------------|-----------|------------------|------------------|
| 600 mm     | Double grouser | 3 060 mm       | 32 100 kg | 5 620 mm         | 3 520 mm         |

Note: Undercarriage retracted

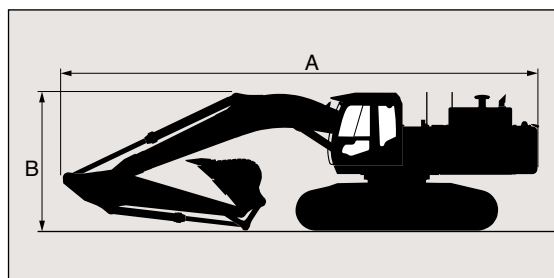
#### BASIC MACHINE FITTED WITH BOOM AND WITHOUT SIDEWALK AND COUNTERWEIGHT



| Boom length | Shoe width | Shoe type      | Overall width* | Weight    | A Overall length | B Overall height |
|-------------|------------|----------------|----------------|-----------|------------------|------------------|
| 6.3 m BER   | 600 mm     | Double grouser | 3 060 mm       | 37 400 kg | 9 060 mm         | 3 520 mm         |
| 7.0 m R     | 600 mm     | Double grouser | 3 060 mm       | 37 300 kg | 9 850 mm         | 3 520 mm         |

Note: Undercarriage retracted \* Equipped with H-front

#### BASIC MACHINE WITH FRONT AND SIDEWALK

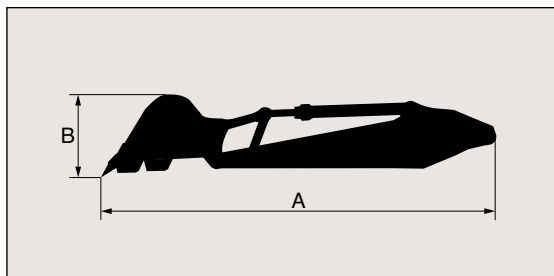


| Boom length | 6.3 m BER |           |
|-------------|-----------|-----------|
| Arm length  | 2.5 m BER | 2.9 m BER |
| A           | 11 400 mm | 11 270 mm |
| B           | 4 100 mm  | 3 980 mm  |

| Boom length | 7.0 m R   |           |
|-------------|-----------|-----------|
| Arm length  | 2.9 m BER | 3.4 m R   |
| A           | 11 980 mm | 11 890 mm |
| B           | 3 500 mm  | 3 500 mm  |

Note: Undercarriage retracted

#### ARM & BUCKET

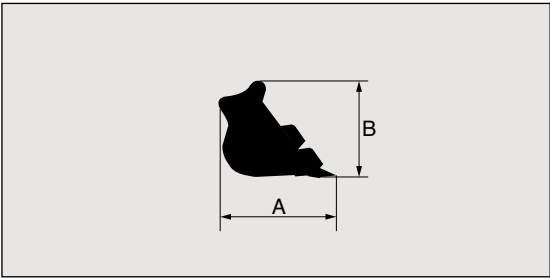


| Arm       | Bucket SAE, PCSA heaped | Weight   | A        | B        | Overall width |
|-----------|-------------------------|----------|----------|----------|---------------|
| 2.5 m BER | 2.5 m <sup>3</sup>      | 5 590 kg | 5 650 mm | 1 470 mm | 1 820 mm      |
| 2.9 m BER | 2.3 m <sup>3</sup>      | 4 770 kg | 6 030 mm | 1 340 mm | 1 700 mm      |
| 3.4 m R   | 1.9 m <sup>3</sup>      | 4 790 kg | 6 370 mm | 1 470 mm | 1 500 mm      |



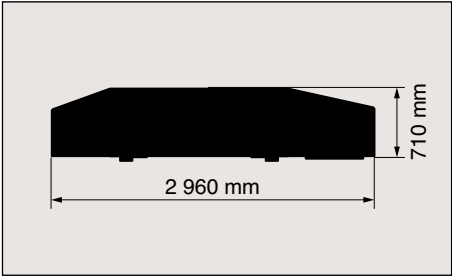
TRANSPORTATION

BUCKET

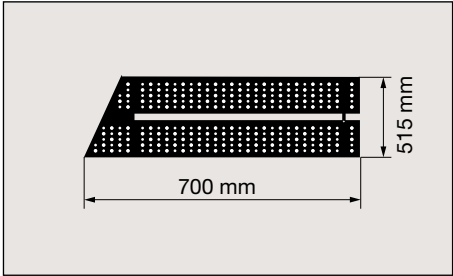


| Bucket           |             | A        | B        | Width    | Weight   |
|------------------|-------------|----------|----------|----------|----------|
| SAE, PCSA heaped | CECE heaped |          |          |          |          |
| 1.9 m³           | 1.7 m³      | 2 030 mm | 1 480 mm | 1 500 mm | 2 070 kg |
| 2.1 m³           | 1.8 m³      | 1 950 mm | 1 650 mm | 1 580 mm | 2 170 kg |
| 2.3 m³           | 2.0 m³      | 1 950 mm | 1 650 mm | 1 700 mm | 2 260 kg |
| 2.5 m³           | 2.2 m³      | 1 950 mm | 1 650 mm | 1 820 mm | 2 360 kg |

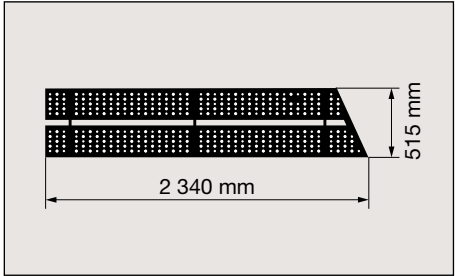
COUNTERWEIGHT 9 820 kg



SIDEWALK 30 kg



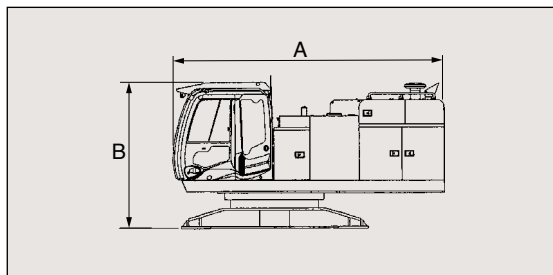
SIDEWALK 44 kg



## ZAXIS 670LCR / 870LCR

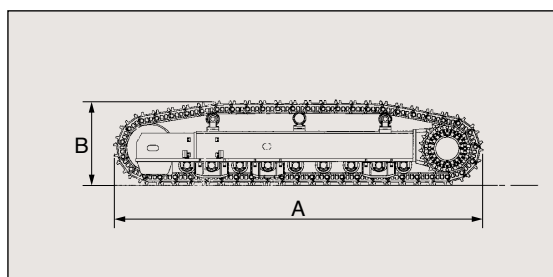
### TRANSPORTATION

#### UPPERSTRUCTURE



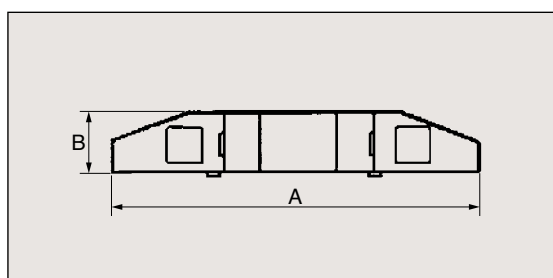
|              | A        | B        | Overall width | Weight    |
|--------------|----------|----------|---------------|-----------|
| ZAXIS 670LCR | 5 060 mm | 2 740 mm | 3 470 mm      | 20 100 kg |
| ZAXIS 870LCR | 6 040 mm | 2 960 mm | 3 500 mm      | 27 500 kg |

#### SIDE FRAME



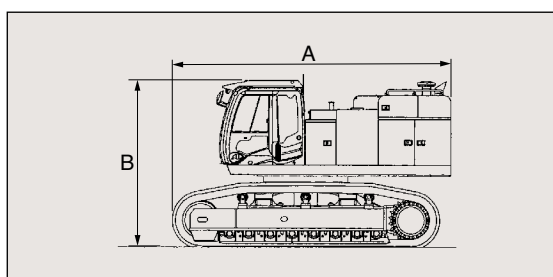
|              | Shoe width | A        | B        | Overall width | Weight    |
|--------------|------------|----------|----------|---------------|-----------|
| ZAXIS 670LCR | 650 mm     | 5 840 mm | 1 450 mm | 1 190 mm      | 10 800 kg |
| ZAXIS 870LCR | 650 mm     | 6 360 mm | 1 500 mm | 1 330 mm      | 12 700 kg |

#### COUNTERWEIGHT



|              | A        | B      | Overall height | Weight    |
|--------------|----------|--------|----------------|-----------|
| ZAXIS 670LCR | 3 360 mm | 590 mm | 1 550 mm       | 11 100 kg |
| ZAXIS 870LCR | 3 360 mm | 720 mm | 1 620 mm       | 13 300 kg |

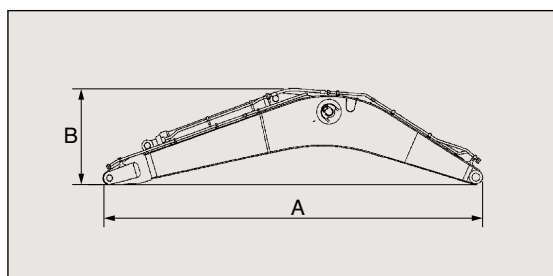
#### BASIC MACHINE ( WITHOUT COUNTERWEIGHT )



|              | Shoe width | A        | B        | Overall width | Weight    |
|--------------|------------|----------|----------|---------------|-----------|
| ZAXIS 670LCR | 650 mm     | 6 100 mm | 3 640 mm | 3 480 mm      | 41 400 kg |
| ZAXIS 870LCR | 650 mm     | 7 080 mm | 3 790 mm | 3 600 mm      | 52 700 kg |

Notes: Undercarriage retracted

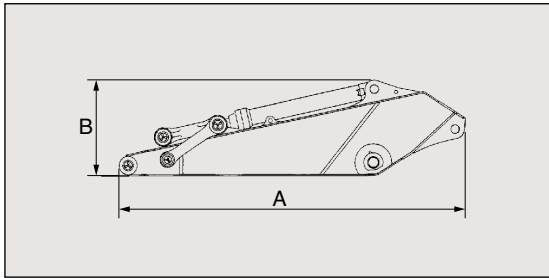
#### BOOM



|              | Boom      | A        | B        | Overall width | Weight   |
|--------------|-----------|----------|----------|---------------|----------|
| ZAXIS 670LCR | 6.8 m BER | 7 140 mm | 2 510 mm | 1 390 mm      | 6 260 kg |
|              | 7.8 m R   | 8 130 mm | 2 330 mm | 1 390 mm      | 6 760 kg |
| ZAXIS 870LCR | 7.1 m BER | 7 490 mm | 2 700 mm | 1 450 mm      | 7 680 kg |
|              | 8.4 m R   | 8 780 mm | 2 500 mm | 1 450 mm      | 8 270 kg |

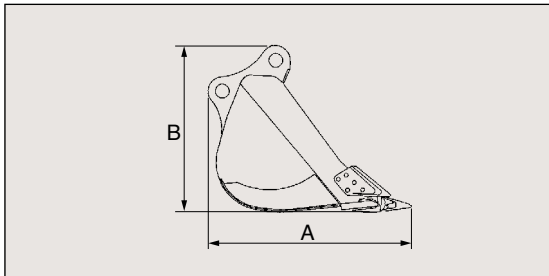
## TRANSPORTATION

### ARM



|              | Arm        | A        | B        | Overall width | Weight   |
|--------------|------------|----------|----------|---------------|----------|
| ZAXIS 670LCR | 2.9 m BER  | 4 370 mm | 1 690 mm | 800 mm        | 3 950 kg |
|              | 3.6 m R    | 5 110 mm | 1 440 mm | 800 mm        | 3 900 kg |
| ZAXIS 870LCR | 2.95 m BER | 4 460 mm | 1 660 mm | 850 mm        | 4 760 kg |
|              | 3.7 m R    | 5 290 mm | 1 420 mm | 820 mm        | 4 610 kg |

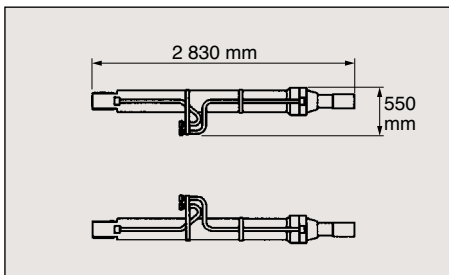
### BUCKET



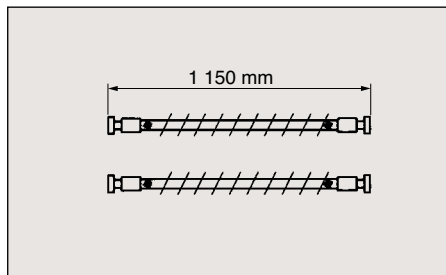
|              | Capacity         |             | A        | B        | Overall width | Weight   |
|--------------|------------------|-------------|----------|----------|---------------|----------|
|              | SAE, PCSA heaped | CECE heaped |          |          |               |          |
| ZAXIS 670LCR | 2.9 m³           | 2.5 m³      | 2 290 mm | 1 770 mm | 1 680 mm      | 3 300 kg |
|              | 3.3 m³           | 2.9 m³      | 2 250 mm | 1 890 mm | 1 790 mm      | 3 610 kg |
| ZAXIS 870LCR | 3.5 m³           | 3.1 m³      | 2 240 mm | 1 920 mm | 1 890 mm      | 4 870 kg |
|              | 3.7 m³           | 3.2 m³      | 2 240 mm | 1 920 mm | 1 970 mm      | 4 970 kg |
|              | 4.3 m³           | 3.8 m³      | 2 310 mm | 2 000 mm | 2 110 mm      | 5 690 kg |

### ZAXIS 670LCR

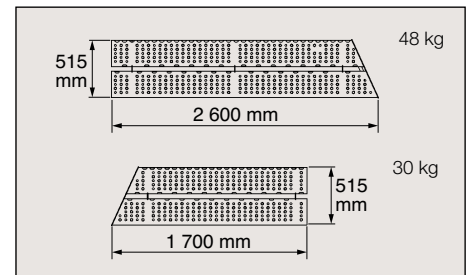
#### BOOM CYLINDERS 550 kg x 2



#### HOSE OF BOOM CYLINDERS 7 kg x 2 / 10 kg x 2

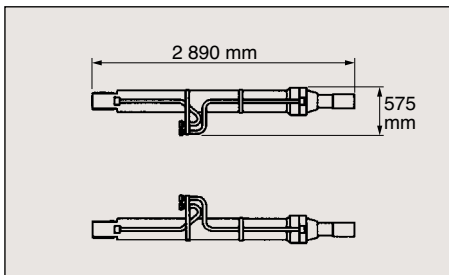


#### LEFT SIDEWALK

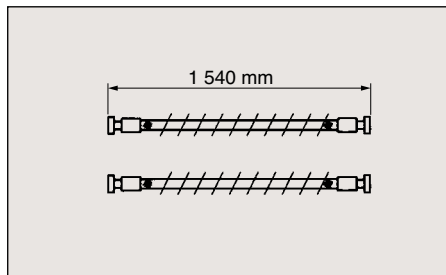


### ZAXIS 870LCR

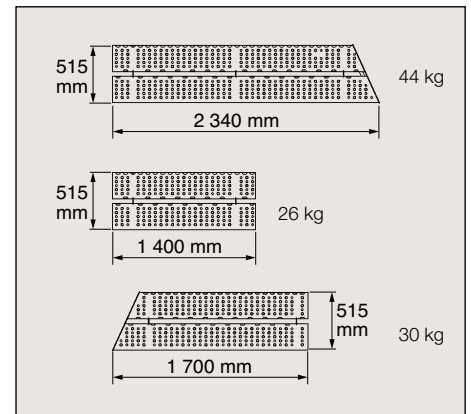
#### BOOM CYLINDERS 850 kg x 2



#### HOSE OF BOOM CYLINDERS 13 kg x 2 / 9 kg x 2



#### LEFT SIDEWALK





## STANDARD EQUIPMENT

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

## ENGINE

- H/P mode control
- P mode control
- E mode control
- 50 A alternator
- Dry-type air double filter with evacuator valve (with air filter restriction switch for monitor)
- Cartridge-type engine oil filter
- Cartridge-type fuel filter
- Fuel pre-filter
- Radiator, oil cooler and intercooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idle system

## HYDRAULIC SYSTEM

- Work mode selector
- Engine speed sensing system
- E-P control system
- Power boost
- Auto power lift
- Boom mode selector system
- Shockless valve in pilot circuit
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter
- Drain filter
- Quick warm-up system for pilot circuit

## CAB

- H/R cab
- OPG top guard fitted Level II (ISO10262) compliant cab
- All-weather sound suppressed steel cab

- Laminated straight and fixed glass front window
- Left side window can be opened
- 6 fluid-filled elastic mounts
- Intermittent windshield wipers
- Front window washer
- Adjustable reclining suspension seat with adjustable armrests
- Footrest
- Electric double horn
- AM-FM radio with digital clock
- Auto-idle selector
- Retractable Seat belt
- Drink holder
- Cigarette lighter
- Ashtray
- Storage box
- Glove compartment
- Floor mat
- Short wrist control levers
- Pilot control shut-off lever
- Auto control air conditioner
- Engine shut-off switch
- Transparent roof with slide curtain

## MONITOR SYSTEM

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

## LIGHTS

- 3 working lights
- 2 cab lights

## UPPERSTRUCTURE

- 4.5 mm thickness Undercover
- Fuel level float
- Rear view camera
- 170 Ah batteries
- Hydraulic oil level gauge
- Tool box
- Utility space
- Rearview mirror (right & left side)
- Swing parking brake
- Electric fuel refilling pump with auto-stop
- Auto-grease lubricator (Boom and arm Joint pin)

**ZX 520LCR-3:**

- Ladder
- 9 820 kg counterweight

**ZX 670LCR-3:**

- Ladder
- 11 100 kg counterweight

**ZX 870LCR-3:**

- 13 300 kg counterweight

## UNDERCARRIAGE

- Travel parking brake
- Reinforced travel motor covers
- Reinforced Idler part
- Hydraulic track adjuster
- Idler track guard
- Bolt-on sprocket
- Upper and lower rollers
- Reinforced track links with pin seals
- Full track guard

**ZX 520LCR-3:**

- 600 mm double grouser shoes

**ZX 670LCR-3 / ZX 870LCR-3:**

- 650 mm double grouser shoes

## FRONT ATTACHMENTS

- Boom cylinder hose protectors
- Arm cylinder hose protectors
- Bucket cylinder hose protectors
- Flanged pin
- Reinforced link A
- Reinforced link B
- Centralized lubrication system
- Dirt seal on all bucket pins
- Damage prevention plate and square bars

**ZX 520LCR-3:**

- 7.0 m R-boom and 3.4 m R-arm
- 1.9 m³ (SAE, PCSA heaped) R-bucket (with dual type side shrouds)

**ZX 670LCR-3:**

- 7.8 m R-boom and 3.6 m R-arm
- 2.9 m³ (SAE, PCSA heaped) R-bucket (with dual type side shrouds)

**ZX 870LCR-3:**

- 8.4 m R-boom and 3.7 m R-arm
- 3.5 m³ (SAE, PCSA heaped) R-bucket (with dual type side shrouds)

## MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel refilling cap
- Skid-resistant tapes, plates and handrails
- Sidewalk
- Travel direction mark on track frame
- Onboard information controller
- Theft deterrent system

## OPTIONAL EQUIPMENT

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

- Hose rupture valves
- Swing motion alarm device with lamps
- Travel motion alarm device
- Biodegradable oil
- Extinguisher
- Pre cleaner
- Cab front step

- Electric grease gun with hose-reel
- Air suspension seat (With seat heater)
- Built-in seat heater
- Track under cover
- Right side walk
- Rain guard for cab
- Attachment basic piping

- Accessories for breaker
- Accessories for breaker & crusher
- Accessories for 2 speed selector
- Sun visor
- 12 V power source
- Additional fuse box
- Overload alarm
- Front glass lower guard
- Front glass upper guard

### **ZX 520LCR-3 :**

- 6.3 m BER-boom
- 2.5 m BER-arm
- 2.9 m BER-arm

### **ZX 670LCR-3 :**

- 6.8 m BER-boom
- 2.9 m BER-arm

### **ZX 870LCR-3 :**

- 7.1 m BER-boom
- 2.95 m BER-arm

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.