

ZAXIS-5G series
Clamshell Telescopic Arm

HITACHI

Reliable solutions

CLAMSHELL TELESCOPIC ARM

ZAXIS330LC

A P P L I C A T I O N & A T T A C H M E N T



Model Code	ZX330LC-5G
Engine Rated Power	184 kW (246 HP)
Operating Weight	42 050 kg

Productive Deep-Digging Excavator with Clamshell Telescopic Arm

The clamshell telescopic arm allows the ZAXIS-5 excavator to dig deep underground, down to a depth of 25 m, and to load a truck with a short cycle time, increasing uptime and production.



Specialty Excavator for Deep Excavation with High Uptime and Production



Sliding cab



Put-on type counterweight (Optional)

Clamshell Telescopic Arm

The clamshell telescopic arm gives dynamic actions for productive underground excavation by a combination of ropes and hydraulic cylinders.

- **Bucket capacity: 1.30 m³**
- **Digging depth: 25.0 m**

Sliding Cab

The cab on the clamshell telescopic arm excavator is positioned 960 mm forward, compared to the Hitachi standard model, to allow the operator to look down deep excavation from the operator's seat for confident excavation. The cab can further slide 1 300 mm, shifting 2 260 mm forward in total, at the operator's command for better downward visibility.

For safety, a sliding prevention switch is provided to prevent the cab from inadvertent movements. A walkway and handrail are deployed for easy access to the cab.

- **Sliding stroke distance: 1 300 mm**

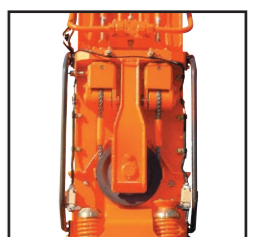
Counterweights Specifications

Two types of counterweights, a standard heavier type and an optional put-on type, are available. The standard heavier type counterweight is designed for exclusive use with the clamshell telescopic arm to increase machine stability. The put-on type counterweight can also reduce rear-end swing radius of the machine by 100 mm to increase work efficiency in narrow area.

- **Rear-end swing radius**
Standard heavier type: 3 690 mm
Optional put-on type: 3 590 mm

Twin-Rope System

The twin-rope system makes the machine safe further. Even if one of the twin ropes breaks accidentally, the other can hold the telescopic arm in position.



High Levels of Performance with Advanced Sturdy Mechanisms

The Hitachi ZAXIS-5 excavator with the clamshell telescopic arm is purpose-designed for efficient, productive deep excavation using numerous advanced mechanisms. The Hitachi clamshell telescopic arm excavator is your dependable partner to provide solutions to tough underground excavation projects.

Large Window at Cab Floor

The cab floor has a large polycarbonate window through which the operator can clearly look down deep underground excavation, allowing efficient, safe positioning and excavation using the clamshell telescopic arm.

Openable Telescopic Arm Top Cover

The telescopic arm top cover is openable for easy checks and servicing, resulting in high uptime and easy repairs, including quick rope replacement.

Extended Rope Life

The newly designed telescopic arm can significantly extend the service life of ropes.

Rope replacement intervals: 1 800 hours

Note: Rope replacement intervals vary according to operating conditions.

Array of Safety Devices

There are an array of safety devices, including warning lights and safety alarm. If one of the twin ropes breaks accidentally or extends excessively, warning lights turn on, and a safety alarm sounds to alert the operator.

If the clamshell is overloaded when it reaches the ground or when it digs underground, warning lights alert the operator.

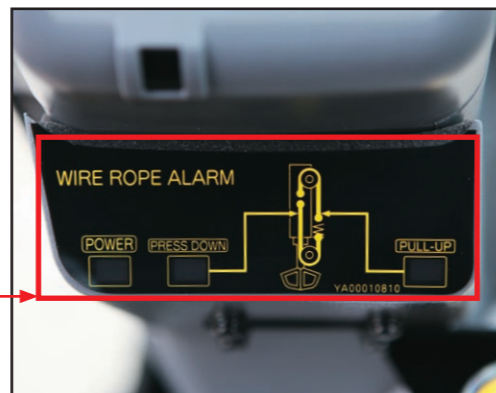
Free-Fall Prevention Devices

Holding Valve

Even if piping or hose punctures, the clamshell is held to prevent its free fall by a combination of telescopic arm cylinder and a holding valve on the boom cylinder.

Free-Fall Prevention Device

The clamshell is driven by two lines: pull-up ropes and press-down ropes. Even if one of the two ropes breaks, the other works to prevent the clamshell from free fall, keeping the bucket in position for dependable deep excavation.



SPECIFICATIONS

ZX330LC-5G

ENGINE

Model	Isuzu AA-6HK1X
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharged, intercooled
No. of cylinders	6
Rated power	
ISO 9249, net	184 kW (246 HP) at 2 000 min ⁻¹ (rpm)
SAE J1349, net	184 kW (246 HP) at 2 000 min ⁻¹ (rpm)
Maximum torque	873 Nm (89.0 kgfm) at 1 700 min ⁻¹ (rpm)
Piston displacement	7.790 L
Bore and stroke	115 mm x 125 mm
Batteries	2 x 12 V / 128 Ah

HYDRAULIC SYSTEM

Hydraulic Pumps

Main pumps	2 variable displacement axial piston pumps
Maximum oil flow	2 x 279 L/min
Pilot pump	1 gear pump
Maximum oil flow	32.8 L/min

Hydraulic Motors

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

Relief Valve Settings

Implement circuit	34.3 MPa (350 kgf/cm ²)
Swing circuit	32.4 MPa (330 kgf/cm ²)
Travel circuit	34.8 MPa (360 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)
Power boost	38.0 MPa (390 kgf/cm ²)

Hydraulic Cylinders

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

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	2
Telescopic arm control pedal	1

UPPERSTRUCTURE

Revolving Frame

D-section frame skirt for resistance to deformation.

Swing Device

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

Swing speed	10.7 min ⁻¹ (rpm)
Swing torque	120 kNm (12 200 kgfm)

Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO* Standards.

* International Organization for Standardization

UNDERCARRIAGE

Tracks

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	2
Lower rollers	8
Track shoes	48
Track guards	3

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 4.9 km/h
	Low : 0 to 3.1 km/h

Maximum traction force .. 298 kN (30 400 kgf)

Gradeability 26% (15 degree) continuous

WEIGHTS AND GROUND PRESSURE

Equipped with type S-TC300R-7 and 1.30 m³ clamshell bucket (SAE,PCSA heaped).

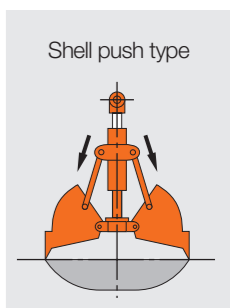
Shoe type	Shoe width	Operating weight	Ground pressure
Triple grouser	600 mm	42 050 kg	79 kPa (0.81 kgf/cm ²)

SERVICE REFILL CAPACITIES

Fuel tank	630.0 L
Engine coolant	35.0 L
Engine oil	36.0 L
Swing device	15.7 L
Travel device (each side)	9.2 L
Hydraulic system	340.0 L
Hydraulic oil tank	180.0 L

CLAMSHELL BUCKET

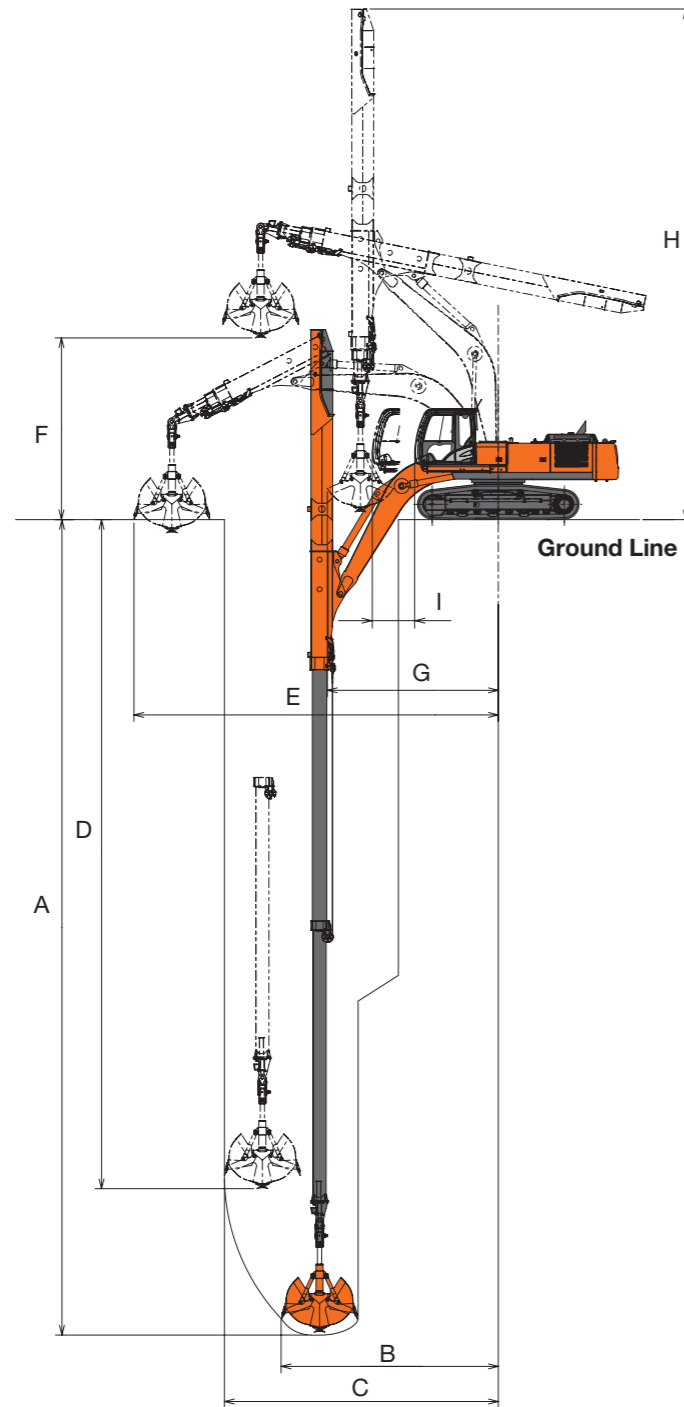
Bucket type	S-SP130	
Bucket capacity	m ³	1.30
Max. digging force	kN (kgf)	79.4 (8 100)
Max. height	mm	2 960
Open max. height	mm	2 650
Closed width	mm	2 030
Open width	mm	2 320
Bucket width	mm	1 230
Number of teeth		9
Weight	kg	1 960



SPECIFICATIONS

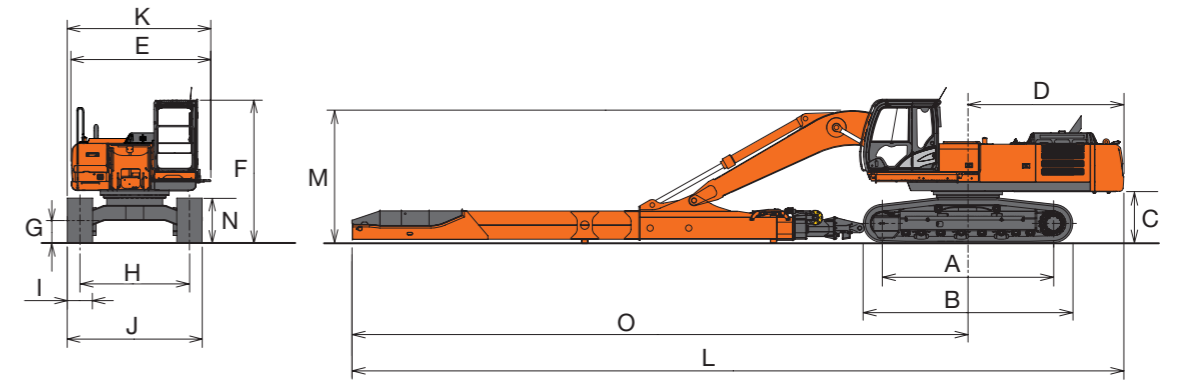
ZX330LC-5G

WORKING RANGES



Unit: mm	
Telescopic arm type	S-TC300R-7
Telescopic arm system	Hydraulic cylinder + wire rope
A Max. vertical digging depth	25 000
B Radius at max. vertical digging depth	6 640
C Max. vertical digging radius	8 400
D Depth at max. vertical digging radius	20 510
E Max. working radius	11 170
F Max. dumping height	5 570
G Min. front swing radius	5 300
H Height at min. front swing radius	15 660
I Cab sliding distance	1 300

DIMENSIONS



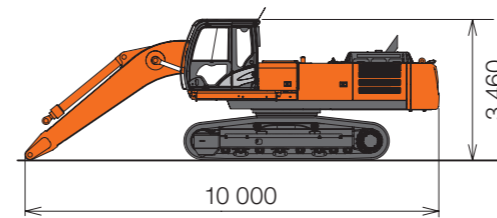
Unit: mm

A Distance between tumblers	4 050
B Undercarriage length	4 940
*C Counterweight clearance	1 160
D Rear-end swing radius	3 690
E Overall width of upperstructure	3 290
F Overall height of cab	3 460
*G Min. ground clearance	500
H Track gauge	2 590
I Track shoe width	G 600
J Undercarriage width	3 190
K Overall width	3 390
L Overall length	18 250
M Overall height of boom	3 250
N Track height with triple grouser shoes	1 060
O Swing centre to front distance	14 570

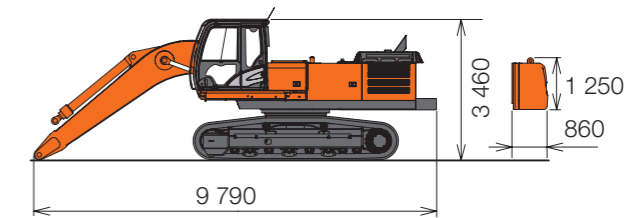
* Excluding track shoe lug G: Triple grouser shoe

TRANSPORTATION

Unit: mm



Width : 3 190 mm
Weight (with Sliding cab)
: 34 540 kg



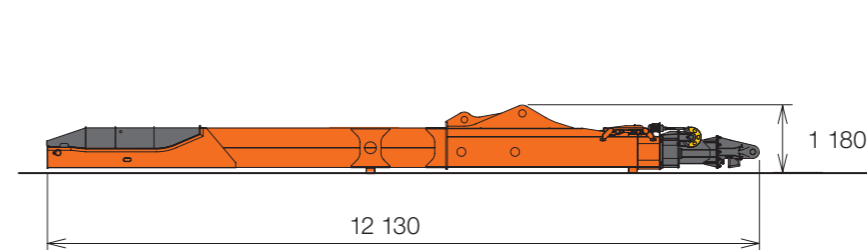
Width : 3 190 mm
Weight (with Sliding cab)
: 24 120 kg

Counterweight
Width : 2 950 mm
Weight : 10 400 kg

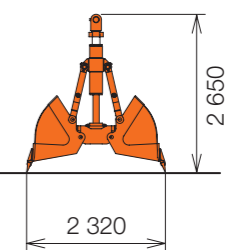
Telescopic Arm

Clamshell Bucket

Unit: mm



Width: 760 mm Weight: 5 470 kg



Width: 1 230 mm Weight: 1 960 kg



Built on the foundation of superb technological capabilities, Hitachi Construction Machinery is committed to providing leading-edge solutions and services to contribute as a reliable partner to the business of customers worldwide.

Hitachi Environmental Vision 2025

The Hitachi Group released the Environmental Vision 2025 to curb annual carbon dioxide emissions. The Group is committed to global production while reducing environmental impact in life cycles of all products, and realizing a sustainable society by tackling three goals — prevention of global warming, conservation of resources, and preservation of ecosystem.

Reducing Environmental Impact by New ZAXIS

Hitachi makes a green way to cut carbon emissions for global warming prevention according to LCA*. New ZAXIS utilizes lots of technological advances, including the new ECO mode, and Isochronous Control. Hitachi has long been committed to recycling of components, such as aluminum parts in radiators and oil cooler. Resin parts are marked for recycling.

*Life Cycle Assessment – ISO 14040

Before using a machine with a satellite communication system, please make sure that the satellite communication system complies with local regulations, safety standards and legal requirements. If not so, please make modifications accordingly.

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.