HITACHI

Reliable solutions

EX1200



HYDRAULIC EXCAVATOR

Model Code: EX1200-7 (Fuel Consumption Optimization)

Engine Rated Power: Cummins: 567 kW (760 HP)
Operating Weight: Loading Shovel: 117 000 kg

Backhoe: 115 000 kg BE-front: 117 000 kg

Bucket Capacity: Loading Shovel: ISO Heaped: 5.9-6.5 m³

Backhoe: ISO Heaped: 5.2 m³ BE-front: ISO Heaped: 7.0 m³ Model Code: EX1200-7B (Tier 4 Final)
Engine Rated Power: Cummins: 567 kW (760 HP)
Operating Weight: Loading Shovel: 118 000 kg

Backhoe: 117 000 kg BE-front: 119 000 kg

Bucket Capacity: Loading Shovel: ISO Heaped: 5.9-6.5 m³

Backhoe: ISO Heaped: 5.2 m³ BE-front: ISO Heaped: 7.0 m³



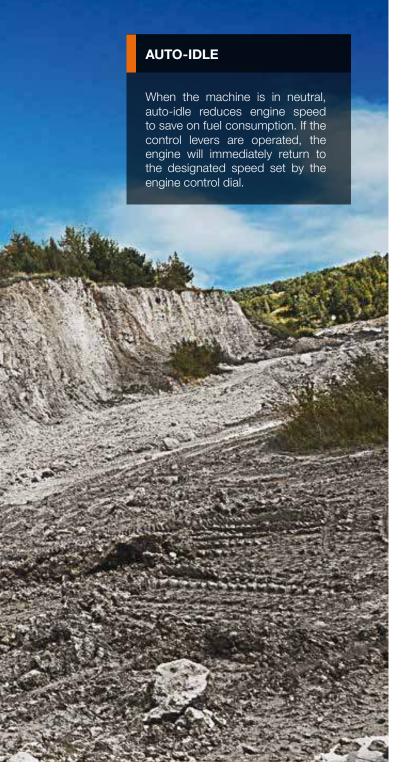






SUSTAINABILITY

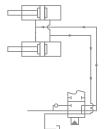
Hitachi's latest energy optimizing features provide a sustainable solution for the mining industry. The EX1200-7 includes electronically controlled hydraulic pumps, an optimized cooling package, enhanced hydraulic circuits, and a choice of emission configurations to meet regulatory requirements. The result is an environmentally conscious machine that doesn't compromise on performance.





MAIN PUMP ELECTRIC REGULATORS

Each individually controlled hydraulic pump utilizes its own electric regulator. This delivers enhanced engine power, lower fuel consumption, and more efficient performance.



HYDRAULIC REGENERATION CIRCUIT

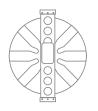
The boom, arm and bucket are fitted with a flow regeneration valve to reduce power requirements from the hydraulic system and engine, lowering fuel consumption and improving pump life.





Hitachi's computer-aided Engine-Pump (E-P) Control achieves optimum productivity from the engine and hydraulic pumps. The innovative system senses load demand and controls engine and pump output to match the work being performed, maximizing operating efficiency and lowering fuel costs for large workloads.

HYDRAULIC OIL COOLER SYSTEM



A redesigned hydraulic oil cooler with variable speed fan reduces energy demand and creates a more reliable hydraulic system. The oil cooler is kept separate from the radiator to keep hydraulic oil cool more effectively. Time and effort spent cleaning is drastically reduced, and service life of hydraulics is extended.

RADIATOR FAN MOTOR



The radiator fan is now driven by a hydraulic system, replacing the previous mechanical drive system. The fan automatically adjusts to meet engine requirements, creating an optimized cooling system with less horsepower demand and less operational noise.



ENGINE OPTIONS

CUMMINS FUEL CONSUMPTION OPTIMIZATION (FCO)

Cummins QSK23, 6 cylinder, 23 L, turbocharged, after-cooled 567 kW (760HP)

CUMMINS TIER 4 FINAL (T4F)

Cummins QSK23, 6 cylinder, 23 L, turbocharged, after-cooled 567 kW (760HP) U.S.A. E.P.A. Tier 4 conforming model, with Diesel Exhaust Fluid (DEF) tank

PRODUCTIVITY

The EX-7 series of excavators embrace Hitachi's latest advancements in design, performing consistently to meet the tough demands of the mining industry.

Engineered from the ground up to strike a balance between productivity and reliability, the EX1200-7 sets a new standard. Designed with precision, Hitachi's meticulous craftsmanship delivers a robust and adaptable solution for all types of operation.



With a front attachment design that improves machine performance, the EX1200-7 can achieve superior productivity under several digging profiles.

The boom and arm are welded, utilizing a full-box section design to evenly distribute stress and provide ease of maintenance.

The front attachment is optimized for the bucket design to achieve higher operating efficiency. It can be controlled with absolute precision while requiring little to no effort from the operator.

BUCKET DESIGN

The bucket design is optimized for excavator performance and longevity, achieving long-term structural integrity and achieving higher productivity.

BUCKET CONTROL

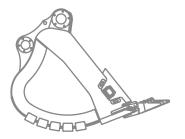
The bucket dumping angle can be freely adjusted for efficient dumping. This reduces shock to the dump body for longer service life and lower repair costs.



LOADING SHOVEL EXCAVATING FORCE

Arm crowding force on ground 585 kN (59,700 kgf)

Bucket digging force 709 kN (72,300 kgf)

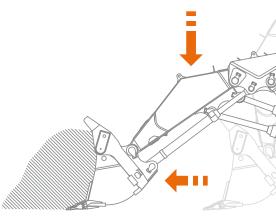


BACKHOE EXCAVATING FORCE

Arm crowding force 438 kN (44,660 kgf

Bucket digging force 569 kN (58,020 kgf)

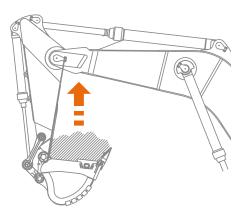






AUTO-LEVELING MECHANISM FOR LOADER APPLICATION

The control of both the arm and boom is achieved through a Hitachi proprietary leveling cylinder mechanism, using just one arm lever. This means the bucket can automatically be pushed out horizontally using a single movement. Potential energy created from the front weight is recycled as level cylinder thrust and added to the arm digging power. This allows for higher digging power, especially at the end of a stroke, improving work performance.



AUTO-POWER LIFT

If load to the hydraulic system becomes excessive while the boom is being lifted, an automatic change in the main relief pressure setting will increase lifting power, improving operability and efficiency.



SELECTABLE BOOM MODE

Two boom modes can be selected with the Boom Mode switch. Power Mode yields higher digging capability by increasing boom lower force for better penetration; Comfort Mode decreases boom lower force for less stress to the structure and smoother operation.



OPERATOR CONTROL

The EX1200-7 is not only designed to provide a comfortable experience, it also allows for ultimate control. Intuitive and advanced features empower the operator to personalize and streamline their work environment for improved workflow and better productivity.



MULTI-FUNCTIONAL DISPLAY

A multi-functional display provides key machine information, performance indicators, and on-board troubleshooting functionality with an integrated dial switch interface and 7-inch, high definition, color, multi-monitor screen. The display is fitted with an LED backlight to improve clarity and reduce reflective glare. 32 languages are provided for easier control and recognition.



MULTI-FUNCTIONAL CONTROLLER

A dial type multi-functional controller makes operation easy and intuitive. Frequently used switches are located on the right hand side console panel within easy reach of the operator.

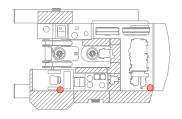
POWER BOOST SWITCH

When digging in hard rock environments, Power Boost Switch can be temporarily activated to increase pump pressure and maximize hydraulic power in the front attachment.

SAFETY

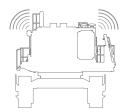
At Hitachi, safety is paramount. This design philosophy, which has evolved over years of experience, is implemented in the EX1200-7 layout to create a safer and more maintainable machine.

Sophisticated safety features, which the industry has come to expect from Hitachi, have been elevated to a new level. Improved pathways, handrails, and dual isolator switch as standard all make for a safer working environment.



ENGINE STOP SWITCHES

Engine stop switches located in both the engine room and cab allow for ease of access.



TRAVEL MOTION ALARM

An audible alarm provides warning to surrounding vehicles and personnel when the excavator is travelling.



REAR VIEW CAMERA

A rear view camera is located on the machine counterweight so the operator has a wider field of view when checking rearward on the cab's LCD monitor. This enhances safety during both swing and travel.

The operation status icons and rear view monitors can be displayed simultaneously without the hassle of having to switch between displays.



DUAL ISOLATOR SWITCH

The conveniently located dual isolator switch offers the option to deactivate the engine and battery individually.

When inspections and maintenance are required, the battery isolator provides the benefit of isolating both the positive and negative terminals of the battery for a safe working environment. The engine isolator deactivates the engine starter motor while allowing battery power to the electric system for troubleshooting, enhancing safety and maintainability.



OPERATOR CABIN

Laminated windows on the front of the cab and tinted windows on the sides reduce heat, glare and harmful UV rays. Sound-suppression further enhances ergonomics and comfort for the operator. The Level II Operator Protective Guard (OPG) provides secure protection from falling objects, ensuring operator safety.

AMENITIES

Operator amenities are designed to maximize comfort and productivity and include hot and cool box, multiple drink holders, 12V power supply, stereo speakers, external audio input, audio device storage box, large storage space to the seat rear, and dooractivated dome light.



OPERATOR COMFORT

The EX1200-7 is engineered with a superior level of comfort for an operator experience like no other. The ergonomic layout, intelligent Multi-Functional Display, and enhanced climate control system create an operating environment that lessens fatigue and increases productivity.



CLIMATE CONTROLLED AIR CONDITIONING

The pressurized cab's climate controlled air conditioning helps to overcome environmental extremes. Optimized filtering of interior and exterior air combined with the new flexi-vent system provides a personalized and balanced environment that meets operator demands.



OPERATOR SEAT

Specifically designed for use in the mining industry, the cab's weight-adjusting cushioned seat allows the operator to customize suspension settings. An optional air suspension seat can be activated by a single switch, and will automatically calculate optimal cushioning according to operator weight. These features enhance comfort and minimize vibration.



FLUID-FILLED ELASTIC MOUNTS

The cab rests on 6-point, support type, fluid-filled elastic mounts. These significantly reduce shocks and vibration for operator comfort, and improve cab durability. These mounts can easily be replaced from underneath the cab floor bed without needing to lift the cab.



ROLL SCREENS (OPTIONAL)

Retractable front and side roll screens reduce heat buildup in the cab, improving efficiency of the climate controlled air conditioner for a superior operating environment.



EASE OF MAINTENANCE

Hitachi believes in safe and simplified maintenance. That's why the EX1200-7's unique modular design, combined with spacious passageways and work platforms, provides clear access for daily upkeep and major component inspections.

Several innovative new features improve serviceability of the EX1200-7, providing the ease of maintenance functionality customers have come to expect from Hitachi.



MAINTENANCE ALERTS & TROUBLESHOOTING

Each time the machine is turned on, the monitor will prompt regular maintenance. The operator can activate specific prompts to appear when needed for peace of mind. Error codes can be displayed on the main screen by authorized service personnel for quick troubleshooting.



MAINTENANCE ACCESS

Wide center walkways and open service areas offer ease of access for daily maintenance tasks and make engine, hydraulic, and electrical component inspections easy.



CENTRALIZED FILTER SYSTEM

Frequently accessed filters are now conveniently located in the center access way.



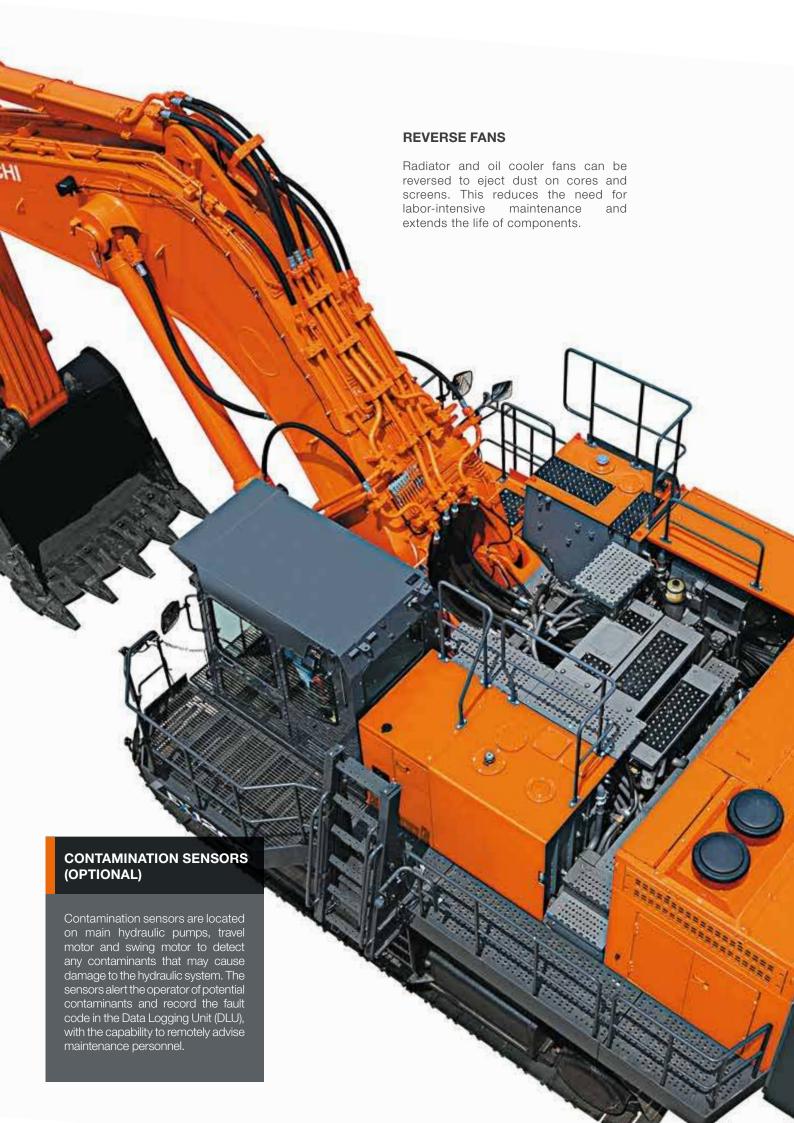
AUTO-LUBRICATION SYSTEM (OPTIONAL)

The EX1200-7 comes with the introduction of an optional auto-lubrication system for a bulk excavation front attachment, which supplies grease to the superstructure including bucket pins. The advanced system comes redesigned with a 95L large capacity grease tank, new grease pump, in-line grease filter and breather with filter, resulting in a more reliable system with less downtime.



FUEL FAST FILL PIPING (OPTIONAL)

The optional fast-filling system provides easy access from the ground to refill fuel. The fast fill piping can also be fitted with an optional quick coupler.





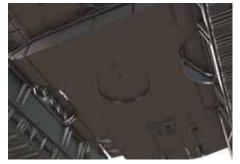


CENTER TRACK FRAME

Hitachi's exclusive center track frame delivers optimal stress dispersion, through the use of specially designed forged steel parts, to reduce the chance of failure in critical high-stress areas. This guarantees a stronger frame with improved durability.

FORGED SWING CIRCLE

A forged swing circle distributes stress evenly around the most demanding areas of the component, improving machine sturdiness.



CENTER FRAME UNDERGUARD (OPTIONAL)

The newly designed heavy duty guard protects hoses located in the track center frame from rocks and debris ingress, providing extra protection and reliability.

AUTOMATIC TRAVEL SHIFTING

When the track identifies an excessive resistance such as hill climb or soft ground while traveling in high speed mode, the system automatically shifts to low speed for better traction. Once resistance is reduced, the travel shift reverts to original speed.



designed for

DURABILITY

Longevity is a cornerstone of Hitachi's EX-7 excavators. Advanced computer modelling, specialized forgings, and track shoes combine to provide a dependable and flexible solution for all mining operations.



RIGID BOX DESIGN

Computer assisted analysis has been used to determine the most effective design for frame longevity, to ensure the machine withstands the demands of any mining operation.



TRACK SHOES

Improved Hitachi track link design mitigates premature failure of the master pin, increasing durability.



OIL-FILLED ROLLERS & IDLERS

The oil-filled idlers and upper and lower rollers eliminate the need for daily lubrication, helping reduce maintenance costs.



FULL TRACK GUARD (OPTIONAL)

A full track guard prevents link mistracking when the EX1200-7 is operating on a rocky surface for extra assurance.





RELIABILITY

Evolving from years of operational experience and engineering excellence, the Hitachi EX-7 series of excavators continue to drive innovation in the mining industry. Advanced technology, enhanced durability, state-of-the-art safety features, and superior operational performance combine to make the EX1200-7 a reliable mining solution.



GREASE-LESS CENTER JOINT

The redesigned center joint employs the machine's hydraulic oil to self-lubricate, reducing the need for daily maintenance.



FRONT ATTACHMENT HOSES

Hitachi's hose design is based on a cyclic fatigue rate to maximize longevity and improve safety. Front attachment hoses have been rearranged from the traditional arch style to an underslung configuration to remove the need for clamping, reduce chafing and increase reliability.



BUCKET LINKAGE

Floating pin design is adopted for bucket linkage. This helps to reduce wear by evenly distributing the load around the pin and minimizing dust ingress. A replaceable thrust plate minimizes maintenance time caused by extreme contact wear to the surface.

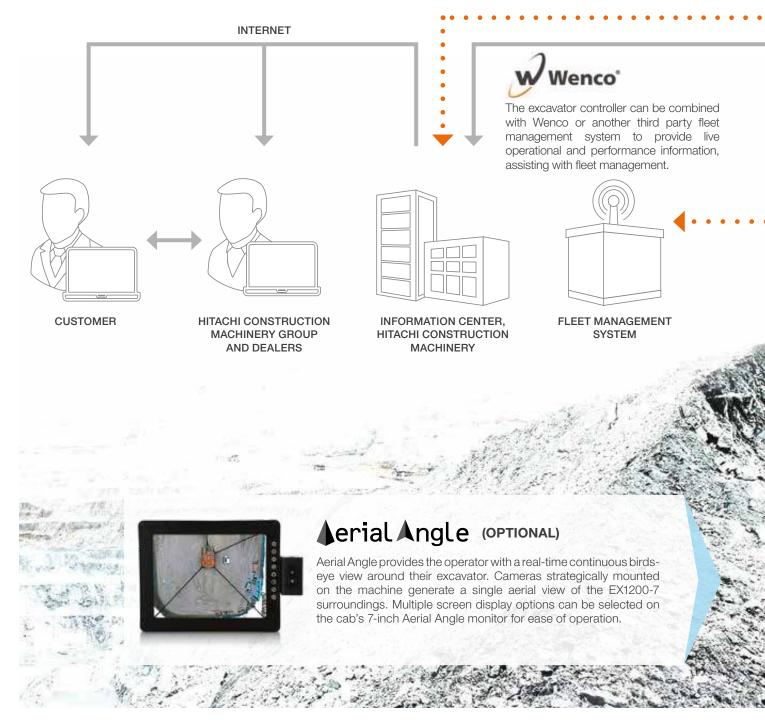


UPPER ROLLERS

The EX1200-7 undercarriage has three single-sided upper rollers on each side of the track frame. These rollers maintain track shoe clearance and provide protection from debris buildup, reducing shoe and roller wear for a more reliable machine.

INTELLIGENCE

Hitachi's EX-7 series of excavators connect physical and digital technologies to drive transformation in the mining industry. Utilizing extensive onboard sensors, diagnostic tools, real time data and advanced software, the EX1200-7 has exceptional intelligence that empowers the operator.

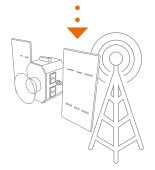


GLOBAL E-SERVICE

Global e-Service is a Hitachi web-based platform which sends vital machine information directly to the customer in an easy-to-understand format.

SATELLITE / GPRS COMMUNICATION (OPTIONAL)

Standard machine information is transmitted daily through either satellite or GPRS (General Packet Radio Service) communication, sending data directly to Hitachi's Global e-Service platform to support the mining operation.



ANTENNA (GPRS) OR SATELLITE



SPECIFICATIONS

ENGINE

Model Cummins QSK23-C

Rated power

SAE J1995, gross 567 kW (760HP) at 180 0 min⁻¹ (rpm)

DEF tank capacity

(T4F only) 145 L

HYDRAULIC SYSTEM

 Main pumps
 3 variable-displacement, swash plate type axial piston pumps

 Max. oil flow
 3 X 520 L/min

 Pilot pump
 Gear pump

 Max. oil flow
 56.0 L/min

Max. oil flow 150 L/min

UPPER STRUCTURE

Swing speed 5.2 min-1 (rpm)

UNDERCARRIAGE

Travel speeds High: 0 to 3.5 km/h Low: 0 to 2.4 km/h

Maximum traction force ... 707 kN (72100 kgf)
Gradeability 70% (35 degree) max.

WEIGHTS AND GROUND PRESSURE

Loading Shovel

Equipped with 6.5 m³ (ISO Heaped) bottom dump bucket

Shoe type	Shoe width	Operating weight	Ground pressure	
Double grousers	700 mm	117 000 kg	148 kPa (1.51 kgf/cm²)	
	900 mm	118 00 kg	116 kPa (1.19 kgf/cm²)	

Backhoe

EX1200-7: Equipped with 9.0 m boom, 3.6 m arm, and 5.2 $\rm m^3$ (ISO heaped) bucket

Shoe type	Shoe width	Operating weight	Ground pressure	
Double grousers	700 mm	115 000 kg	145 kPa (1.48 kgf/cm²)	
	900 mm	116 000 kg	114 kPa (1.17 kgf/cm²)	

EX1200-7 BE-front: Equipped with 7.55 m BE-boom, 3.4 m BE-arm, and 7.0 m $^{\!3}$ (ISO heaped) bucket

	Shoe type	Shoe width	Operating weight	Ground pressure	
	Double grousers	700 mm	117 000 kg	148 kPa (1.51 kgf/cm²)	
		900 mm	118 000 kg	116 kPa (1.19 kgf/cm²)	

FCO configuration only

ATTACHMENTS LOADING SHOVEL

Bucket Capacity (ISO Heaped)

5.9 m³: Material density 10 000 kg/m³ or less 6.5 m³: Material density 1 800 kg/m³ or less

Bucket

Capacity	Width	No. of teeth	Weight	Type	Materials density
ISO 7546 (Heaped 2:1)					
5.9 m ³	2 510 mm	6	10 000 kg	•	1 800 kg/m³ or less
6.5 m ³	2 700 mm	6	9 390 kg	0	1 800 kg/m³ or less

Bottom dump type general purpose bucket
Bottom dump type rock bucket

ATTACHMENTS BACKHOE

Bucket Capacity (ISO Heaped)

5.2 m³: Material density 1 800 kg/m³ or less 7.0 m³: Material density 1 800 kg/m³ or less

Bucket

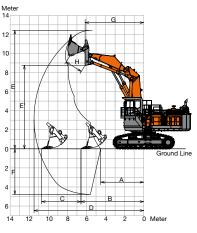
Capacity	Width		No.			
ISO 745 1 (Heaped 1:1)	Without shroud	With shroud	of teeth	Weight	Type	Materials density
5.2 m ³ 2 140 mm		2 140 mm	5	5 450 kg	0	1 800 kg/m³ or less
7.0 m ^{3*}	2 640 mm	2 640 mm	5	7 860 kg	0	1 800 kg/m³ or less

O General purpose bucket

^{*} BE (Bulk Excavation) Front Attachment

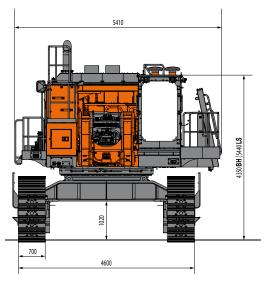
WORKING RANGES

Loading Shovel



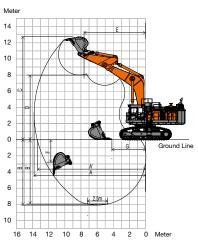
		(Unit: mm)		
Buc ISO	ket capacity 7456 (Heaped 2:1)	6.5 m ³		
А	Min. digging distance	4 510		
В	Min. level crowding distance	6 580		
С	Level crowding distance	4 370		
D	Max. digging reach	11 500		
Е	Max. cutting height	12 410		
E'	Max. dumping height	8 750		
F	Max. digging depth	4 780		
G	Working radius at max. dumping height	6 140		
Н	Max. bucket opening width	1 880		
Arm crowding force on ground		585 kN (59 700 kgf)		
Buck	et digging force	709 kN (72 300 kgf)		

DIMENSIONS



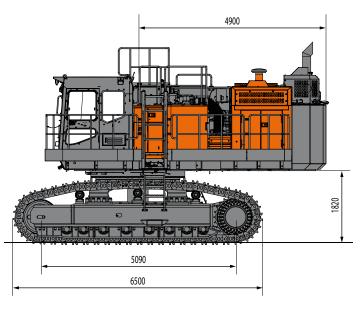
BH - Backhoe **LS** - Loading shovel

Backhoe



				(Unit: mm)	
	Вс		7.55 m BE- boom	9.0 m	
	An		3.4 m BE-arm	3.6 m	
	Α	Max. digging reach	13 790	15 350	
	A'	Max. digging reach (on ground)	13 410	15 010	
е	В	Max. digging depth	8 100	9 380	
	B'	Max. digging depth (2.5m level)	7 960	9 260	
	С	Max. cutting height	12 340	13 460	
	D	Max. dumping height	8 010	9 080	
	D'	Min. dumping height	3 220	4 160	
	Е	Min. swing radius	6 770	7 740	
	F	Max. vertical wall	4 440	6 450	
	G	Min. level crowding distance	4 210	5 790	
		and and all marks as forms	569 kN	482 kN	
		icket digging force O)*	58 000 kgf	49 200 kgf	
	Λ	m around force	438 kN	430 kN	
		m crowd force O)*	44 700 kgf	43 900 kgf	

 $^{{}^{\}star}\text{This}$ is the calculated value at the loading point (Cutting Edge) conforming to ISO.



PASS MATCH

Best match: 4–6 passes Potential match: 3–8 passes

Model		60t class truck	100t class truck	EH3500AC-3	EH4000AC-3	EH5000AC-3
EX1200-7	BH (7.0 m ³)	5				
LX1200-1	LD (6.5 m ³)	6				
EX1900-6	BH (12 m ³)	3	5			
EX1900-6	LD (11 m³)	4	6			
EX2600-7	BH (17 m ³)		3	6	8	
EA2000-7	LD (15 m ³)		4	8		
EX3600-6	BH (22 m ³)		3	5	6	8
EX3000-0	LD (21 m ³)		3	6	7	
EX5600-7	BH (34 m ³)			3	4	5
EX3000-7	LD (29 m³)			4	5	7
EX8000-6	BH (43 m ³)				3	4
EX6000-6	LD (40 m ³)			3	4	5

EQUIPMENT

STANDARD EQUIPMENT

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

ENGINE

- Alternator belt auto-tensioner
- Auto-idle system
- Cartridge-type engine oil filter
- Cartridge-type fuel filter (Tier 4 Final only)
- Coolant filter
- Dry-type air filter with clean dust cup
- Element-type fuel filter
- ECO mode control
- Fan guard
- H/P mode control
- Isolation-mounted engine
- Overheat prevention control
- Power mode control
- Radiator, air cooler and oil cooler with dust protective net
- SCR muffler (Tier 4 Final only)
- 140A alternator

HYDRAULIC SYSTEM

- Auto power lift control
- Boom mode selector system
- Control valve with main relief valve
- Engine speed sensing system
- E-P control system
- Forced-lubrication and forced cooling pump drive system
- Full-flow filter
- HIOS IIIB (Human & Intelligent Operation System)
- Line filter (Delivery filter)
- Overheat prevention control
- Pilot filter
- Power Boost Switch
- Pump drain filter
- Reverse Fan system
- Suction filter

CAB

- Adjustable armrests
- Adjustable reclining seat
- All-weather sound-suppressed steel integrated cab
- Ashtray
- Auto air conditioner with defroster
- Auto-idle switch

- Auto-tuning AM-FM radio
- Cigarette lighter
- Digital clock
- Dome light linked to door
- Drink holder with hot and cool functions
- Electrical horn
- Engine control dial
- Evacuation hammer
- External input port (Aux terminal)
- Floor mat
- Footrest
- Hot and cool box
- Intermittent wiper interlocked with front windshield washer
- Laminated glass windshield
- Large storage space
- OPG top guard level II (ISO)
- Pilot control shut-off lever
- Reinforced/tinted (Green color) glass side and rear windows
- Seat belt
- Small caddy
- 12 V power supply
- 2x speakers

MONITOR SYSTEM

• Meters:

Auto-idle

DEF level gauge

Engine coolant temperature gauge

Fuel gauge

Hour meter

• Warning indicators:

Air-filter restriction

Alternator

Auto lubrication

DEF level (Tier 4 Final only)

Engine oil level

Engine oil pressure

Engine stop

Engine warning

Fuel level

Hydraulic oil level

Overheat

Preheat

Pump transmission oil pressure

Radiator water level

DATA LOGGING SYSTEMS

• DLU (Data Logging Unit)

LIGHTS

- 1x boom light
- 1x step light
- 2x cab lights
- 2x counterweight lights
- 2x working lights

UPPER STRUCTURE

- Centralized lubrication system for swing bearing
- Control valves with main relief valves and port relief valves
- Electric grease gun with hose reel
- Rear view camera
- Slow return orifices and make up valves for cylinder circuits
- Undercover
- 18 000 kg counterweight

UNDERCARRIAGE

- Hydraulic (Grease) track adjuster with shock absorbing recoils spring
- Spring-set/hydraulic-released disc type parking brake
- Track and idler guards
- Travel motor cover
- 700 mm shoe

MISCELLANEOUS

- Auto-lubrication system for frontattachment (except bucket arm joint part)
- Battery isolator switch
- Elevated cab (for Loading Shovel)
- ISO conforming stairs and handrails
- Slide ladder
- Slip resistance plate
- Starter isolator switch
- Wide side walk

OPTIONAL EQUIPMENT

- Additional fuel filter
- Additional travel motion alarm
- Additional travel motion a
- Additional 1x boom lightAdditional 2x operating lights
- Aerial Angle
- Air suspension heated seat
- Bucket auto lubrication system(BE front)
- CAB front guard
- CAB front guard
- Center frame underguard
 Cold weather package*
- Communication system** GPRS communication system

Satellite data transmitting system

- Contamination sensorElectric fuel refilling pump device
- Electric fuel refilling
 Fuel refilling piping
- Full track guard
- Hand rail on oil cooler, radiator, counter weight, air cleaner
- counter weight, air clear
- High altitude applicationHigh cab kit (for Backhoe)
- Large sized air cleaner
- LC side frameMarine specification

- Pre-cleaner, Full view type, Top spin type
- Right and left side cameras
- Right and is
- Roll screens
- Sun visorSwing alarm
- Tool kit
- Travel motion alarm device
- USB supplyWIU (Wireless Interface Unit)

• 900 mm shoe

*Engineered on request **The availability of the system depends on licensing regulations in each country.

Please contact Hitachi dealer for more information.

Before using a machine with a satellite communication system or telecommunication 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.