

**ZAXIS-7G series**

**HITACHI**

**Reliable Solutions**

# **ZAXIS 890Lch**

Hitachi Construction Machinery Group

**LANDCROS**

Japanese Excellence—Reliable Solutions



## **HYDRAULIC EXCAVATOR**

Engine rated power : 377 kW (506HP)

Operating weight : 84 300 kg

Backhoe bucket capacity : 4.5 - 6.0 m<sup>3</sup>





# GET MORE FROM YOUR MACHINE

You're at the heart of Hitachi Construction Machinery's design for its latest range of excavators. To continuously improve on previous generation machines, we've focused on enhancing your profit in business.

We have made cost reduction for our customers our top priority and, in doing so, have achieved reduced fuel consumption. The cab has been redesigned to improve the operator's working environment and controllability, with production also expected to improve. A new engine that already has a proven track record of high reliability has been adopted, and we have placed further work in it to make it even more robust. Remote failure diagnosis, monitoring, and OTA (Over The Air - controller rewriting) are also supported to reduce downtime.

## INSIDE



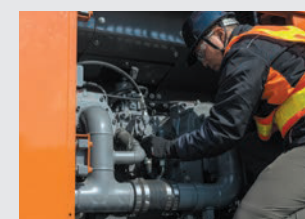
4-5 | MORE PRODUCTION  
LOWER FUEL CONSUMPTION



6-7 | BETTER  
OPERABILITY



8-9 | HIGH DURABILITY  
AND RELIABILITY



10-11 | SMOOTH  
MAINTENANCE



12-13 | MACHINE  
MANAGEMENT



# MORE PRODUCTION LOWER FUEL CONSUMPTION

The HIOS-V new Hydraulics system has achieved both increased productivity and reduced fuel consumption in each mode. The ZAXIS performance contributes to increase the returns to the customer.

### HIOS-V Hydraulic system

The hydraulic system developed was based on the concept of a hydraulic system that fits in-line with a sense of human operation.

- ✓ Efficient hydraulic control achieves smoother and more speedy movement of front attachments.
- ✓ Fine-tuned hydraulic pump control according to work load reduces fuel consumption and supports cost reductions.

### Reduced oil pressure loss

A new valve has been adopted to reduce hydraulic loss and further improve hydraulic efficiency.

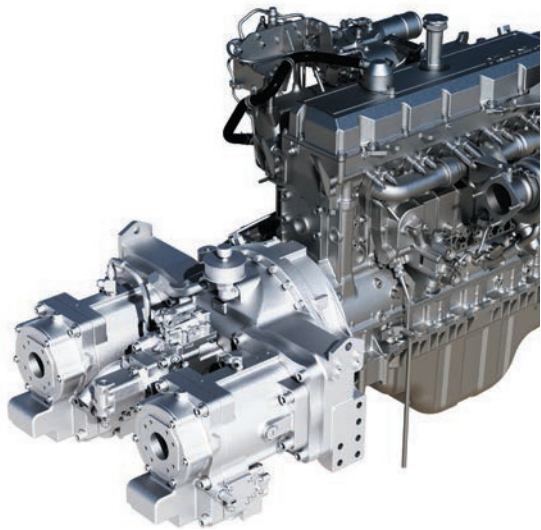
- ✓ Contributing to low fuel consumption operation

### High power engine

Rated power has been increased from the conventional Z X870-5G engine contributing to greater work volume.

- ✓ Increased workload

	ZX870-5G	ZX890-7G
Rated output (ISO 14396:2002)	360kW	377kW



### High efficiency operation support system

#### ECO gauge

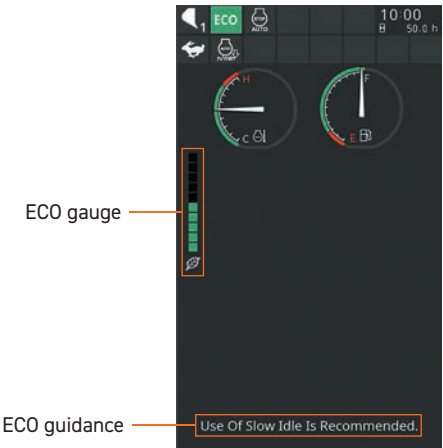
The current fuel consumption is indicated by segment display, prompting the operator to better fuel economy. The lower the fuel consumption, the higher the segment.

Easy to be removed and cleaned

#### ECO guidance

Prompts the operator to better fuel economy. Messages are also shown while the ECO gauge is displayed.

- ✓ Prompts operator for better economy





# BETTER OPERABILITY

In the cab of the ZAXIS-7G, enhanced comfort and safety features are at your fingertips, offering the power to perform greater productivity with ease as well as reduced fatigue.



Operation is easy with ergonomically designed controls and switches.



Low-reflective color 8" monitor, 42% larger display compared to ZX-5G series. Easier to view and navigate. Bluetooth® and USB power supply available.



New designed pilot shut-off lever  
The newly designed pilot shut-off lever allows easier locking and unlocking with wrist operation.



AERIAL ANGLE (Optional)  
270-degree bird's eye-view camera system is available as an option.

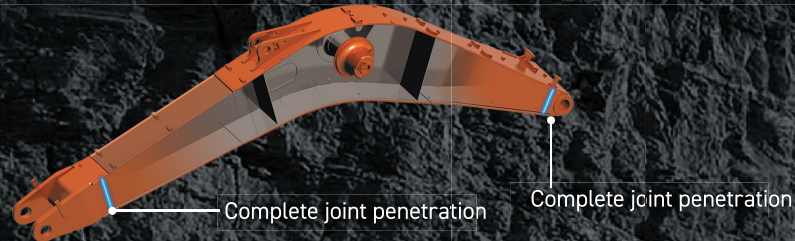


# HIGH DURABILITY AND RELIABILITY

Completing a project on time and on budget depends on the ability of your construction equipment to perform all day, every day. That's why Hitachi construction machinery owners have profited from generations of reliable and durable machinery. Hitachi Construction Machinery is always conscious of improving long-term reliability in its machine development. High long-term reliability is good in not only performance all day, every day but also for resale value.

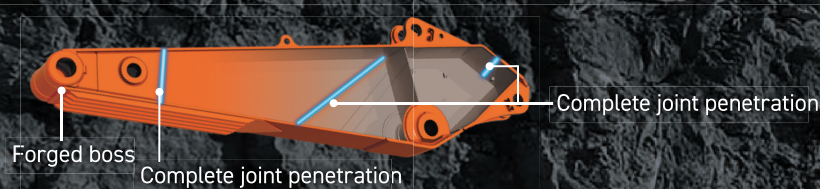
## H Boom

Complete joint penetration has been applied to areas where the load is focused, and durability and reliability have been further improved.



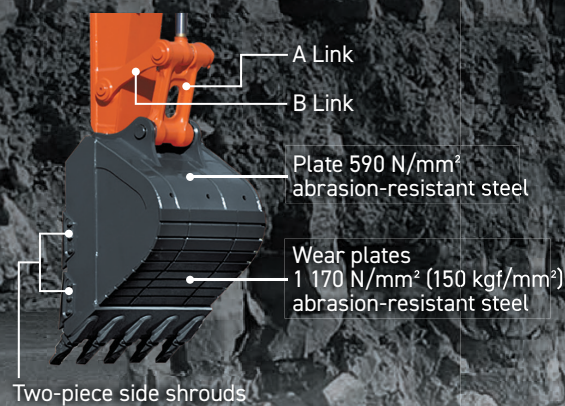
## H Arm

A forged boss is used in the arm rod. Complete joint penetration has been applied to areas where the load is focused, and durability and reliability have been further improved.



## Rock bucket (ZX890LCH-7G only)

A rock bucket has been adopted in consideration for sites requiring heavier excavator work. Equipped with horizontal wear plates and two-piece side shrouds for increased durability.



## Undercarriage (ZX890LCH-7G only)

**Full track guard**  
Protects the lower roller and link from boulders and extending the unit's operating life.



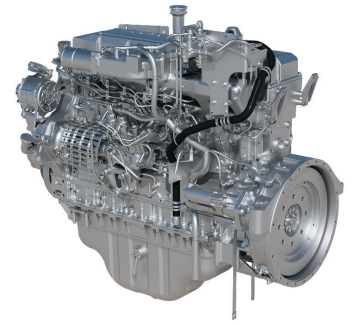
## Equipped with an Expansion tank

✓ Improving the reliability of the engine cooling performance



## An engine with improved reliability

The engine is a highly reliable model that has already been adopted previously. In adopting it for the ZX-7G, we have put in our efforts to further increase durability and to BOOST your uptime. EGR (Exhaust Gas Recirculation) is removed from the engine, increasing its durability for using low-quality fuel.



## H-front attachment (Same as the standard model)

## H/R Cab (ZX890LCH-7G only)



A reinforced cab for H&R specification machines with a reinforced windshield and a FOPS\* guard that protects the cab from falling objects. The front has a laminated straight glass front window that shuts out dust. The cab front guard (optional), also complies with the ISO standard OPG\*\*.

\*FOPS: Falling-Object Protective Structure  
\*\*OPG: Operator Protective Guards

## Reinforced undercover (ZX890LCH-7G only)

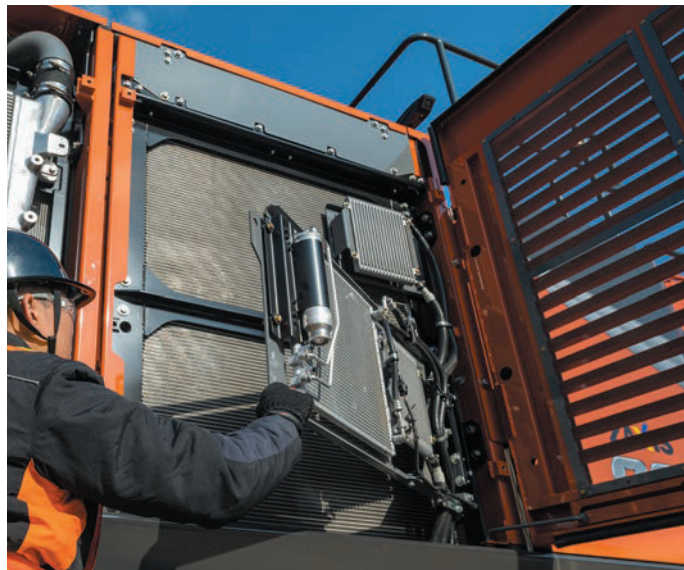
## Laminated straight glass front window





# SMOOTH MAINTENANCE

Regular maintenance is essential for the machine to achieve high performance. Hitachi's excavator is designed for ease of regular maintenance. Simple and easy maintenance keeps the machine in good condition and keeps its high performance.



## Easy-access air conditioner condenser

- ✓ The cover can be opened without the need for any tools
- ✓ Easy to clean Radiator/Oil Cooler/Inter cooler core with simple air blowing



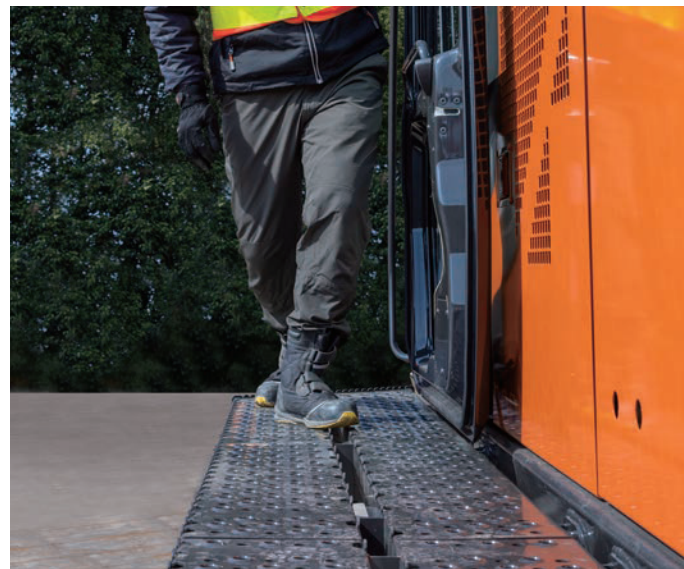
## Dust-proof net on right side cover

- ✓ Provided on the cover, in front of radiator core
- ✓ Easy cleaning with compressed air



## Simplified engine oil drainage

- ✓ Drain work can be done more easily by attaching a dedicated nozzle hose.



## Side walk

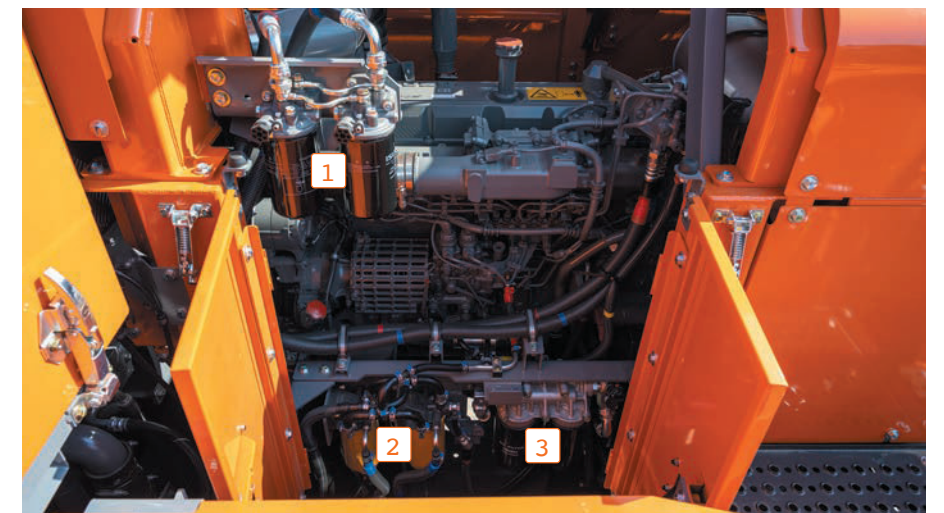
- ✓ Easy to move from cab to pump room or platform



## Easy access to filters

Filter locations are concentrated in the pump room

- 1 Fuel main filter
- 2 Fuel pre-filter with water separator
- 3 Engine oil filter





# MACHINE MANAGEMENT

Hitachi Construction Machinery offers a wide range of after-sales services to help you feel in total control of your fleet and workload. These initiatives give you access to vital data and tools to manage your machine.



A wide range of data on Global e-Service enhances efficiency.

## Data report

Regular reports inform you of the machine's operation status. Emergency reports inform you of alarm information. The stable operation of the machine is further supported with two types of reports visualizing the machine's daily operation status.

## Monthly report

Regular reports on the operating status of each machine.

## Alarm report

If an emergency alarm is generated from a sensor mounted on the machine, its alarm content is reported by e-mail in a timely manner. You can receive it on your computer, mobile phone, or smartphone (communication format is via e-mail).

movie for further info.



## ConSite Air

This is a service solution to diagnose machine status and update software remotely using OTA (Over The Air).

- Machine status, including error code display and sensor data, can be checked quickly, reducing downtime due to machine trouble.
- Software updates can be performed remotely, reducing the amount of machine downtime required.



Remote Diagnosis



Remote Software update

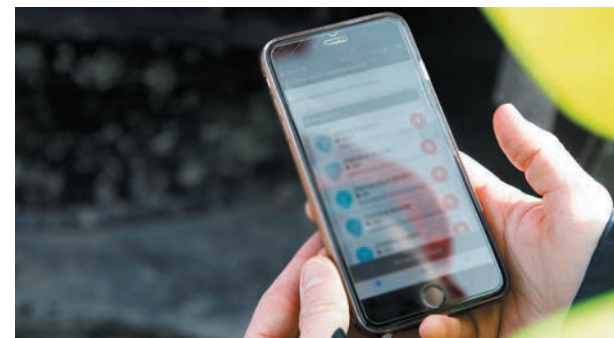
movie for further info.



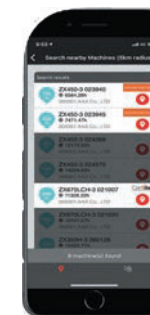
## ConSite Pocket

ConSite Pocket sends you real-time alerts for issues arising with your machine. You'll receive recommendations on what to do and step-by-step help guides. The app also enables you to see the location of your fleet.

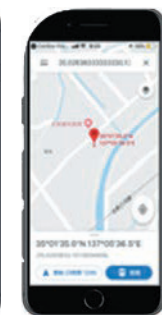
- Use your smartphone to check monthly reports, alarm reports, as well as machine operating positions.
- If an alarm report is generated, the system will notify you immediately using a push notification.



Monthly report



Machine finder



Location information

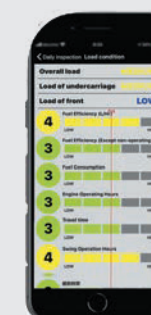
movie for further info.



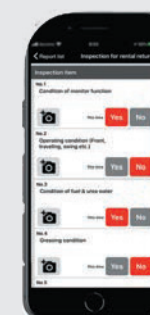
## ConSite Shot

This is a smartphone application that allows you to easily perform daily inspections of your machines and rental warehousing / delivery management.

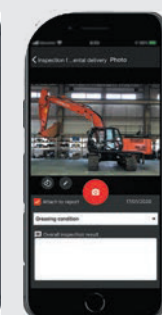
- You can easily create high-quality inspection reports and share information within your company or with agents etc.
- Customers who have rental machines can also use it during rental warehousing / delivery inspections.



Load condition



Acceptance or delivery inspection of rental machines



Inspection report with condition photo

movie for further info.



## ConSite OIL

This system detects if the oil quality has deteriorated, due to contamination or low viscosity. If this happens, you and your authorized dealer will receive a notification.

movie for further info.





SPECIFICATIONS

ENGINE	
Model	Isuzu AE-6WG1XWSA
Type	4-cycle water-cooled, common rail direct injection
Aspiration	Variable geometry turbocharged, intercooled
No. of cylinders	6
Rated power	
ISO 14396 : 2002 gross	377 kW (506 HP) at 1 800 min <sup>-1</sup> (rpm)
ISO 9249 : 2007 net	375 kW (503 HP) at 1 800 min <sup>-1</sup> (rpm)
Maximum torque	2 138 Nm (218 kgfm) 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

HYDRAULIC SYSTEM

Hydraulic Pumps	
Main pumps	2 variable displacement axial piston pumps
Maximum oil flow	2 x 512 L/min
Pilot pump	1 gear pump
Maximum oil flow	50 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	28.4 MPa (290 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			
	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

BUCKET AND ARM DIGGING FORCE

Boom length	7.1 m BE	
	2.95 m BE	
Arm length	kN	kgf
Bucket digging force ISO 6015 : 2006	472	48 100
Arm crowd force ISO 6015 : 2006	394	40 200

Calculated value at power boost

BACKHOE ATTACHMENT

Capacity (m³)	Width (mm)		No. of teeth	Weight (kg)	Boom 7.1 m BE
	Without side cutters	With side cutters			Arm 2.95 m BE
ISO7451: 2007 heaped					
6.0	2 360	2 430	5	5 000	○
5.4	2 430	2 500	5	4 500	○
4.5	2 090	2 160	5	4 400	●
Applicable shoe type		650 mm double grouser			

- Heavy-duty service / Suitable for material with density of 2 000 kg/m³ or less
- Suitable for material with density of 1 600 kg/m³ or less

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	3
Lower rollers	9 : ZX890LCH-7G
Track shoes	51 : ZX890LCH-7G
Track guards	Full track guard : ZX890LCH-7G
Travel Device	
Each track driven by axial piston motor through reduction gear for counterrotation of the tracks. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.	
Travel speeds	High : 0 to 4.6 km/h
	Low : 0 to 3.1 km/h
Maximum traction force	560 kN (57 100 kgf)
Gradeability	70 % (35 degree) continuous

SERVICE REFILL CAPACITIES

Fuel tank	1 110.0 L
Engine coolant	133.0 L
Engine oil	54.0 L
Pump drive	6.2 L
Swing device (each)	15.7 L
Travel device (each side)	19.0 L
Hydraulic system	1 042.0 L
Hydraulic oil tank	500.0 L

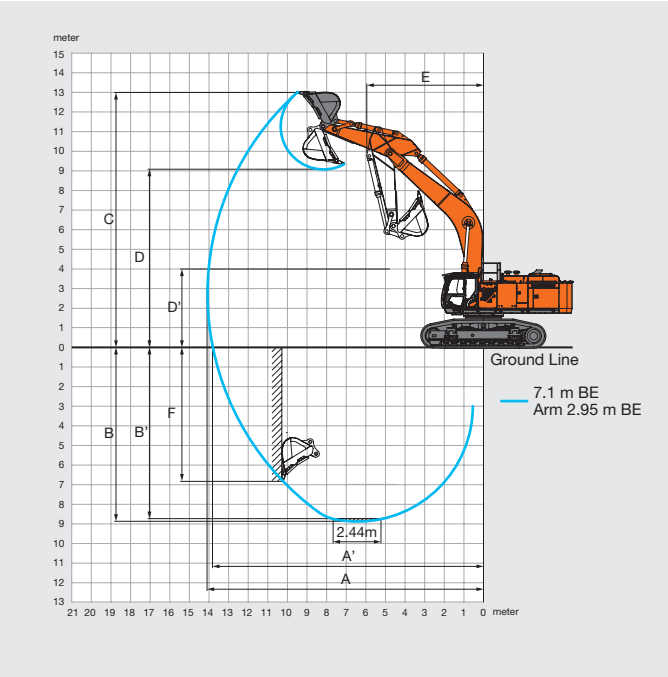
UPPERSTRUCTURE

Revolving Frame	
D-section frame for resistance to deformation.	
Swing Device	
Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row. Swing parking brake is spring-set/hydraulicreleased disc type.	
Swing speed	7.4 min <sup>-1</sup> (rpm)
Swing torque	194 kNm (19 800 kgfm)

WEIGHTS AND GROUND PRESSURE

Attachment	Operating weight	Ground pressure	
Backhoe	84 300kg	126kPa	1.28kgf/cm²

WORKING RANGES

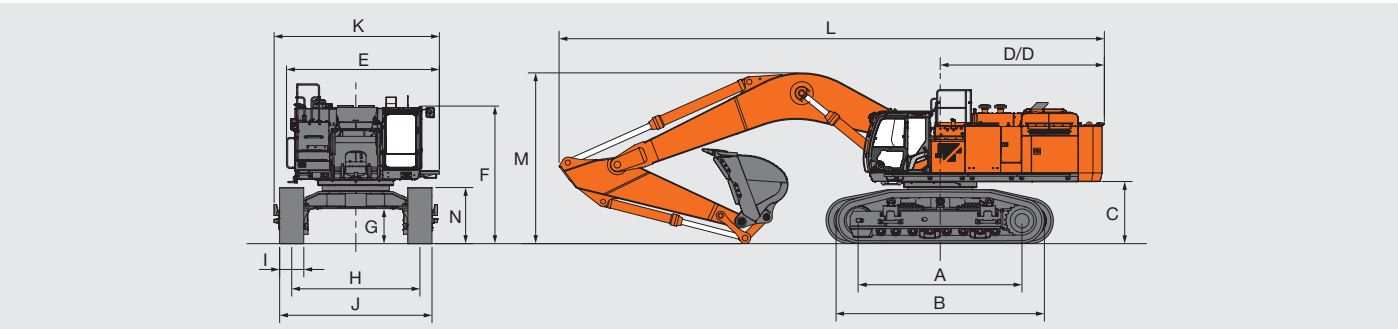


Unit: mm

Boom	7.1 m BE
Arm length	2.95 m BE
A Max. digging reach	12 340
A' Max. digging reach (on ground)	12 020
B Max. digging depth	7 140
B' Max. digging depth for 2.44 m level	7 000
C Max. cutting height	12 010
D Max. dumping height	8 130
D' Min. dumping height	3 770
E Min. swing radius	5 210
F Max. vertical wall digging depth	4 100

Excluding track shoe lug

DIMENSIONS



Unit: mm

A	Distance between tumblers	5 110
B	Undercarriage length	6 360
*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	3 800
*G	Min. ground clearance	890
H	Track gauge : Extended / Retracted	3 450 / 2 830
I	Track shoe width	650
J	Undercarriage width : Extended / Retracted	
	with 650 mm shoe	4 100 / 3 480
	with 750 mm shoe	—
	with 900 mm shoe	—
K	Overall width	4 450
L	Overall length	13 680
M	Overall height of boom	5 250
*N	Track height	1 500

\* Excluding track shoe lug



MACHINE CAPACITIES

Notes:

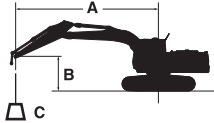
1. Ratings are based on ISO 10567 : 2007.

2. Machine 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.



A: Load radius

B: Load point height

C: Machine capacity

For machine capacities, subtract installed attachment and quick hitch weight from machine capacities.

To determine lifting capacities, apply "Rating over-side or 360 degrees" machine capacities from the table and deduct weight of installed attachment and quick hitch.

Optional feature may affect machine performance.

ZX890LCH-7G										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		9.0 m		10.5 m				
		▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮
Boom	9.0															
7.1 m BE	7.5							*21 750	*21 750					*16 660	*16 660	8.9
Arm	6.0					*26 890	*26 890	*23 170	*23 170	*21 180	18 200			*16 390	*16 390	9.5
2.95 m BE	4.5					*31 010	*31 010	*25 220	23 410	*22 040	17 730			*16 610	15 120	9.9
Counterweight	3.0					*34 730	30 970	*27 250	22 420	*23 040	17 180			*17 290	14 450	10.1
13 300 kg	1.5					*36 770	29 730	*28 650	21 610	*23 730	16 710			*18 530	14 340	10.0
Shoe 650 mm	0 (Ground)					*36 890	29 090	*29 000	21 100	*23 670	16 390			*20 570	14 810	9.7
	-1.5			*42 330	*42 330	*35 250	28 900	*27 960	20 890	*22 120	16 320			*21 580	16 050	9.1
	-3.0	*41 880	*41 880	*39 690	*39 690	*31 580	29 080	*24 790	21 040					*21 270	18 640	8.2
	-4.5			*30 900	*30 900	*24 390	*24 390							*19 710	*19 710	6.9
	-6.0															

TRANSPORTATION

UPPERSTRUCTURE					
Fixed gauge	A (mm)	B (mm)	C (mm)	Overall width (mm)	Weight (kg)
ZX890LCH-7G	6 040	3 370	2 955	3 420	27 700

BUCKET				
Bucket Capacity ISO heaped (m³)	A (mm)	B (mm)	Overall width (mm)	Weight (kg)
4.5	2 300	2 005	2 160	4 400
5.4	2 300	2 005	2 500	4 500
6.0	2 786	1 920	2 430	5 000

BASIC MACHINE (WITHOUT COUNTERWEIGHT)						
Fixed gauge	Shoe width (mm)	A (mm)	B (mm)	C (mm)	Overall width (mm)	Weight (kg)
ZX890LCH-7G	650	7 080	4 300	3 890	3 480	52 700

Notes : Undercarriage retracted.

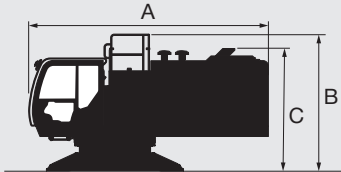
SIDE FRAME					
Fixed gauge	Shoe width (mm)	A (mm)	B (mm)	Overall width (mm)	Weight (kg)
ZX890LCH-7G	650	6 360	1 500	1 330	12 400

BOOM				
Boom	A (mm)	B (mm)	Overall width (mm)	Weight (kg)
7.1 m BE	7 490	2 700	1 450	7 670


ARM				
Arm	A (mm)	B (mm)	Overall width (mm)	Weight (kg)
2.95 m BE	4 460	1 660	850	4 650

TRANSPORTATION

UPPERSTRUCTURE



BUCKET



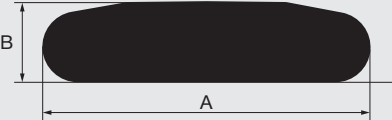
BASIC MACHINE (WITHOUT COUNTERWEIGHT)



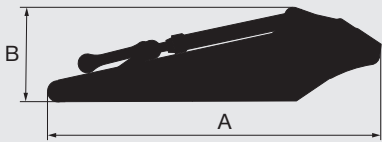
BOOM



SIDE FRAME




ARM



COUNTERWEIGHT

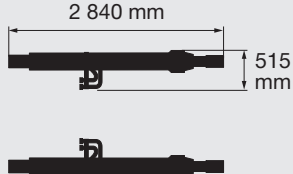
Overall height : 1 670 mm



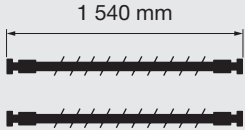
Weight : 13 300 kg

BOOM CYLINDERS 550 kg X 2

Overall height: 410 mm



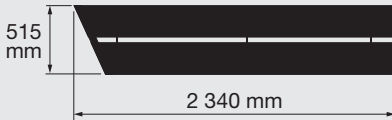
HOSE OF BOOM CYLINDERS 9 kg X 2 / 13 kg X 2



LEFT SIDEWALK


Overall height: 150 mm

FRONT




Weight : 46 kg

CENTER



Weight : 26 kg

REAR



Weight : 32 kg



● : Standard equipment   ○ : Optional equipment   – : Not applicable

ENGINE	ZX890 LCH-7G
Alternator 60 A	●
Auto idle system	●
Auto shut-down control	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
Cartridge-type fuel pre-filter with water separator	●
ConSite OIL (sensor)*1	○
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
Dust-proof net	●
ECO/PWR/HP mode control	●
Electrical fuel feed pump	●
Engine oil drain coupler	●
Expansion tank	●
Fan guard	●
Isolation-mounted engine	●
Pre-cleaner	●
Radiator, oil cooler and intercooler	●
Reversible fan	●

HYDRAULIC SYSTEM	ZX890 LCH-7G
Auto power lift	●
Boom mode selector system	●
ConSite OIL (sensor)*1	●
Control valve with main relief valve	●
Drain filter	●
Engine speed sensing system	●
Extra port for control valve	●
High mesh full flow filter	●
Pilot filter	●
Power boost	●
Shockless valve in pilot circuit	●
Suction filter	●
Two extra port for control valve	●
Work mode selector	●

LIGHTS	ZX890 LCH-7G
2 Additional boom LED light with cover	●
Additional cab roof front 2 LED lights	●
Additional cab roof front 4 LED lights	○
Additional cab roof rear 1 LED light	○
LED lights for camera (side and rear view camera)	○
Rotating lamp	○
2 working LED lights	●

CAB	ZX890 LCH-7G
Auto control air conditioner	●
Bluetooth® radio	●
Cab : All-weather sound suppressed steel cab	●
Cab : CRES VII (center pillar reinforced structure) cab	●
Console height adjustment	●
Drink holder with hot and cool function	●
Electric double horn	●
Engine shut-off switch	●
Evacuation hammer	●
Fire extinguisher bracket	●
Floor mat	●
Footrest	●
Front guard : OPG front guard Level II (ISO 10262 : 1998) compliant	●
Front window washer (1 points)	●
Glove compartment	●
Hands-free calling device	○
Hot and cool box	●
Intermittent windshield wipers	●
Key cylinder light	●
Laminated round glass front window	–
Laminated straight glass front window	●
LED room light	●
Magazine rack	●
Pilot shut-off lever	●
Power outlet 12V	●
Power outlet 24V	●
Rain guard (without OPG front guard)	○
Rear tray	●
Retractable seat belt	●
Rubber radio antenna	●
Seat : air suspension seat with heater	○
Seat : mechanical suspension seat	●
Seat adjustment part : backrest, armrest, height and angle, slide forward / back	●
Seat belt reminder	●
Short wrist control levers	●
Smartphone holder	●
Sunscreen roller type (multi-use front or side and rear window)	●
Top guard : OPG top guard Level II (ISO 10262 : 1998) compliant	●
Transparent roof with slide curtain	●
USB power supply	●
Windows on leftside can be opened	●
2 speakers	●
6 fluid-filled elastic mounts	●
8 inch monitor	●

● : Standard equipment   ○ : Optional equipment   – : Not applicable

UPPER STRUCTURE	ZX890 LCH-7G
AERIAL ANGLE (270-degree view camera system)	○
Auto-grease lubricator (without bucket and link pins)	○
Batteries	●
Body top handrail	●
Counterweight 13 300 kg	●
Electric fuel refilling pump with auto stop and filter	○
Grease pump (Hand pump)	●
Fuel level float	●
Hydraulic oil level gauge	●
Ladder	●
Lockable fuel refilling cap	●
Lockable machine covers	●
Lockable tool box	●
Platform handrail	●
Right side and rear view camera	●
Sidewalk (cab side)	●
Skid-resistant plates and handrails	●
Swing parking brake	●
Undercover	●
Utility space	●
2 way disconnect switch	●

MISCELLANEOUS	ZX890 LCH-7G
ConSite	●
Global e-Service	●
Onboard information controller	●
Standard tool kit	●
Theft prevention system*2	●

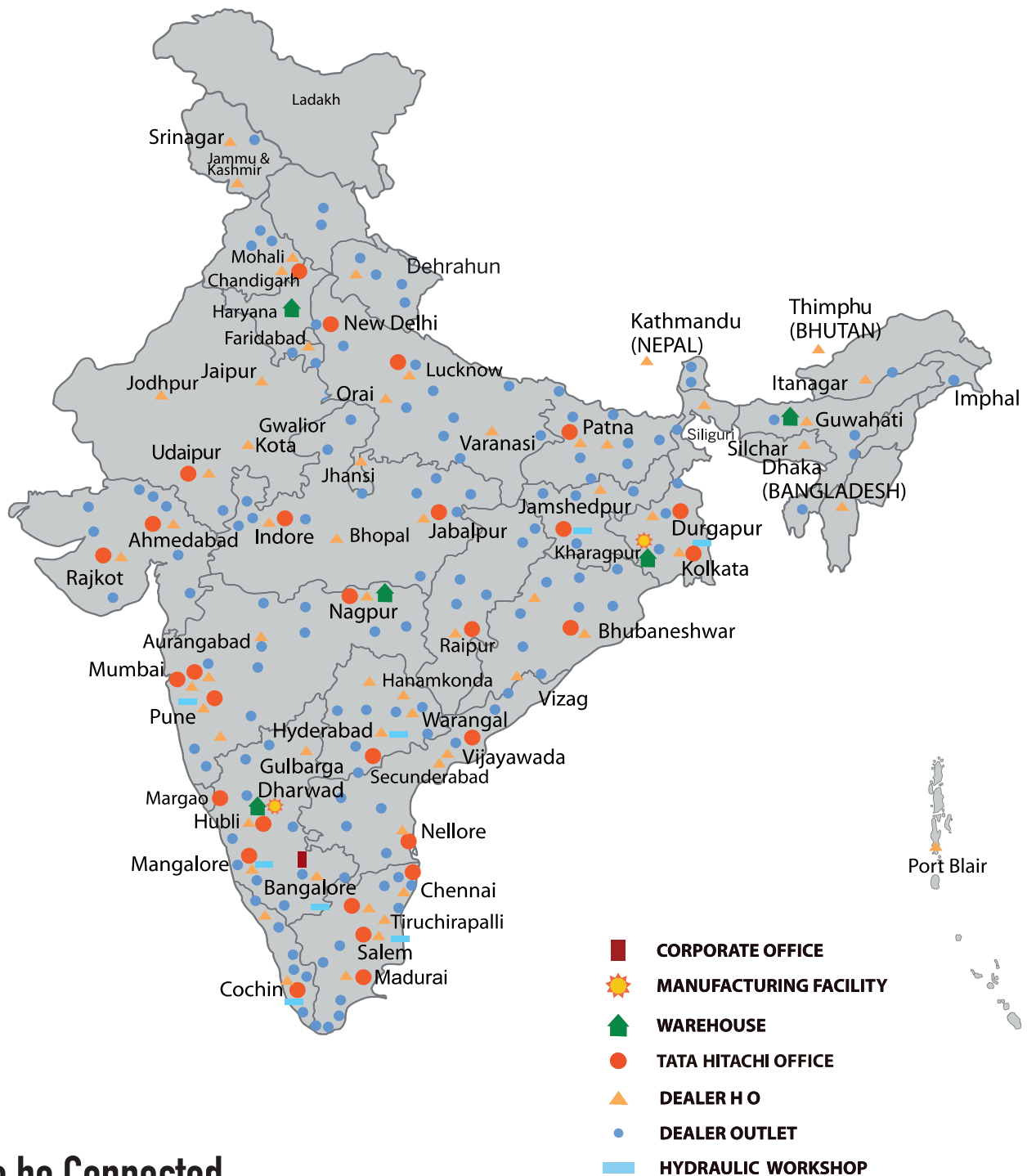
FRONT ATTACHMENTS	ZX890 LCH-7G
Arm 2.95 m BE	●
Arm 3.7 m H	○
Boom 7.1 m BE	●
Boom 8.4 m H	○
Bucket 6.0 m³ (ISO 7451 : 2007 heaped)	●
Bucket 5.4 m³ (ISO 7451 : 2007 heaped) with dual type side shrouds	○
R-Bucket 4.5 m³ (ISO 7451 : 2007 heaped) with dual type side shrouds	○
Centralized lubrication system	●
Damage prevention plate and square bars	●
Dirt seal on all bucket pins	●
Flanged pin	●
Link B	●
Monolithically cast bucket link A	●
Reinforced link A	–
Reinforced link B	–

MONITOR SYSTEM	ZX890 LCH-7G
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,etc	●
Display of meters : water temperature, hour, fuel rate, clock, etc	●
Other displays : work mode, auto-idle, glow, rear view monitor, side view monitor, operating conditions, etc	●
35 languages selection	●

UNDERCARRIAGE	ZX890 LCH-7G
Bolt-on sprocket	●
Full track guard	●
Hydraulic track adjuster	●
Idler track guard	●
Lower rollers (single flange)	●
Lower rollers (double flange)	–
Reinforced track links with pin seals	●
Shoe : 650 mm double grouser	●
Shoe : 750 mm double grouser	○
Shoe : 900 mm double grouser	○
Track undercover	●
Travel direction mark on track frame	●
Travel motor covers	●
Travel parking brake	●
Upper rollers	●
2 track guards (each side)	○



## OUR NETWORK



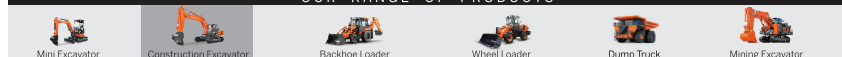
## To be Connected

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#### OUR RANGE OF PRODUCTS



Authorised Dealer

These specifications are subject to change without prior notice. The machine depicted may vary from the actual machine. Please contact our nearest office for latest specifications. Accessories shown here are not part of the standard equipment. Performance of the machine may vary with site and operating conditions encountered.