

Reliable solutions

ZAXIS400LCH



HYDRAULIC EXCAVATOR

Model Code : ZX400LCH-5G
Engine Rated Power : 184 kW (246 HP)
Operating Weight : 38 200 kg
Backhoe Bucket : ISO Heaped : 1.90 m³

ZAXIS Empower your Vision.

A ZAXIS hallmark – industry-leading hydraulic technologies, and impressive performance. New ZAXIS provides reliable solutions: impressive fuel economy, swift front movements, and easy operation. You'll also find Hitachi technological prowess and expertise, such as the optimized hydraulic system and engine.

New ZAXIS features the key benefits of high quality, low fuel consumption, and high durability, all of which serve to ensure low running costs.

New ZAXIS, which is empowered by comprehensive evolution, will realize customers' visions and dreams, and pioneer your colorful future.



More Production with Less Fuel

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- Fuel-efficient operation
- More fuel reduction in the ECO mode
- Swift front movements with HIOS III hydraulics
- Powerful lifting operation
- Boosted swing torque
- Enhanced power boost



No Compromise on Operator Comfort

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- Comfortable operating environment
- Comfort-designed operator seat
- Robust cab
- New, easy-to-use multifunctional monitor



Hitachi Support Chain

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- Parts and service



Pursuits of Performance and Durability

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- Prestige R&D and quality control
- Durable, reliable engine
- Rock-solid, durable front attachment
- Strengthened undercarriage
- Proven upperstructure



Simplified Maintenance

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- Dust-proof indoor net
- Attractive, robust body
- Grouped remote inspection points
- Low life cycle costs



Reliable Solutions, with Various Options

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- Easy-to-use attachments
- Recommended options



More Production with Less Fuel

Reduction in Fuel Consumption

New ZAXIS achieves fuel-efficient operation thanks to the HIOS III hydraulic system and engine control system.

More Fuel Reduction in the ECO mode

The ECO mode, a new economical mode, can further cut fuel consumption by 9% compared to the PWR mode, without sacrificing digging speed by optimal matching of operations.

Swift Front Movements with HIOS* III Hydraulics

Operating speed increases with less fuel consumption thanks to the HIOS III hydraulic system, developed by industry-leading hydraulic technologies and a wealth of experience.

*Human & Intelligent Operation System

Rapid Arm Roll-in

Arm roll-in speed increases by combined flow from arm and boom cylinders through regenerative valves for productive excavation.

Fast Arm Speed During Boom Lowering

Arm speed increases by boom weight during boom lowering, without needing pressure oil from a pump. That is, arm circuit flow is increased for higher arm speed, allowing for quick loading of a dump truck and positioning of the front.

Powerful Lifting Operation

The Auto Power Lift mode, which automatically surge lifting force by 10% when needed, allows for powerful lifting of buried concrete pipes or sheathing sheets.

Boosted Swing Torque

Allows for powerful wall cutting with the bucket, and smooth swing operation on slope.

Enhanced Power Boost

The Power Boost mode allows the operator to surge 10% more digging force for powerful excavation by pressing its button on the control lever.

Pursuits of Performance and Durability

Prestige R&D and Quality Control

Hitachi has earned praise for technological prowess and product performance around the world.

R&D Division has a track record – including excellent design, stress analysis expertise using CAE system, and abundant production data base. What's more, a large-scale durability test field (427 hm²) allows for a series of stringent testing of new machines. Production Division strives to automatize production processes, including robotic welding, machining, painting, assembling and transferring.

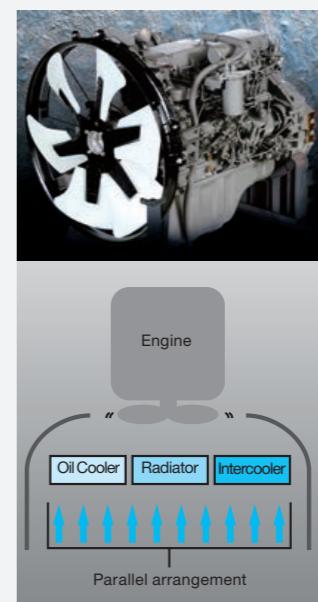
Durable, Reliable Engine

This engine has a track record showing impressive durability at countless tough job sites around the world.

The engine – associated with a rugged design, a direct fuel injection system and an elaborate governor – goes green, and complies with EU Stage II and US EPA Tier 2 emissions regulations.

The cooling system well keeps the engine cool. The engine cover has a wider air suction area, and radiators are arranged in parallel for efficient cooling. This parallel arrangement also facilitates their cleaning.

The ample-capacity intercooler and turbocharger help yield a whopping 184 kW (246 HP) output for higher production in shorter job schedule.



Rock-Solid, Durable Front Attachment

The boom top and foot are reinforced with thickened high-tensile steel brackets, which incorporate steel bushings to enhance durability. Arm cylinder and boom cylinders (rod extend ends) cushion shocks at stroke ends to cut noise and extend service life.

Joint pins at the front attachment are tightly fit to reduce jolt and sound. The arm-bucket joint is protected by WC thermal spraying on its contact surfaces to reduce wear and jolt. New-type HN bushings, utilized on joint pins, retain grease inside for longer greasing intervals. A reinforced resin thrust plate, mounted on the bucket pin, helps reduce wearing noise.



Strengthened Undercarriage

The X-beam frame is made monolithically with fewer welds for higher rigidity and durability.

Full track guards protect track links and lower rollers from damage and deformation. Moreover, they also keep out stones, preventing the overload to the undercarriage to reduce wear and damage.

Proven Upperstructure

The upperstructure frame is reinforced with the proven D-section skirt to increase rigidity against damage by obstacles.

A large door catch is added to reduce shocks and jolts of the cab and upperstructure.

No Compromise on Operator Comfort

Comfortable Operating Environment

You'll feel comfortable and confident, with plenty of leg space and excellent visibility when operating the cab. The new compact console gives more leg space. The new door pillar is shifted rearward by 70 mm to widen an entry space for easy access. A new LED room light, interlocked with the door, turns on when the door opens. The front window is easily removed and stored overhead using slide rails. The overhead window is openable for ventilation. Ample air conditioner vents are located strategically for uniform air circulation inside the cab. The control panel and control levers are arranged within easy reach of the operator. AM/FM radio and AUX port (optional) for a mobile music player are available for a long work day with less fatigue. All these designs focus on operator comfort.

Comfort-Designed Operator Seat

The luxury cloth seat is fitted with a headrest and arm rests for operator comfort. The seat can be adjusted in multiple ways, sliding and reclining, to suit operator's size and preferences. The seat can slide rearward by 40 mm more for added leg space. An air suspension with a heat pad is optional.



Robust Cab

The robust cab, meeting the OPG (Top Guard Level 1), protects the operator from falling objects. The pilot control shut-off lever is provided with a neutral engine start system that permits engine starting only when the pilot control shut-off lever is in Lock position.

Simplified Maintenance

Dust-Proof Indoor Net

A dust-proof indoor net, provided at the front of radiator, can be easily removed and cleaned with compressed air. At the rear of the radiator, air blowing can be done through a one-touch open cover. The air condenser is openable for easy cleaning at its rear.



Attractive, Robust Body

Side frame tops of the undercarriage are sloped to let muck slide away. Track adjuster greasing ports are repositioned for easier lubrication, and well protected from muck packing.



Grouped Remote Inspection Points

Service points are concentrated inside left and right covers that are readily accessible from ground level for convenient servicing and inspection, including water draining from the fuel tank, replenishment of coolant, and replacement of filters. The fuel tank is anti-corrosion coated on its inside, and has a large cleaning port at the bottom. These wise designs effectively keep fuel clean, and ease servicing. Handrails are provided at convenient locations for easy riding on the upperstructure. Plenty slip-resistant plates are located for well reduce slippage during servicing.



**Engine Oil : 500 h
Engine Oil Filter : 500 h
Hydraulic Oil : 5 000 h
Hydraulic Oil Filter : 1 000 h
Fuel Filter : 500 h**

Low Life Cycle Costs

Service intervals are long enough to slash maintenance costs.



Note: Periodic inspection is required to check oil contamination and such.

Hitachi Support Chain

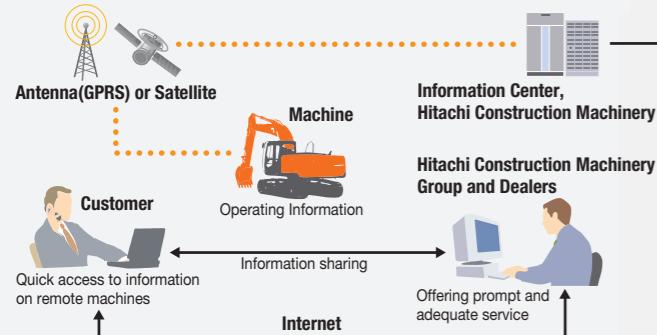
SUPPORT CHAIN

Hitachi Support Chain is a full customer support system offered after buying a Hitachi machine.

Remote Fleet Management with Global e-Service

Easy Access to On-Site Machines through the Internet

This on-line fleet management system allows you to access each on-site machine from a PC in your office. You can get its operating information and location to increase productivity of the fleet and reduce downtime. Operating data and log are sent to a Hitachi server for processing, and then to customer and dealers around the world. This system is available 24 hours a day, all the year around.



Note: In Some Regions, Global e-Service Is Not Available by Local Regulations.

Main Features of Global e-Service

Functions

Global e-Service provides easy access to a machine on site, conveying operating information and log, including daily operating hours, fuel level, temperatures, pressures, and likes.

Maintenance

Maintenance data are displayed on an easy-to-read monitor screen, suggesting recommended maintenance for efficient fleet management.



Parts and Service

Hitachi full customer support is available every area on the globe for full customer satisfaction through Hitachi local dealers.

Parts

Hitachi Global Online Network, a parts supply system, is linked with Japan Parts Center, overseas depots and over 150 dealers abroad to deliver on-line parts information, including in-stock parts, order receptions, shipments and delivery period of over one million parts and components.

Genuine Hitachi Parts

Genuine Hitachi parts, meeting Hitachi stringent quality standards, are guaranteed according to Hitachi warranty standards. The use of genuine Hitachi parts, including engine, fuel, hydraulic oil and filters, may slash running costs, and extend machine life.

Ground Engaging Tools (GETs)

Hitachi provides an array of Hitachi Ground Engaging Tools developed and built for a variety of applications.

Using high-quality, well-maintained GETs will help you get customers' trust.

Note: Some dealers do not handle Hitachi GETs.

Remanufactured Components

Hitachi components are remanufactured according to the stringent remanufacturing standards at factories around the world. They have high quality equivalent to new ones, and backed up by Hitachi warranty system.

Note: Some dealers do not handle Hitachi Remanufactured Components.

Service

Extended Warranty – HELP

Hitachi Standard Warranty System is available on all new Hitachi machines. In addition, Hitachi offers Hitachi Extended Life Programs (HELPs) to suit customer expectations –

protecting machines under tough operating conditions, avoiding unexpected downtime, and reducing repair costs.

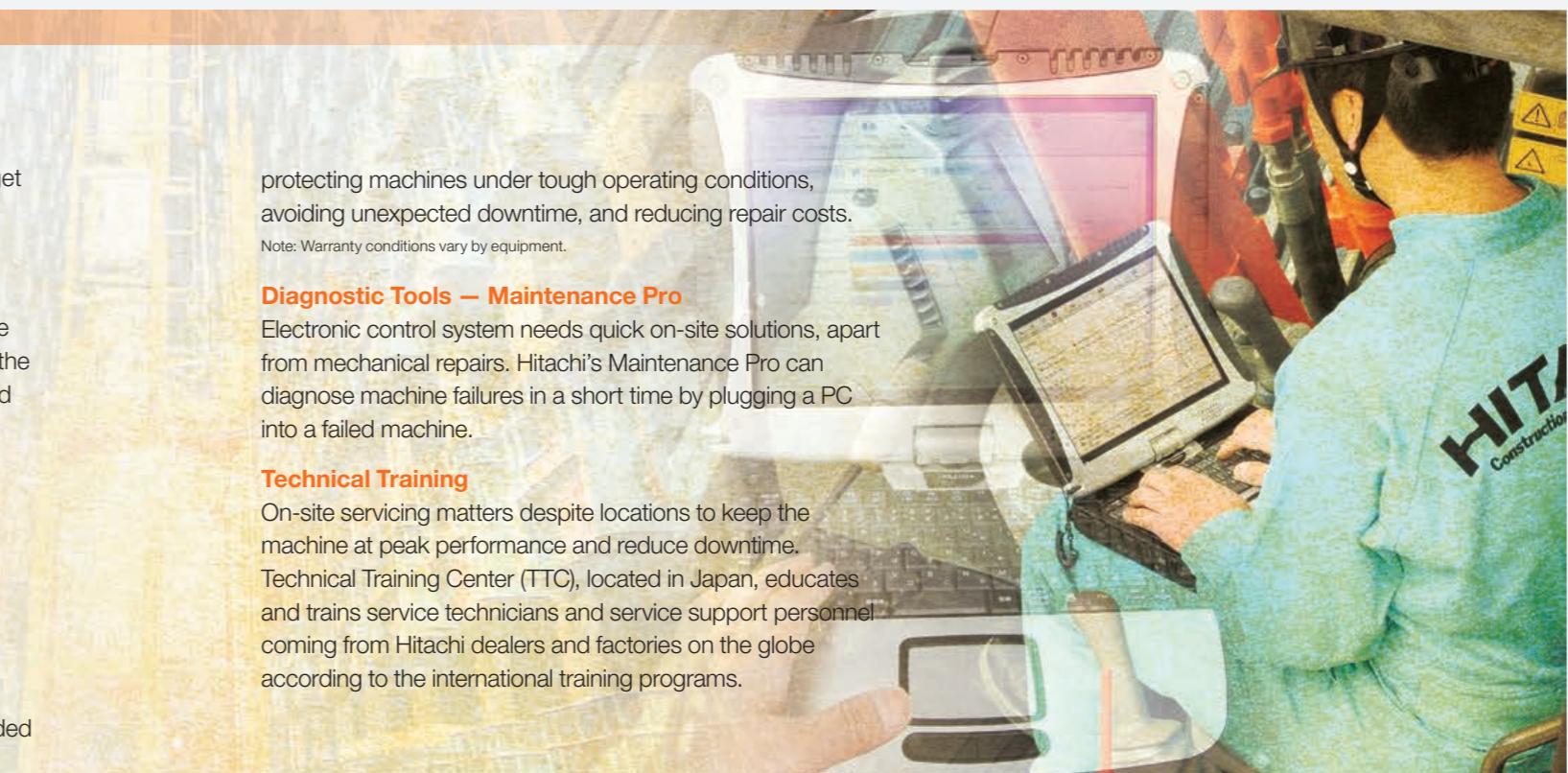
Note: Warranty conditions vary by equipment.

Diagnostic Tools – Maintenance Pro

Electronic control system needs quick on-site solutions, apart from mechanical repairs. Hitachi's Maintenance Pro can diagnose machine failures in a short time by plugging a PC into a failed machine.

Technical Training

On-site servicing matters despite locations to keep the machine at peak performance and reduce downtime. Technical Training Center (TTC), located in Japan, educates and trains service technicians and service support personnel coming from Hitachi dealers and factories on the globe according to the international training programs.





Reliable Solutions, with Various Options

Easy-to-Use Attachments

The operator can change over valves, adjust extra circuit flow, and check settings from the multifunctional monitor next to the operator seat. What's more, 11 jobs, including flow rate setting, can easily be selected by their identified names.

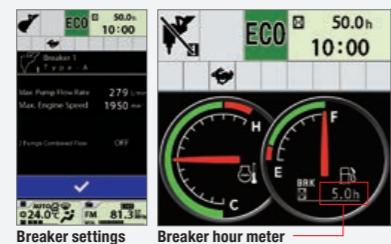
Easy-to-Operate Breaker

When using a breaker that requires frequent change of hydraulic oil and filters, an extra hour meter on the multifunctional monitor displays operating hours of the breaker, suggesting adequate replacement timing of oil and filters. The Breaker Alarm (optional) displays an alert mark on the monitor screen, and sounds when the breaker works continuously over one minute.

Varied Jobs, Varied Options

Lower cab front guard is provided for protection against debris during demolition and breaker operation.

High-performance filters and in-line filters are available at tough job sites.



Recommended Options



SPECIFICATIONS

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 (355 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)
Power boost	38.0 MPa (388 kgf/cm ²)

Hydraulic Cylinders

	Quantity	Bore	Rod diameter
Boom	2	145 mm	100 mm
Arm	1	170 mm	115 mm
Bucket	1	140 mm	95 mm

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	120.0 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	49
Track guard	Full track guard

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 5.0 km/h

Low : 0 to 2.9 km/h

Maximum traction force .. 322 kN (32 800kgf)

Gradeability .. 70% (35 degree) continuous

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)	11.0 L
Hydraulic system	340.0 L
Hydraulic oil tank	180.0 L

SPECIFICATIONS

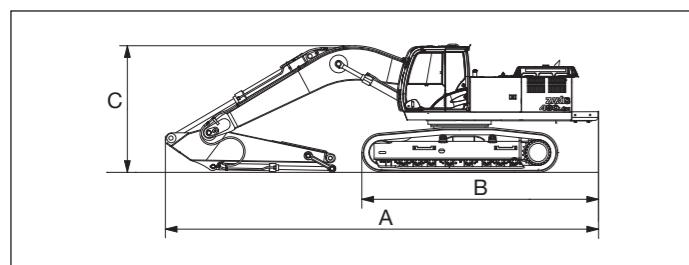
WEIGHTS AND GROUND PRESSURES

Operating weights and Ground pressures

ZX400LCH-5G			
Shoe type	Shoe width	Boom type	Arm type
			kg
Triple or double grouser	600 mm	6.4 m H	2.67 m H
			38 200
			71 (0.72)
			3.20 m H
			38 300
			71 (0.72)

TRANSPORTATION

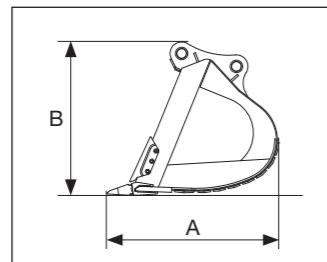
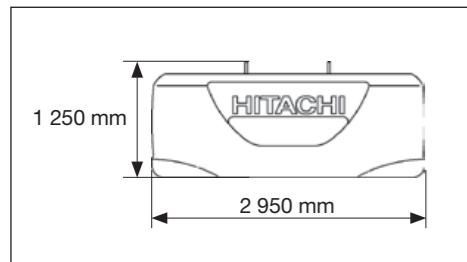
BASIC MACHINE (WITHOUT BUCKET AND COUNTERWEIGHT)



Arm length	2.67 m H	3.20 m H
Weight	28 900 kg	29 100 kg
Overall width	3 290 mm	3 290 mm
A	11 140 mm	10 990 mm
B	5 920 mm	5 920 mm
C	3 480 mm	3 270 mm

COUNTERWEIGHT 7 600 kg

BUCKET



Capacity (ISO heaped)	1.9 m³	1.6 m³
Weight	1 650 kg	1 650 kg
Overall width	1 450 mm	1 520 mm
A	1 790 mm	1 790 mm
B	1 600 mm	1 400 mm

BACKHOE ATTACHMENTS

Boom and arm are of welded, box-section design. 6.40 m H boom, and 2.67 m H , and 3.20 m H arms are available.
Bucket is of welded steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

Buckets

Capacity	Width		No. of teeth	Weight	Recommendation	
	Without side shrouds	With side shrouds			Arm 2.67 m H	Arm 3.20 m H
1.60 m³	1 420 mm	1 450 mm	5	1 650 kg	—	◎
1.90 m³	1 490 mm	1 520 mm	5	1 650 kg	◎	—

◎ Suitable for materials with density of 2 000 kg/m³ or less

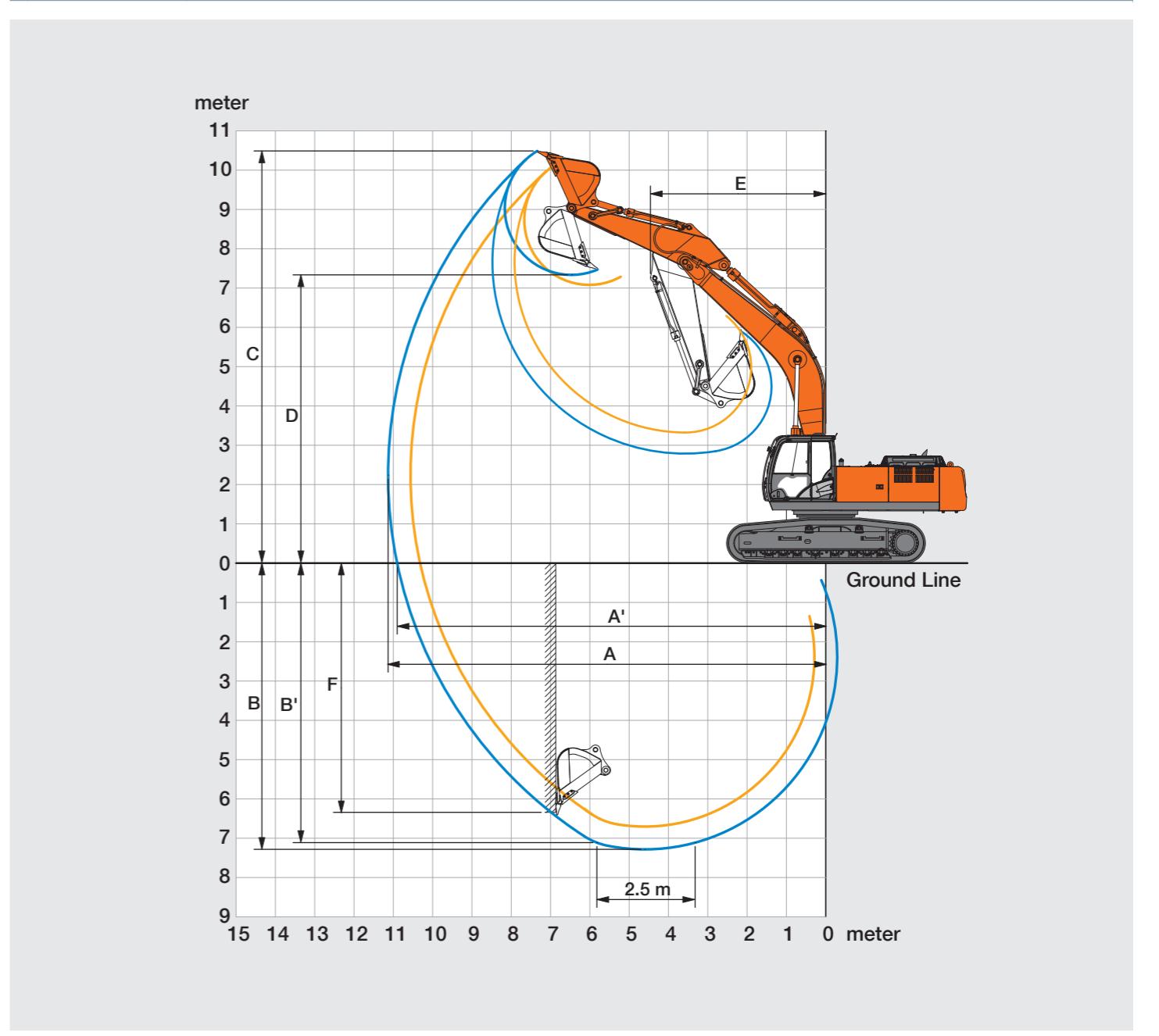
— Not applicable

BUCKET AND ARM DIGGING FORCES

Arm length	2.67 m	3.20 m
Bucket digging force* ISO	242 kN (24 700 kgf)	246 kN (25 100 kgf)
Bucket digging force* SAE : PCSA	214 kN (21 900 kgf)	210 kN (21 500 kgf)
Arm crowd force* ISO	212 kN (21 600 kgf)	185 kN (18 900 kgf)
Arm crowd force* SAE : PCSA	202 kN (20 600 kgf)	175 kN (17 900 kgf)

* At power boost

WORKING RANGES



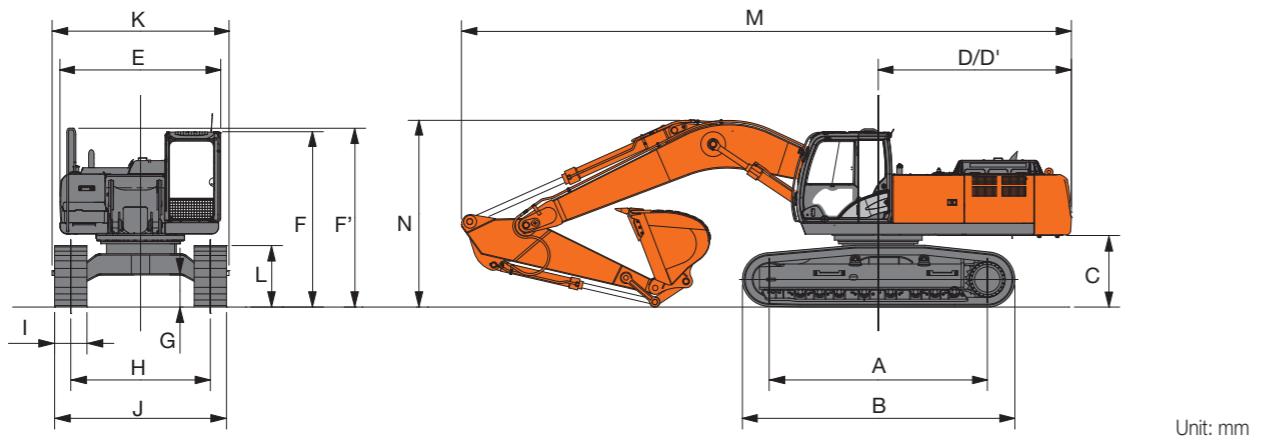
Unit: mm

Arm length	2.67 m H	3.20 m H
A Max. digging reach	10 600	11 100
A' Max. digging reach (on ground)	10 320	10 900
B Max. digging depth	6 740	7 310
B' Max. digging depth for 2.5 m level	6 500	7 110
C Max. cutting height	10 100	10 400
D Max. dumping height	7 040	7 330
E Min. swing radius	4 610	4 460
F Max. vertical wall digging depth	3 610	6 340

Excluding track shoe lug

SPECIFICATIONS

DIMENSIONS



ZX400LCH-5G	
A Distance between tumblers	4 050
B Undercarriage length	5 060
* C Counterweight clearance	1 260
D Rear-end swing radius	3 590
D' Rear-end length	3 590
E Overall width of upperstructure	2 990
F Overall height of cab	3 260
F' Overall height of upperstructure	3 320
* G Min. ground clearance	560
H Track gauge	2 590
I Track shoe width	G 600
J Undercarriage width	3 190
K Overall width	3 290
* L Track height with triple grouser shoes	1 150
M Overall length	
With Arm 2.67 m H	11 330
With Arm 3.20 m H	11 180
N Overall height of boom	
With Arm 2.67 m H	3 480
With Arm 3.20 m H	3 270

* Excluding track shoe lug G: Triple grouser shoe

LIFTING CAPACITIES

Notes: 1. Ratings are based on ISO 10567.

2. Lifting capacity does not exceed 75% of tipping load with the machine on firm,

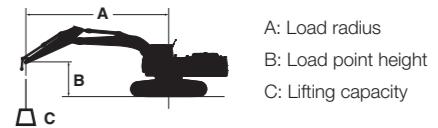
level ground or 87% full hydraulic capacity.

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. 0 m = Ground.

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



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

Conditions	Load point height m	Load radius								At max. reach			
		3.0 m		4.5 m		6.0 m		7.5 m					
		Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Unit : kg			
Boom 6.40 m H Arm 2.67 m H Counterweight 7 600 kg Shoe 600 mm	6.0							*10 400	*10 400	*9 570	7 750	*9 460	
	4.5			*15 100	*15 100	*11 700	10 500	*10 100	7 540	9 440	6 080	8.61	
	3.0			*18 500	14 900	*13 300	9 960	*10 900	7 270	8 860	5 670	8.88	
	1.5							*14 500	9 510	11 200	7 020	8 730	5 550
	0 (Ground)			*20 200	14 000	*15 000	9 270	11 000	6 870	9 030	5 710	8.63	
	-1.5	*14 500	*14 500	*19 100	14 000	*14 600	9 220	11 000	6 840	9 900	6 230	8.08	
	-3.0	*21 900	*21 900	*17 000	14 200	*13 100	9 350				*10 300	7 390	7.19
	-4.5	*16 400	*16 400	*13 000	*13 000							*9 800	*9 800

Conditions	Load point height m	Load radius								At max. reach			
		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m	
		Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees	Rating over-front	Rating over-side or 360 degrees
Boom 6.40 m H Arm 3.20 m H Counterweight 7 600 kg Shoe 600 mm	7.5									*8 120	7 940		
	6.0									*8 900	7 860		
	4.5					*13 700	*13 700	*11 000	10 700	*9 550	7 610	*7 630	5 700
	3.0					*17 200	15 200	*12 600	10 100	*10 400	7 310	8 700	5 570
	1.5					*19 600	14 300	*14 000	9 570	11 200	7 030	8 550	5 430
	0 (Ground)					*20 300	13 900	*14 800	9 250	11 000	6 840	8 450	5 340
	-1.5			*13 700	*13 700	*19 700	13 900	*14 700	9 140	10 900	6 760		8 910
	-3.0	*16 000	*16 000	*21 600	*21 600	*18 000	14 000	*13 700	9 200	*10 500	6 830		*9 740
	-4.5			*19 400	*19 400	*14 700	14 400	*11 000	9 480				*9 550

EQUIPMENT

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

	ZX400LCH-5G
ENGINE	
Air cleaner double filters	●
Auto idle system	●
Cartridge-type engine oil filter	●
Cartridge-type fuel pre-filter	●
Cartridge-type fuel main filter	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
ECO/PWR mode control	●
Engine warm-up device	●
Fan guard	●
Water separator	●
Pre-cleaner	○
Dust-proof indoor net	●
Radiator reserve tank	●
50 A alternator	●

	HYDRAULIC SYSTEM
Auto power lift	●
Control valve with main relief valve	●
Full-flow filter	●
High mesh full flow filter with restriction indicator	○
Pilot filter	●
Power boost	●
Suction filter	●
One extra port for control valve	●
Work mode selector	●

	CAB
All-weather sound suppressed steel cab	●
AM-FM radio with 2 speakers	●
Ashtray	●
Auto control air conditioner	●
Aux. terminal and storage	○
Cab (Center pillar reinforced structure)	●
Drink holder	●
Drink holder with hot & cool	●
Electric double horn	●
Engine shut-off lever	●
Evacuation hammer	●
Fire extinguisher bracket	○
Floor mat	●
Footrest	●
Front window washer	●
Front windows on upper, lower and left side can be opened	●
Lower cab front guard	●
Upper cab front guard	○
Glove compartment	●

	MONITOR SYSTEM
Alarm buzzers:	
Overheat, engine oil pressure, overload	●
Alarms:	
Overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, etc	●
Display of meters:	
Water temperature, hour, fuel rate, clock	●
Other displays:	
Work mode, auto-idle, glow, rearview monitor, operating conditions, etc	●
32 languages selection	●

	LIGHTS
Additional cab roof front lights	○
Additional boom light with cover	○
2 working lights	●

	UPPER STRUCTURE
Electric fuel refilling pump	○
Fuel level float	●
Hydraulic oil level gauge	●
Rear view camera	○
Rear view mirror (right & left side)	●
Swing parking brake	●
Tool box	●
6.0 mm reinforced undercover	●
Utility space	●
7 600 kg counterweight	●
2 x 128 Ah batteries	●

● : Standard equipment

○ : Optional equipment

	UNDERCARRIAGE
Bolt-on sprocket	●
Reinforced track links with pin seals	●
Hydraulic track adjuster	●
Shoes : 600 mm triple grouser shoes	●
Shoes : 600 mm double grouser shoes	○
Travel motor covers	●
Travel parking brake	●
9.0 mm reinforced track undercover	○
Upper and lower rollers	●
Full track guard	●

	FRONT ATTACHMENTS
Arm 2.67 m H and 1.90 m ³ bucket (ISO heaped)	●
Arm 3.20 m H and 1.60 m ³ bucket (ISO heaped)	○
Boom 6.40 m H	●
Casted bucket link A	●
Centralized lubrication system	●
Dirt seal on all bucket pins	●
Flanged pin	●
HN bushing	●
Reinforced resin thrust plate	●
Reinforced link B	●
WC (tungsten-carbide) thermal spraying	●

	ATTACHMENTS
Attachment basic piping	○
Breaker and crusher piping	○
High mesh full flow filter with restriction indicator	○
Parts for breaker and crusher	○
2 pump combined flow for attachment basic piping	○
Line filter	○

	MISCELLANEOUS
Lockable fuel refilling cap	●
Lockable machine covers	●
Onboard information controller	●
Skid-resistant tapes, plates and handrails	●
Standard tool kit	●
Travel direction mark on track frame	●
Global e-Service	●

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.