HITACHI

Reliable solutions

ZAXIS890LCH



HYDRAULIC EXCAVATOR

Model code: ZX890LCH-7

Engine rated power: 382 kW (ISO 14396) /

380 kW (ISO 9249)

Operating weight: 84 600 – 87 500 kg Bucket ISO heaped: 3.5 – 5 m³



YOU'RE IN CONTROL

You're at the heart of Hitachi's design for its latest range of excavators. To continuously improve on previous generation machines we've focused on enhancing your experience in the cab as an operator.

We've considered the challenges you face as the owner of a successful business. And we've zoomed in on the ways in which we can support you over the life cycle of your machine.

By putting you at the heart of the Zaxis-7 range, we invite you to take control – over your workspace and your fleet. And by working in partnership, we will help you to create your vision.



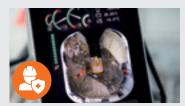
INSIDE



4. Complete Control In control of your assets



11. Control ZoneFeel the difference



6. Increase your safetyBe in control of your environment



12. Get More from your machine In control of your performance



8. Boost your uptime Improve your profit



14. SpecificationsKnow your machine



COMPLETE CONTROL

The new Zaxis-7 range of large excavators puts you firmly in control, so you can feel assured of your machine's performance and supported by the technological expertise and services that Hitachi provides.





The expanded cab interior provides a more comfortable working environment.



Integrated console and seat suspension gives a greater sense of control, and helps to reduce fatigue.



Visibility of the job site is excellent thanks to the Aerial Angle® camera system and new LCD monitor.



Sensors monitor oil continuously and contribute to preventative maintenance, helping to reduce downtime.



ConSite Pocket app allows you to manage and monitor your fleet remotely.



Options such as Hitachi ground engaging tools enable you to enhance the performance of your excavator.



Improved access to components ensures maintenance is quick and easy.



The new HIOS-V hydraulic system reduces fuel consumption and increases front speed to enhance productivity.



The ECO gauge on the monitor indicates how to lower fuel consumption and reduce costs.



Your ability to work safely is vital, not only for your own wellbeing, but also for the successful completion of any project. To protect yourself and your machine from potential hazards, the new Hitachi Zaxis-7 excavators give you a superior view of your surroundings, so you can see the job site from all angles.

The visibility you enjoy from the cab includes an exceptional 270-degree bird's-eye view with the Aerial Angle® camera system. You can choose from six image options to view the machine's immediate environment, which enables you to control your own safety – as well as that of those around you.

To help you to work more confidently and efficiently, even in the most challenging of conditions, Zaxis-7 excavators are fitted with some impressive new features. From the LED work lights and the windscreen wiper with an increased sweeping area, to the large reflective strips on the counterweight and roller sunshades, you'll have the visibility you need when it matters most.

Attention to detail is also fundamental to a safe working environment – and the repositioning of the pilot shutoff lever is a perfect example. It is now within easy reach to prevent any unintentional actions.





The pilot shutoff lever offers enhanced safety in the cab.



Choose between different image layouts to suit your working environment.



LED work lights improve visibility in challenging conditions.

BOOST YOUR UPTIME

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 owners have profited from generations of ultra-reliable and durable machinery – and the Zaxis-7 range is no exception.

The latest Hitachi large excavators have been built to last, so that you can remain in complete control of your assets. They have been tested rigorously and continuously at dedicated facilities in Japan with the goal of significantly boosting your uptime.

As a result, a wide range of durable new components have been fitted to the latest Stage-V compliant machines – even down to the detail of the rigidity of the door hinges. Now standard on our Zaxis-7 range are hydraulic and engine oil monitoring sensors that help to reduce downtime and running costs.

Downtime is prevented by the durable after-treatment system, and also minimised by the priority given to easy maintenance and cleaning – saving you time and money. Peace of mind comes from such features as the two-way disconnect switch. This makes it possible to shut down power without resetting data on the monitor and prevents the battery from discharging during welding.



The radiator is easy to clean and maintain.



Components are conveniently accessible for daily maintenance.



Access to the upper structure is easy via a new step.



A fuel saving of up to 20% is achieved with the HIOS V hydraulic system.





CONTROL ZONE

Enhanced comfort and safety features are at your fingertips in the refined cab of Zaxis-7 excavators, giving you the power to perform productively, with ease and reduced fatigue.

- 1 Increased sweeping area of wide view wiper enhances visibility in difficult working conditions.
- **2 Air conditioning and audio** are easily controlled via the monitor.
- **3 Low-reflective colour 8" LCD monitor** is easy to view and navigate.
- 4 USB power supply and smartphone holder helps you stay connected.
- 5 Drinks holder is easy to detach for cleaning.
- **6** Additional joystick controls for effortless operation.
- **7 Ergonomic design** gives you convenient access to controls
- 8 Bluetooth® for hands-free calls and DAB+ radio for music while you work.

- Multifunctional control panel makes operation easier.
- 10 Improved sound isolation makes this one of the quietest cabs in the market.
- User-friendly storage space keeps your workspace tidy and clutter-free.
- 12v and 24v outlets for your electrical devices.
- **One-touch adjustment lever for console** so you can work comfortably in the optimum position.
- **14 Integrated console and seat suspension** gives a greater sense of control and helps to reduce fatigue.
- **15 Increased legroom** creates a more spacious cab.
- (16) Optimal pedal layout helps to reduce fatigue.



Operation is easy with ergonomically designed controls and switches.



Bluetooth® connection for hands-free calls while you work.

GET MORE FROM YOUR MACHINE

Designed to work in perfect harmony with your machine, Hitachi preferred durable hydraulic breakers, hydraulic hitches, buckets and Ground Engaging Tools (GET) will increase your profit by maximising productivity and uptime. Manufactured to the same high standards as all Hitachi construction equipment, they offer unrivalled reliability and exceptional performance.

Buckets

You can increase the versatility of your excavator by choosing the right bucket for the job. For loading light materials or heavy-duty work, Hitachi supplied buckets can be customised to meet your needs. You have a wide range of options to choose from Hitachi supplied buckets with different capacities and widths.

Ground engaging tools

You can enhance the digging power and productivity of your excavator or wheel loader with Hitachi GET. Quick and safe to install and replace, they fit precisely to your attachments and can be tailored to suit the task. Using Hitachi GET can reduce your maintenance costs and downtime, lower fuel consumption and enhance the overall performance of your machine.

Breakers

High-performance hydraulic breakers – approved by Hitachi – are perfectly suited to large excavators. They are easy to maintain and user-friendly, and their high-quality materials ensure a long lifetime. This means reduced maintenance costs, fewer replacement parts and minimal downtime.



Attachments can be customised to suit the application.



Breakers are lightweight with high impact energy.



Hitachi GET include teeth and reliable adapters to ensure a precise fit. *Not available in all markets



A variety of boom and arm types are available to suit tough environments and heavy-duty tasks.



SPECIFICATIONS

ENGINE	
Model	Isuzu 6WG1
Туре	4-cycle water-cooled, common rail direct injection
Aspiration	Variable geometry turbocharged, intercooled,cooled EGR
Aftertreatment	DOC+CSF+SCR system
No. of cylinders	6
Rated power	
ISO 14396 : 2002 gross	382 kW at 1 800 min ⁻¹
ISO 9249 : 2007 net	380 kW at 1 800 min ⁻¹
SAE J1349 : net	380 kW at 1 800 min ⁻¹
Maximum torque	2 250 Nm at 1 300 min ⁻¹
Piston displacement	15.681 L
Bore and stroke	147 mm x 154 mm
Batteries	2 x 12 V / 170 Ah

HYDRAULIC SYSTEM						
Hydraulic Pumps						
Main pumps	2 variable displacement axial piston pumps					
Maximum oil flow	2 x 556 L/min					
Pilot pump	1 gear pump					
Maximum oil flow	50 L/min					
Hydraulic Motors						
Travel	2 variable displacement axial piston motors					
Swing	2 axial piston motors					
Relief Valve Settings						
Implement circuit	31.9 MPa					
Swing circuit	28.4 MPa					
Travel circuit	34.3 MPa					
Pilot circuit	3.9 MPa					
Power boost	34.3 MPa					

Hydraulic Cylinders

	Quantity	Bore	Rod diameter
Boom	2	215 mm 150 mr	
Arm	1	225 mm	160 mm
Bucket	1	200 mm	140 mm
BE-Bucket	BE-Bucket 1		150 mm

UPPERSTRUCTURE			
Revolving Frame			
D-section frame for resistance to deformation.			
Swing Device			
Axial piston motor with planetary reduction gear is bathed in oil. Swing parking brake is spring-set/hydraulic-released disc type.			
Swing speed 7.8 min ⁻¹			
Swing torque 267 kNm			

UNDERCARRI	UNDERCARRIAGE					
Tracks						
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 Rolle	ers and Shoes on Each Side					
Upper rollers	Upper rollers 3					
Lower rollers 9						
Track shoes	51					
Track guards	Track guards 1					
Travel Device	Travel Device					
counterrotation of t Parking brake is sp	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.					
Traval appeda	High: 0 to 4.7 km/h					
Traver speeds	Travel speeds Low: 0 to 3.2 km/h					
Maximum traction force	560 kN					
Gradeability 70% (35 degree) continuous						

SERVICE REFILL CAPACITIES				
Fuel tank	1 110.0 L			
Engine coolant	124.0 L			
Engine oil	62.0 L			
Pump drive	6.2 L			
Swing device	15.7 L			
Travel device (each side)	19 L			
Hydraulic system	1 042 L			
Hydraulic oil tank	500 L			
DEF/AdBlue® tank	95 L			

ENVIRONMENT	
Engine Emissions	EU Stage V
Sounds Level	
Sound level in cab according to ISO 6396: 2008	74 LpA dB(A)
External sound level according to ISO 6395 : 2008 and EU Directive 2000/14/EC	108 LwA dB(A)
Air Conditioning System	

Air Conditioning System

The air conditioning system contains fluorinated greenhouse gases. Refrigerant type: HFC-134a, GWP: 1430, Amount: 1.05kg, CO2e: 1.50ton.

WEIGHTS AND GROUND PRESSURE

Operating Weight and Ground Pressure

Bucket Capacity	Boom type	Arm type	Shoe grouser type	Shoe width (mm)	Operating weight (kg)	Ground pressure (kPa)
3.5 m ³ Rock bucket (ISO 7451 : 2007	8.4 m H	3.7 m H	Double	650 mm	85 100	116
(130 7431 . 2007 heaped)	0.4 111 17	3. <i>1</i> III FI	Double	750 mm	85 800	101
5.0 m³ Rock bucket	7.1 m BE	2.95 m BE	Double	600 mm	85 900	117
(ISO 7451 : 2007 heaped)	7.1111 DE	2.95 111 BE	Double	750 mm	86 600	102

BUCKET AND ARM DIGGING FORCE

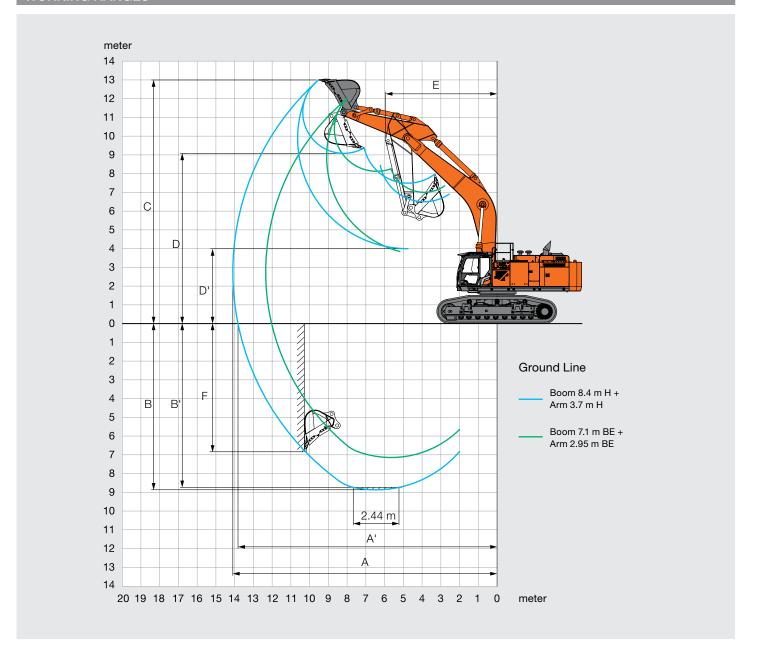
Unit: kN

	ZAXIS 890LCH			
Boom length	Boom 7.1 m m BE	Boom 8.4 m H		
Arm length	Arm 2.95 m BE	Arm 3.7 m H		
Bucket Digging Force* at Power Boost ISO 6015	472	402		
Bucket Digging Force* at Power Boost SAE: PCSA	411	359		
Arm Crowd Force* at Power Boost ISO 6015	394	324		
Arm Crowd Force* at Power Boost SAE : PCSA	378	316		

^{*} At power boost

SPECIFICATIONS

WORKING RANGES

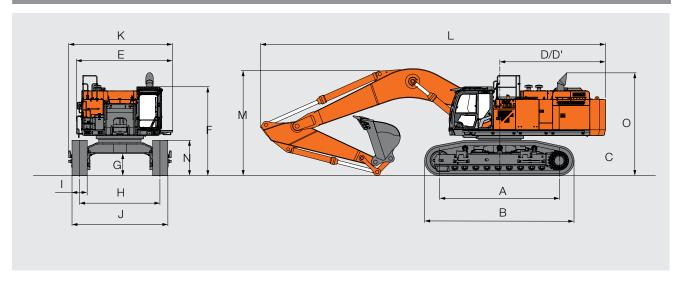


Unit: mm

	ZX890LCH-7		
	Boom 7.1 m BE	Boom 8.4 m H	
Arm length	Arm 2.95 m BE	Arm 3.7 m H	
A Max. digging reach	12 340	14 100	
A' Max. digging reach (on ground)	12 020	13 820	
B Max. digging depth	7 140	8 870	
B' Max. digging depth for 2.44 m level	7 000	8 740	
C Max. cutting height	12 010	-	
D Max. dumping height	8 130	9 080	
D' Min. dumping height	3 770	3 990	
E Min. swing radius	5 210	5 950	
F Max. vertical wall digging depth	4 100	6 840	

Excluding track shoe lug

DIMENSIONS



Unit: mm

		ZX890LCH-7			
Α	Distance between tumblers	5 110			
В	Undercarriage length	6 3	60		
*C	Counterweight clearance	1 6	80		
D	Rear-end swing radius	4 6	00		
D'	Rear-end length	4 5	90		
Е	Overall width of upperstructure	4 1	20		
F	Overall height of cab	3 800			
*G	Min. ground clearance	890			
H'	Track gauge : Extended / Retracted	3 450 / 2 830			
1	Track shoe width	G 650	G 750		
J	Undercarriage width: Extended / Retracted	4 100 / 3 480	4 200 / 3 580		
K	Overall width	4 4	50		
L	Overall length	14 900			
М	Overall height of boom	4 770			
N	Track height	1 500			
0	Overall height of base machine	4 4	10		

Backhoe Buckets

Bucket	Capacity (m3)		Width (mm)		No. of		Recomm	endation
							ZX890LCH-7	
		CECE	Without side cutters	With side cutters	teeth	Weight (kg)	Boom 7.1 m BE	Boom 8.4 m H
	ISO heaped	heaped					Arm 2.95 m BE	Arm 3.7 m H
	3.5	3.1	1 870	1 890	5	3 790	_	•
Rock bucket	4.3	3.8	2 090	2 110	5	4 270	•	-
	5.0	4.4	2 240	2 260	5	5 010	•	_
Ripper bucket	1.9	1.7	-	1 490	3	4 200	-	•
	2.2	2.0	-	1 580	3	4 400	•	_
One-point ripper	-	-	-	-	1	2 680	•	•

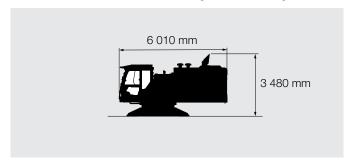
[◆] Heavy-duty service – Not applicable

 $^{^{^{*1}}}$ Excluding track shoe lug G: Grouser shoe $^{^{*2}}$ Equipped with H-boom 8.4 m and H-arm 3.7 m

TRANSPORTATION

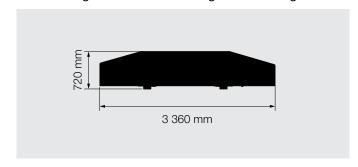
UPPER STRUCTURE

Overall width: 3 420 mm / Weight: 28 300 kg

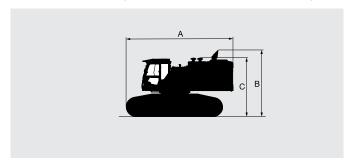


COUNTERWEIGHT

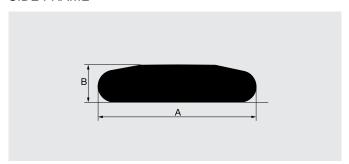
Overall height: 1 670 mm / Weight: 13 300 kg



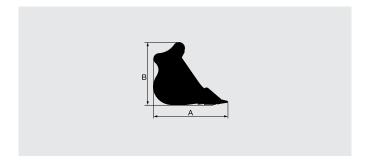
BASIC MACHINE (WITHOUT COUNTERWEIGHT)



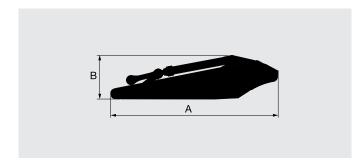
SIDE FRAME



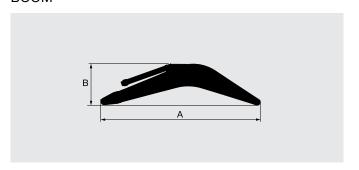
BUCKET



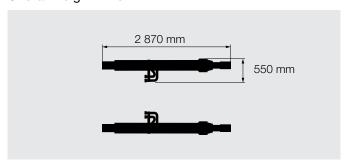
ARM



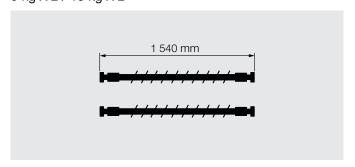
воом



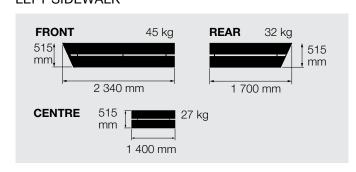
BOOM CYLINDERS 850 kg X 2 Overall height: 410 mm



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



LEFT SIDEWALK



BASIC MACHINE (WITHOUT COUNTERWEIGHT)

	Shoe width (mm)	A (mm)	B (mm)	C*1 (mm)	Overall width*2 (mm)	Weight (kg)
ZX890LCH-7	650	7 080	4 410	3 890	3 630	53 000
Z/090LCH-/	750	7 080	4 410	3 890	3 630	53 700

SIDE FRAME

	Shoe width (mm)	A: Length (mm)	B: Height (mm)	Overall width (mm)	Weight (kg)
ZX890LCH-7	650	6 360	1 500	1 340	12 200
ZA090LUH-1	750	6 360	1 500	1 340	12 500

воом

Boom	A: Length (mm)	B: Height (mm)	C: Overall width (mm)	Weight (kg)
7.1 m BE	7 470	2 680	1 440	7 710
8.4 m H	8 760	2 510	1 440	8 240

ARM

Arm	A (mm)	B (mm)	Overall width (mm)	Weight (kg)
2.95 m BE	4 430	1 700	840	4 630
3.7 m H	5 260	1 460	810	4 490

BUCKET

Bucket	Capac	ity (m³)	A (mm)	B (mm)	Overall width	Moight (kg)
Ducket	ISO heaped	CECE heaped	A (IIIII)	D (IIIIII)	(mm)	Weight (kg)
	3.5	3.1	2 270	1 960	1 920	3 790
Rock bucket	4.3	3.8	2 360	2 050	2 150	4 270
	5.0	4.4	2 510	2 020	2 320	5 010

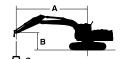
^{*1} Without exhaust funnel
*2 Undercarriage retracted without truck sidestep

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-	7									🖺 Ratir	ng over-fror	nt 🛱 F	Rating over-	side or 360	0 degrees	Unit : kg
	Load						Load	radius							t max. read	h
Conditions	point	3.0) m	4.5	5 m	6.0) m	7.5	5 m	9.0) m	10.	5 m] "	it max. reac	41
	height m	ů	₽	ů	₽	ů	₽	ů	₽	ů	₽	ů	₽	ů	₽	meter
Boom 7.1 m BE	7.5							*21 570	*21 570					*16 760	*16 760	8.9
Arm 2.95 m BE	6.0					*26 640	*26 640	*22 930	*22 930	*20 950	18 620			*16 450	*16 450	9.5

EQUIPMENT

• : Standard equipment O : Optional equipment - : Not applicable

ENGINE	ZX890LCH-7
Aftertreatment device	•
Air cleaner double filters	•
Alternator 90 A	•
Auto idle system	•
Auto shut-down control	•
Cartridge-type engine oil filter	•
Cartridge-type fuel main filter	•
ConSite OIL (sensor)*	•
DEF/AdBlue® tank inlet strainer and extension filler	•
DEF/AdBlue® tank with ISO magnet adapter	•
Dry-type air filter with evacuator valve (with air filter restriction indicator)	•
Dust-proof indoor net	•
ECO/PWR/HP mode control	•
Electrical fuel feed pump	•
Engine oil drain coupler	•
Expansion tank	•
Fan guard	•
Fuel cooler	•
Fuel pre-filter with water separator	•
Isolation-mounted engine	•
Maintenance free pre-cleaner	•
Radiator, oil cooler and intercooler	•

HYDRAULIC SYSTEM	ZX690LCH-7
Auto power lift	•
Boom mode selector system	•
ConSite OIL (sensor)*	•
Control valve with main relief valve	•
Drain filter	•
Engine speed sensing system	•
Extra port for control valve	•
Hose rupture valve for arm	0
Hose rupture valve for boom	0
Pilot filter	•
Power boost	•
Shockless valve in pilot circuit	•
Suction filter	•
Work mode selector	•

 $^{^{\}star}$ Engine oil and hydraulic oil monitoring sensor.

CAB	ZX890LCH-7
All-weather sound suppressed steel cab	•
Auto control air conditioner	•
Bluetooth® integrated DAB+radio	•
Console height adjustment	•
CRES VII (center pillar reinforced structure) cab	•
Drink holder with hot and cool function	•
Electric double horn	•
Engine shut-off switch	•
Equipped with reinforced, tinted (Green color) glass windows	•
Evacuation hammer	•
Floor mat	•
Footrest	•
Front window washer (2 points)	•
Glove compartment	•
Hands-free calling device	•
Hot and cool box	•
Intermittent windshield wipers	•
Key cylinder light	•
Laminated round glass window	•
LED room light with door courtesy	•
Magazine rack	•
OPG front guard Level II (ISO10262) compliant	0
OPG top guard Level II (ISO10262) compliant	•
Pilot shut-off lever	•
Power outlet 12 V and 24 V	•
Rear tray	•
Retractable seat belt	•
Rubber radio antenna	•
Seat : air suspension seat with heater	•
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)	•
Transparent roof with slide curtain	•
USB power supply	•
Wide view wiper	•
Windows on left side can be opened	•
2 speakers	•
6 fluid-filled elastic mounts	•

MONITOR SYSTEM	ZX890LCH-7
Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, SCR system trouble, etc	•
Alarm buzzers: overheat, engine oil pressure, overload, SCR system trouble, etc	•
Display of meters: water temperature, hour, fuel rate, clock, DEF/AdBlue® rate, etc	•
Other displays: work mode, auto-idle, glow, rearview monitor, side view monitor, operating conditions, etc	•
35 languages selection	•

LIGHTS	ZX890LCH-7
Additional boom LED light with cover	0
Additional cab roof front 2 LED lights	•
Additional cab roof front 4 LED lights	0
Additional cab roof rear LED lights	•
LED lights for camera (side and rear view camera)	•
4 working LED lights	•

UPPER STRUCTURE	ZX890LCH-7
AERIAL ANGLE® (side and rear view camera)	•
Auto-grease lubricator (without bucket and link pins)	•
Batteries 2 x 170 Ah	•
Body top handrail	•
Counterweight 13 300 kg	•
Electric fuel refilling pump with auto stop and filter	•
Electrical grease pump with hose-reel	•
Fuel level float	•
Hydraulic oil level gauge	•
Ladder	•
Lockable fuel refilling cap	•
Lockable machine covers	•
Lockable tool box	•
Platform handrail	•
Sidewalk (cab side)	•
Skid-resistant plates and handrails	•
Swing parking brake	•
Undercover	•
2 way disconnect switch	•

SPECIFICATIONS

• : Standard equipment O : Optional equipment - : Not applicable

UNDERCARRIAGE	
Bolt-on sprocket	•
Full track guard	•
Reinforced track links with pin seals	•
Shoe: 650 mm double grouser	•
Shoe: 750 mm double grouser	0
Track undercover	•
Travel direction mark on track frame	•
Travel motor covers	•
Travel parking brake	•
Upper and lower rollers (with single-flange lower rollers)	•
Upper and lower rollers (with double-flange lower rollers)	•
4 tie down hooks	•

ATTACHMENTS	ZX890LCH-7
Accessories for breaker and crusher	0
Accessories for 2 speed selector	0
Pilot accumulator	•

MISCELLANEOUS	ZX890LCH-7
ConSite	•
Global e-Service	•
Onboard information controller	•
Standard tool kit	•
Theft prevention system**	0

FRONT ATTACHMENTS	ZX890LCH-7
Arm 2.95 m BE	0
Arm 3.7 m H	•
Boom 7.1 m BE	0
Boom 8.4 m H	•
Centralized lubrication system	•
Cylinder hose protectors arm	•
Cylinder hose protectors boom	•
Cylinder hose protectors bucket	•
Damage prevention plate and square bars	•
Dirt seal on all bucket pins	•
Flanged pin	•

MEMO

in a country other than a country of its intended use, it may be necessary to make modifications to it so that it complies with the local regulatory	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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