HYDRAULIC EXCAVATOR

Model Code: ZX65USB-5A
Engine Rated Power: 34.1 kW (45.7 HP)
Operating Weight: 6,170 - 6,600 kg
Backhoe Bucket: ISO Heaped: 0.24 m³
Trustworthy and User-Friendly
New Compact Excavators

The new series of Hitachi compact excavators has evolved even more. We listen to customers’ needs, provide solutions, and adopt fresh ideas into our new products. The outcome is new excavators that are compact, productive and nimble.

The round body is smart and its wide-opening covers provide direct access to service points for quick maintenance.

The operator station is full of easy-to-use controls, an informative multi-monitor, and comfortable operator seat. A low fuel consumption design ensures better fuel efficiency.

- A line of Hitachi quality products
- Strong front attachment
- Rugged box-section blade
- Sturdy upperstructure

DURABILITY

- Open-wide covers for easy maintenance
- Easy to clean cab floor

SIMPLIFIED MAINTENANCE

- Pleasant operator environment
- Sturdy operator stations by rigorous safety standards
- Easy-to-read multi-monitor

OPERATOR COMFORT

- Swift actions in narrow work place
- Excellent controllability
- Reduced fuel consumption

HIGH PERFORMANCE

- Standard and optional equipment may vary by country, so please consult your Hitachi dealer for details.
HIGH PERFORMANCE
Agility Stands for Efficiency

Swift Actions in Narrow Work Place

Short rear-end swing design allows for safe, confident operation in tight work areas.

Excellent Controllability

The Hitachi pilot control system is impressive. Its pilot lever provides excellent fine control and low-effort handling to reduce operator fatigue. It is ergonomically positioned for easy operation. The HHH (Hitachi High-performance Hydraulic) system allows for smooth operation by lever control regardless of the load. The multi-monitor allows selection of ECO and PWR modes to control the motion speed. With the engine control dial, you can also adjust engine speed with ease. The auto speed change system shifts down travel speed when the load exceeds a certain limit (for instance, when going downhill), and shifts up when the load is less.

Reduced Fuel Consumption

A new engine has an electronic governor that is a clue to low fuel consumption. With an electronic accelerator, you can achieve precision engine control for fuel economy. To conserve fuel, select ECO mode, and to get more power, select PWR mode. In short, you can choose an optimum mode according to job needs. The Auto Idle helps save fuel consumption, too. When moving the control lever to neutral, the Auto Idle automatically reduces engine speed to idling level four seconds later, reducing fuel consumption.
OPERATOR COMFORT

Comfortable Operator Stations to Yield High Production

Pleasant Operator Environment

Hitachi cabs have been traditionally praised for operator comfort. They are spacious with ample leg room. The console and seat are designed ergonomically, standing for operator comfort.

When sitting in the operator station, the operator will not feel restricted. Cab door width increases by 80 mm for easy access and a better view of work place. The front windshield is enlarged for higher visibility. The foot step is lowered for easy access. A host of devices, including armrests, drink holder and seat back box, enhance operator comfort.

Sturdy Operator Stations by Rigorous Safety Standards

The rugged cab will protect the operator in case of tipping. They are ruggedly designed by the ROPS* standard. All the models are protected with the OPG** top guard against falling objects.

A seat belt, pilot control shut-off lever, swing parking brake and travel parking brake are all standard. The neutral engine start system further enhances safe operation, disabling engine starting unless the lever is in lock position.

*Roll-Over Protection Structure  **Operator Protection Guard

Easy-to-Read Multi-Monitor

The multi-monitor is bright, informative and easy-to-read, displaying machine conditions, settings and warnings. A clock is newly added.

Menu Return Switch

Auto-Idle Selector Switch

ECO/PWR Mode Selector Switch

Items

- Coolant Temperature Gauge
- Fuel Gauge
- Hour Meter
- Clock
- Travel Mode Indicator
- Work Light Indicator
- Overheat Indicator
- Engine Oil Pressure Indicator
- Preheat Indicator
- Fuel Level Indicator
SIMPLIFIED MAINTENANCE

Easy Servicing, Day-in Day-out

Open-Wide Covers for Easy Maintenance

All covers are wide-opening for direct access to service points, allowing for quick daily inspection and replacement. A cover adjacent to the radiator extends vertically to easily clean the radiator. A refueling port is placed inside the cover to avoid dirt entry and fuel theft. A new tank cover is lightweight and wide-opening for easy refueling. A large tool box is located beside the operator seat to store a grease gun and the likes. All this increases uptime.

Easy-to-Clean Cab Floor

The radiator and oil cooler are arranged in parallel, instead of conventional in-line arrangement, to promote easy, efficient cleaning and cooling. Their wavy fins can be easily cleaned by air blowing. Dust-proof indoor nets are standard for easy removal of debris and dirt. A split-type floor mat can easily be removed at a seam between foot pedals and cab floor, and its surface patterns allow for quick sweeping.
Front pins are jointed with a tight fit to reduce jerking and noise significantly, enhancing durability. Those pins are lubricated with HN bushings having an abundant grease-retaining capacity, extending greasing intervals up to 500 hours.

Main hoses are sheathed with hose protectors at the swing post. The bottom side of the boom cylinder is protected with a V-shaped boom cylinder guard. The four-side reinforced arm is sturdy with high rigidity.

**Rugged Box-Section Blade**

The blade is box-section structure for higher ruggedness, and its stays have openings for easy flow-out of mud.

**Sturdy Upperstructure**

The upperstructure frame is reinforced with job-proven D-section skirts whose height is increased for larger cross section to boost durability against obstacles.

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DURABILITY

Technological Prowess and Stringent Quality Control

A Line of Hitachi Quality Products

Hitachi has been acclaimed worldwide for technological prowess and high-performance products since the launch of its first hydraulic excavator in 1949. Its Design Division has adopted the 3D-CAD system for applied analysis and data crunching to churn out quality products and slash lead time in development.

Newly developed products have been rigorously tested in multiple ways, such as long-hours durability test and evaluation test, at a Hitachi vast 427 hectares test field under critical operating conditions — for instance, tropical or freezing weather — before unveiling new products.

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**Strong Front Attachment**

Front pins are jointed with a tight fit to reduce jerking and noise significantly, enhancing durability. Those pins are lubricated with HN bushings having an abundant grease-retaining capacity, extending greasing intervals up to 500 hours.

Main hoses are sheathed with hose protectors at the swing post. The bottom side of the boom cylinder is protected with a V-shaped boom cylinder guard. The four-side reinforced arm is sturdy with high rigidity.

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Technological Prowess and Stringent Quality Control
**SPECIFICATIONS**

**ENGINE**
- Model: Yanmar 4TNV94L-ZWHB
- Type: 4-cylinder water-cooled, direct injection
- No. of cylinders: 4
- Rated power: 34.1 kW (45.7 HP) at 2000 rpm
- Rolling resistance: 1.50 m

**HYDRAULIC SYSTEM**
- Hydraulic pumps:
  - Main pumps: 1 variable displacement axial piston pumps
  - Maximum oil flow: 1 x 144 L/min
  - Pilot pump: 1 gear pump
  - Maximum oil flow: 10.4 L/min
- Hydraulic Motors:
  - Travel: 2 variable displacement axial piston motors
  - Swing: 1 axial piston motor
- Relief Valve Settings:
  - Implement circuit: 24.5 MPa (250 kgf/cm²)
  - Swing circuit: 19.6 MPa (200 kgf/cm²)
  - Travel circuit: 25.7 MPa (262 kgf/cm²)
  - Pilot circuit: 3.9 MPa (40 kgf/cm²)
- Hydraulic Cylinders:
  - Quantity: 1
  - Bore: 110 mm
  - Rod diameter: 60 mm
  - Stroke: 785 mm
- Swings:
  - Upper
  - Lower

**UNDERCARRIAGE**
- Tracks: Tractor type undercarriage. Welded track frame using selected materials. Side frame welded to track frame.
- Numbers of Rollers on Each Side:
  - Upper rollers: 1
  - Lower rollers: 4
- Travel Device:
  - Each track driven by 2-speed axial piston motor.
  - Parking brake is spring-set/hydraulic-released disc type.
  - Automatic transmission system: High-Low.
- Travel speeds:
  - High: 0 to 4.8 km/h
  - Low: 0 to 2.9 km/h
- Maximum traction force: 39.8 kN (4060 kgf)
- Gradability: 58% (30 degrees) continuous

**WEIGHTS AND GROUND PRESSURE**
- Operating weight and ground pressure:
  - Shoe type: Rubber shoes
  - Shoe width: 400 mm
  - Arm length: 1.50 m
  - Arm weight: 6.170 kg
  - Ground pressure: 35.3 (36) kgf/cm²

**BUCKET AND ARM DIGGING FORCE**
- Bucket digging force SAE:
  - ISO: 31.1 kN (3170 kgf)
  - SAE: 29.5 kN (3010 kgf)
- Arm crowning force SAE:
  - ISO: 21.0 kN (2104 kgf)
  - SAE: 20.8 kN (2030 kgf)

**SERVICE REFILL CAPACITIES**
- Fuel tank: 3390 L
- Engine oil: 0.9 L
- Hydraulic oil tank: 60.0 L

**UPPERSTRUCTURE**
- Revolving frame: D-section frame for resistance to deformation.
- Swing Device:
  - Axial piston motor with planetary reduction gear is bathed in oil. Swing device is single-row. Swing parking brake is spring-set/hydraulic-released disc type.
  - Swing speed:
    - 9.5 m/min
  - Swing torque:
    - 1.10 kNm (1120 kgf-m)
- Operator’s Cab:
  - Independent spacious cab. 1.95 mm wide by 1.61 m high, conforming to ISO standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat.

*International Organization for Standardization*
**DIMENSIONS**

- **A** Distance between tumbleris: 1,990
- **B** Undercarriage length: 2,540
- **C** Overhawt length of structure: 620
- **D** Rear-end swing radius: 1,300 (1,410)
- **D’** Rear-end length: 1,300 (1,410)
- **E** Overall width of superstructure: 1,830
- **F** Overall height of cab: 2,540
- **G** Min. ground clearance: 335
- **H** Track gauge: 1,600
- **I** Track shoe width: 400
- **J** Undercarriage width: 2,000
- **K** Overall width (blade width): 2,000
- **L** Overall length: 1,990
- **M** Overall length of boom: 5,760 (5,870)
- **N** With 1.50 m arm: 5,790 (5,900)
- **O** With 1.85 m arm: 5,990
- **P** Horizontal distance to blade: 1,990
- **Q** Blade height: 420

**SPECIFICATIONS**

**LIFTING CAPACITIES (Without Bucket)**

Notes:
1. Ratings are based on ISO 10567.
2. Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
3. The load point is the center-line of the bucket pivot mounting pin on the arm.
4. Indicates load limited by hydraulic capacity.
5. G = Ground.

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

**Z65USB-5A, Blade above Ground**

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Load point height</th>
<th>1.0 m</th>
<th>2.0 m</th>
<th>3.0 m</th>
<th>4.0 m</th>
<th>5.0 m</th>
<th>At max. reach</th>
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<tbody>
<tr>
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<tr>
<td>Boom: 2.97 m Arm: 1.85 m Additional counterweight: 270 kg Rubber shoe 400 mm</td>
<td>1.0 m</td>
<td>1.82</td>
<td>1.90</td>
<td>1.38</td>
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<td>4.0 m</td>
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**Z65USB-5A, Blade on Ground**

<table>
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<td>1.85</td>
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**ZXUSB-5A, Blade on Ground**

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<td>2.74</td>
<td>1.70</td>
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**Notes:**
- Load radius: 1.0 m
- Load point height: 1.0 m
- Load radius: 2.0 m
- Load point height: 2.0 m
- Load radius: 3.0 m
- Load point height: 3.0 m
- Load radius: 4.0 m
- Load point height: 4.0 m
- Load radius: 5.0 m
- Load point height: 5.0 m

**Additional Information:**
- Blade on Ground
- Blade above Ground
- Conditions
- Load radius: 0.0 m (Ground)
- Load radius: 1.0 m
- Load radius: 2.0 m
- Load radius: 3.0 m
- Load radius: 4.0 m
- Load radius: 5.0 m
- Load radius: 0.0 m (Ground)
- Load radius: 1.0 m
- Load radius: 2.0 m
- Load radius: 3.0 m
- Load radius: 4.0 m
- Load radius: 5.0 m
- Load radius: 0.0 m (Ground)
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- Load radius: 3.0 m
- Load radius: 4.0 m
- Load radius: 5.0 m
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- Load radius: 1.0 m
- Load radius: 2.0 m
- Load radius: 3.0 m
- Load radius: 4.0 m
- Load radius: 5.0 m
- Load radius: 0.0 m (Ground)
- Load radius: 1.0 m
- Load radius: 2.0 m
- Load radius: 3.0 m
- Load radius: 4.0 m
- Load radius: 5.0 m
# EQUIPMENT

- **ENGINE**
  - Auto idle system
  - Cartridge-type engine oil filter
  - Dust-proof indoor net
  - ECO/PWR mode control
  - Electrical fuel feed pump
  - Fuel main filter
  - High performance water separator
  - Pre-cleaner
  - Radiator, oil cooler
  - Radiator reserve tank
  - 55 A alternator

- **CAB**
  - AM/FM radio
  - Armrests
  - Auxiliary function lever (AFL)
  - Defroster
  - Drink holder
  - Fresh air introduction type air conditioner
  - Pilot control shut-off lever with neutral engine start system
  - Rearview mirror
  - Reclining seat
  - Retractable seat belt
  - ROPS/FOPS cab
  - Spare power supply
  - Suspension seat
  - Window washer
  - Wiper

- **LIGHTS**
  - Auxiliary light

- **UPPERSTRUCTURE**
  - Electric fuel refilling pump
  - Tool box
  - 270 kg additional counterweight

- **UNDERCARRIAGE**
  - Travel parking brake
  - 400 mm grouser shoes
  - 400 mm pad crawler shoes
  - 430 mm rubber shoes

- **FRONT ATTACHMENTS**
  - Extra piping
  - HN bushing
  - Hose rupture valve
  - Pilot accumulator
  - 1.50 m arm
  - 1.50 m 4-side reinforced arm
  - 1.85 m arm
  - 1.85 m 4-side reinforced arm

- **MISCELLANEOUS**
  - Theft deterrent system*

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

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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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Hitachi Construction Machinery Co., Ltd.  
www.hitachi-c-m.com  
KS-EN232  
13.01 (SA/KA,MT)