KOBELCO

SK220XDLC

Bucket Capacity :

0.80 - 1.00m³ (ISO heaped)

Engine Power :

118KW / 2,000 min^{-1}
(ISO 14396)

Operating Weight :

22,500 kg

We Save You Fuel
Achieving a Low-Carbon Society

Power Meets Efficiency

In line with KOBELCO's concept of mining-friendly construction machinery that will work long and hard on any site on the planet, the rugged machine body is newly designed, and comprehensive reinforcement makes the attachment more robust.
It all adds up to KOBELCO's toughest ever mining excavator.
The latest hydraulics technology delivers both high-powered output and lower fuel consumption.
As the 10th generation model of KOBELCO's SK series, the SK220XDLC meets the needs of the most punishing mining sites with a performance that simply astounds.

*in ECO-mode compared to S-mode on the SK210HDLC-8

Even stronger attachment

Reinforced arm exhibits strength

Thick steel plate NEW

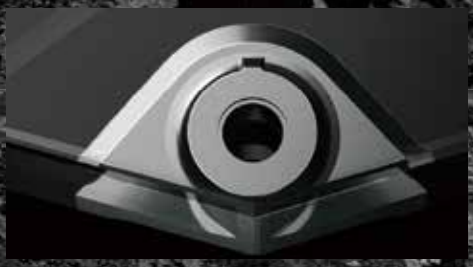
Arm top

Thickness of steel plate has been increased.

Arm foot

Base plate thickness has been increased.

Modified Foot Boss Shape NEW



The arm foot boss shape has been modified and improved to distribute stress, delivering more strength for tasks like digging next to a wall.

Rock Guards

Specially designed long, solid rock guards installed to prevent damage to arm.

Increase in productivity means "Power"

The boom and arm that take the greatest punishment are significantly reinforced.

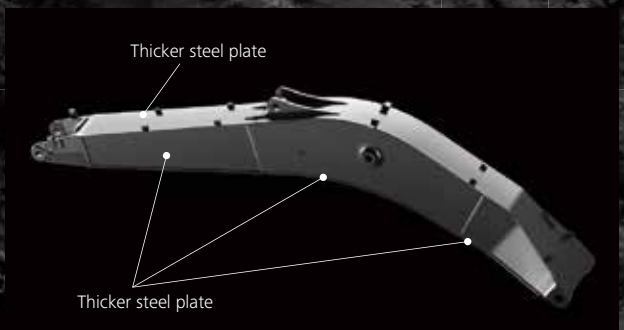
Upper under covers protect machine body

Upper Under Covers

Thick covers with increased durability compared to standard models.

Newly developed mining boom made of thicker steel plate

Featuring an XD Boom NEW



The XD boom features stronger plates compared to the HD booms of standard machines, which increases longevity even under the toughest working conditions.

Big cross-section boom

Big cross-section boom for unbeatable durability under harsh working conditions

Increase in productivity means “Power”

Powerful travel system for easy transit over loose rocks,
and highly reliable filtration system ensure higher machine performance.

Crawlers Built for Unbeatable Durability

Reinforced Guide Frame

Reinforced guide frame prevents deformation caused by impact or encroaching of loose stones.

Reinforced step

Design of the step uses strong, thick-plate steel, to stop large rocks impacting the travel motor.

Track Guides

Large, reinforced track guides are installed in three locations.

Double-support outer flange upper rollers

Thicker steel plate for shoes

Reinforced HD shoes of thick steel plate to master rough,stony ground.

Track Links

The size and durability of the track link are increased compared to standard models.

Reinforced Travel Motor Cover

Rear of travel motor cover is reinforced.

Lower Frame Underside Cover

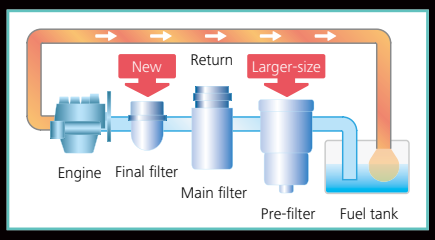
Hydraulic piping and equipment protected against damage from rubble and stony ground.

Improved Filtration System Reliability

Clean, contaminant-free fuel and hydraulic fluid are essential to stable performance.
The improved filtration systems reduce the risk of mechanical trouble and enhance longevity and durability.

Fuel filter NEW

The pre-filter with built-in water separator has 1.6 times more filter area compared to the previous models and with a new final stage maintenance free fuel filter to maximize filtering performance.

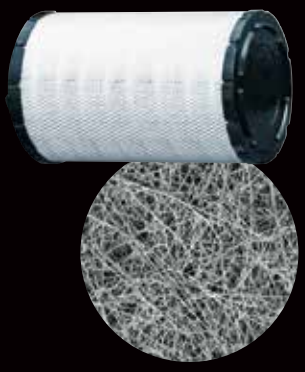


Hydraulic Fluid Filter NEW

Recognized as the best in the industry, our super-fine filter separates out even the smallest particles. New cover prevents contamination when changing filters.

Metal mesh cover air cleaner NEW

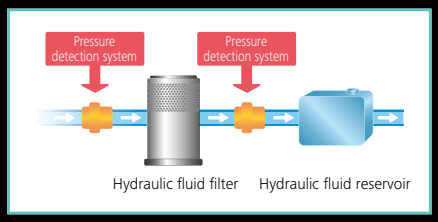
Metal mesh cover ensures strength and durability.



Enlarged filter image

Hydraulic Fluid Filter Clog Detector NEW

Hydraulic tank pressure sensor monitors the pressure difference between the return line and tank inside pressure to determine the degree of clogging. If the difference exceeds a predetermined level, a warning appears on the multi-display, so any contamination can be trapped by the filter and replaced before it reaches the hydraulic fluid in the tank.



Evolution Continues, with Improved Fuel Efficiency.

19%* Higher fuel Saving means "Efficiency"

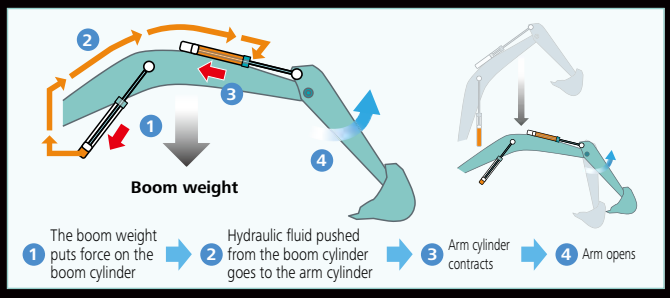
The new arm regeneration flow system more efficiently controls hydraulic fluid flow, and significant reduction of in-line resistance and pressure loss boosts fuel efficiency by about 19%*.

* in ECO-mode compared to S-mode on the SK210HDLC-8

Hydraulic System: Revolutionary Technology Saves Fuel

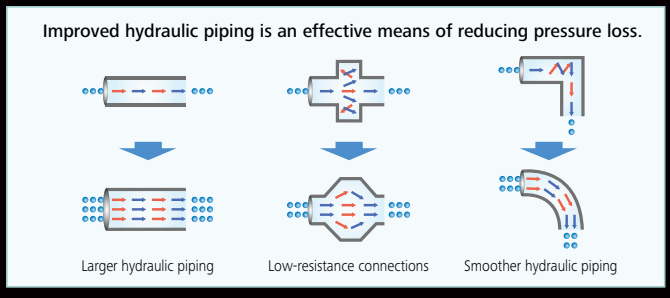
Arm Interflow System NEW

When lowering the boom, this system uses the downward force generated by the boom's weight to push fluid to the excavator arm cylinder. This greatly reduces the need to apply power from outside the system.



Hydraulic circuit reduces energy loss

We have made every effort to enhance fuel efficiency by minimizing hydraulic pressure resistance, improving the hydraulic line layout to control friction resistance loss and minimizing valve resistance.



Get More Done Faster

2.94 m arm (Bucket capacity 0.8m³)

■ Max. Bucket Digging Force

Normal: **143kN**

With power boost: **157kN**

■ Max. Arm crowding Force

Normal: **102kN**

With power boost: **112kN**

■ Max digging reach:

9,900 mm

■ Max digging depth:

6,700 mm

■ Max vertical digging depth:

6,100 mm

Piping for Breaker

Piping for breaker is fitted as standard.

In Pursuit of Improved Fuel Efficiency

Operation Mode NEW

Fuel consumption is lower in H-mode/S-mode/ECO-mode in comparison with the previous model (Generation 8).

■ Compared to previous models

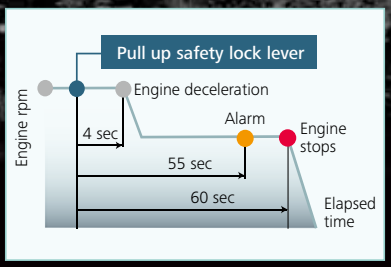
H H-mode • • • About 16% improvement

S S-mode • • • About 14% improvement

E ECO-mode • • • About 19% improvement

AIS (Auto Idle Stop)

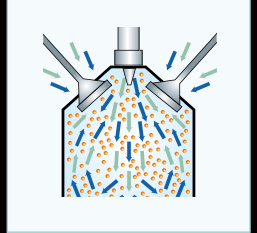
If the boarding/disembarking lever is lifted up, the engine will stop automatically.
This eliminates wasteful idling during standby, saving fuel and reducing CO_2 emissions as well.



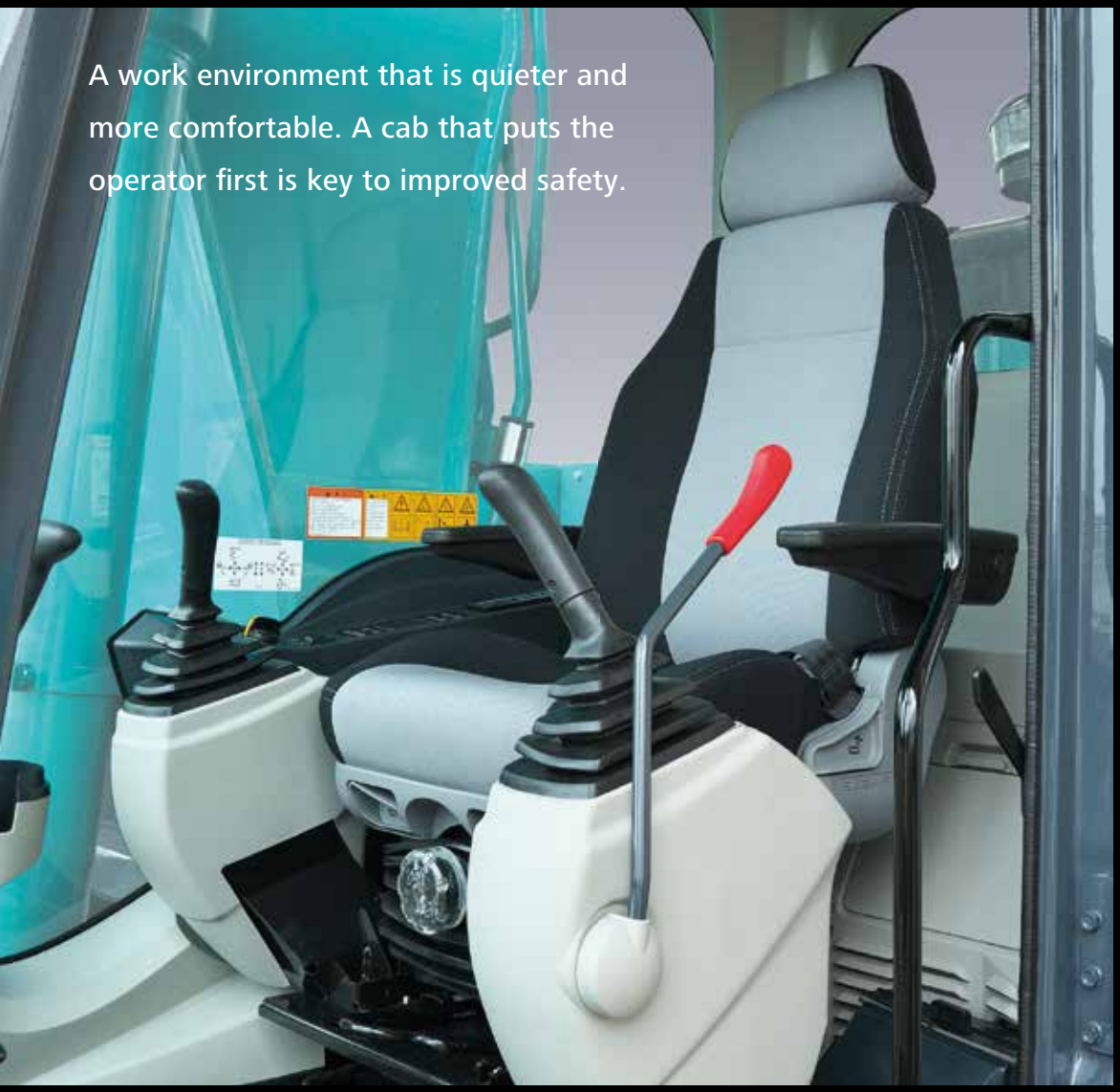
Pursuing maximum fuel efficiency

Common rail system

High-pressure injection atomizes the fuel, and more precise injection improves combustion efficiency. This also contributes to better fuel economy.



Comfortable Cab Is Now Safer than Ever.



A work environment that is quieter and more comfortable. A cab that puts the operator first is key to improved safety.

Large cab NEW

4 % larger than the previous cab capacity. Relaxing environment allows work to be performed in comfort.

Air Conditioner Louvers behind the Seat NEW

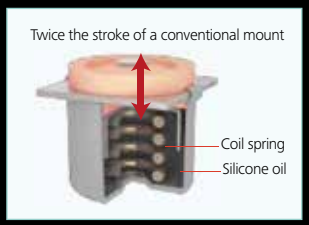
The large air-conditioner has louvers on the back pillars that blow from behind and to the right and left of the operator's seat. They can be adjusted to put a direct flow of cool/warm air on the operator, which means a more comfortable operating environment.

Super-Airtight Cab NEW

The high level of air-tightness keeps dust out of the cab.

Low Vibration NEW

Coil springs absorb small vibrations, and high suspension mounts filled with silicone oil reduce heavy vibration. The long stroke achieved by this system provides excellent protection from vibration.



Multi-Display in Color NEW

Brilliant colors and graphic displays are easy to recognize on the LCD multi-display in the console. The display shows fuel consumption, maintenance intervals, and more.

Fuel consumption

Maintenance

Breaker mode

1. Analog gauge provides an intuitive reading of fuel level and engine water temperature
2. Green indicator light shows low fuel consumption during operation
3. Fuel consumption/Switch indicator for rear camera images
4. Digging mode switch
5. Monitor display switch

One-Touch Attachment Mode Switch

A simple touch of a button, switches the hydraulic circuit and flow amount to match attachment changes. Icons help the operator to confirm the proper configuration at a glance.

Comfort

Broad View Liberates the Operator NEW

The front window features one large piece of glass without a center pillar on the right side for a wide, unobstructed view.

Large Cab Is Easy to Get in and Out of NEW

The expanded cab provides plenty of room for a large door, more headroom and smoother entry and exit.

More Comfortable Seat Means Higher Productivity

Vibration absorbing suspension seat

Seat recliner can be pushed back flat

Double slides allow adjustment for optimum comfort

A Light Touch on the Lever Means Smoother, Less Tiring Work NEW

It takes 38% less effort to work the operation lever, which reduces fatigue over long working hours or continued operations.

Interior Equipment Adds to Comfort and Convenience

24V outlet

Spacious storage tray

Large cup holder

Safety

ROPS Cab NEW

ROPS (Roll-Over-Protective Structure)-compliant cab clears ISO standards (ISO-12117-2: 2008) and ensures greater safety for the operator should the machine tip over.

Wide view during operations High Visibility for Safety

Greater safety assured by rearview mirrors on left and right.

Hammer for emergency exit

Rear view camera (option)

A rear view camera is installed as option to simplify checking for safety behind the machine. The picture appears on the monitor.

Efficient Maintenance Keeps the Machine in Peak Operating Condition.

Examples of displaying maintenance information

Machine Information Display Function

- Displays only the maintenance information that's needed, when it's needed
- Self-diagnostic function provides early-warning detection and display of electrical system malfunctions
- Service-diagnostic function makes it easier to check the status of the machine
- Record function of previous breakdowns including irregular and transient malfunction

Easy, On-the-Spot Maintenance

There is ample space in the engine compartment for a mechanic to do maintenance work inside. The distance between steps is lower so entry and exit is easier. And the mechanic can work in comfort, without contortions or unnatural body positions. Finally, the hood is lighter and easier to raise and lower.

Generous space for maintenance work

Step/Hand rail

Maintenance Work, Daily Checks, Etc., Can Be Done from Ground Level

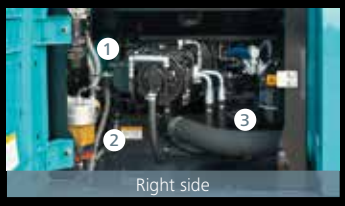
The layout allows for easy access from the ground for many daily checks and regular maintenance tasks.

Double-element air cleaner

Left side

Laid out for easy access to radiator and cooling system elements

Fuel filter with built-in water-separator / Fuel filter

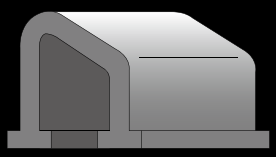


Right side

1. Fuel filter
2. Fuel filter with built-in water-separator
3. Engine oil filter

Easy Cleaning

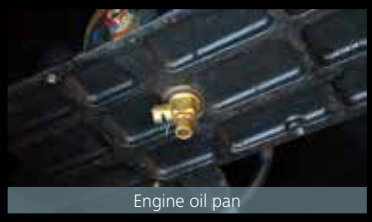
Crawler frame



Special crawler frame design for easy mud removal cleaning.

Detachable two-piece floor mat

Detachable two-piece floor mat with handles for easy removal. A floor drain is located under floor mat.



Engine oil pan

Engine oil pan equipped with drain valve.

More Efficient Maintenance Inside the Cab

Internal and external air conditioner filters can be easily removed without tools for cleaning.

Air conditioner filters

Engine

Model	HINO J05E
Type	Four-stroke liquid-cooled direct injection diesel turbo charged with intercooler
No. of cylinders	4
Bore and stroke	112 mm X 130 mm
Displacement	5.123 L
Rated power output	114 kW/2,000 min^{-1} (ISO9249)
	118 kW/2,000 min^{-1} (ISO14396)
Max. torque	569 N•m/1,600 min^{-1} (ISO9249)
	592 N•m/1,600 min^{-1} (ISO14396)

Hydraulic System

Pump	
Type	Two Variable displacement piston pumps + one gear pump
Max. discharge flow	2 X 220 L/min, 1 X 20 L/min
Relief valve setting	
Boom, arm and bucket	34.3 MPa {350 kgf/cm^2}
Power Boost	37.8 MPa {385 kgf/cm^2}
Travel circuit	34.3 MPa {350 kgf/cm^2}
Swing circuit	29.0 MPa {296 kgf/cm^2}
Control circuit	5.0 MPa {50 kgf/cm^2}
Pilot control pump	Gear type
Main control valves	8-spool valve
Oil cooler	Air cooled type

Swing System

Swing motor	One fixed displacement piston pump
Brake	Hydraulic; locking automatically when the swing control lever is in the neutral position
Parking brake	Wet multiple plate
Swing speed	13.3 min^{-1} {rpm}

Attachments

Backhoe bucket and arm combination

Type			Backhoe bucket		
Bucket capacity	ISO heaped	m^3	0.80 (0.7) Side pin type	0.93 (0.8) Side pin type	1.00 (0.9) Side pin type
	ISO struck	m^3	0.59	0.67	0.76
Opening width	With side cutter	mm	1,160	1,260	1,410
	Without side cutter	mm	1,130	1,240	1,390
No. of teeth			5	5	5
Bucket weight		kg	810	860	930
Combination	2.4m short arm		○	◎	○
	2.94m standard arm		◎	○	△

◎ Standard ○ Recommended △ Loading only

Travel System

Travel motors	2 X axial-piston. Two-step motors
Travel brakes	Hydraulic
Parking brakes	Wet multiple plate
Travel shoes	49 each side
Travel speed	6.0/3.6 km/h
Drawbar pulling force	227 kN (SAE)
Gradeability	70 % {35°}
Ground clearance	435 mm

Cab & Control

Cab

All-weather, sound-suppressed steel cab mounted on the high suspension mounts filled with silicone oil and equipped with a heavy, insulated floor mat.

Control

Two hand levers and two foot pedals for travel

Two hand levers for excavating and swing

Electric rotary-type engine throttle

Boom, Arm & Bucket

Boom cylinders	120 mm X 1,355 mm
Arm cylinder	135 mm X 1,558 mm
Bucket cylinder	120 mm X 1,080 mm

Refilling Capacities & Lubrications

Fuel tank	320 L
Cooling system	18 L
Engine oil	20.5 L
Travel reduction gear	2 X 5 L
Swing reduction gear	3 L
Hydraulic oil tank	140 L tank oil level
	244 L hydraulic system

Specifications

Working Ranges

Unit: m

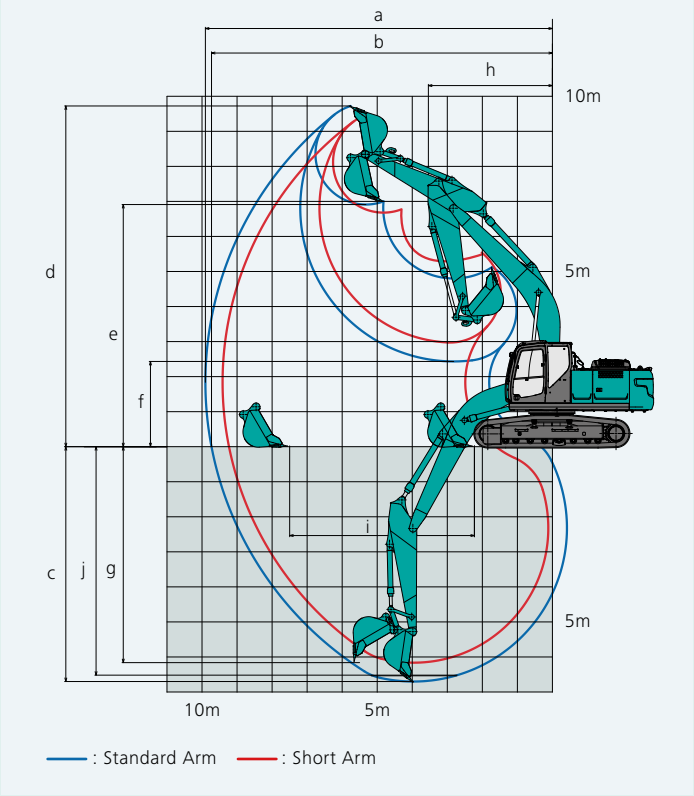
Boom	5.65 m	
Arm / Range	Standard 2.94 m	Short 2.4 m
a- Max. digging reach	9.9	9.42
b- Max. digging reach at ground level	9.73	9.24
c- Max. digging depth	6.7	6.16
d- Max. digging height	9.72	9.51
e- Max. dumping clearance	6.91	6.68
f- Min. dumping clearance	2.43	2.98
g- Max. vertical wall digging depth	6.1	5.57
h- Min. swing radius	3.55	3.56
i- Horizontal digging stroke at ground level	5.27	4.08
j- Digging depth for 2.4 m (8') flat bottom	6.52	5.95
Bucket capacity ISO heaped m³	0.8	0.93

Digging Force (ISO 6015)

Unit: kN

Arm length	Standard 2.94 m	Short 2.4 m
Bucket digging force	143 157*	143 157*
Arm crowding force	102 112*	121 133*

*Power Boost engaged.



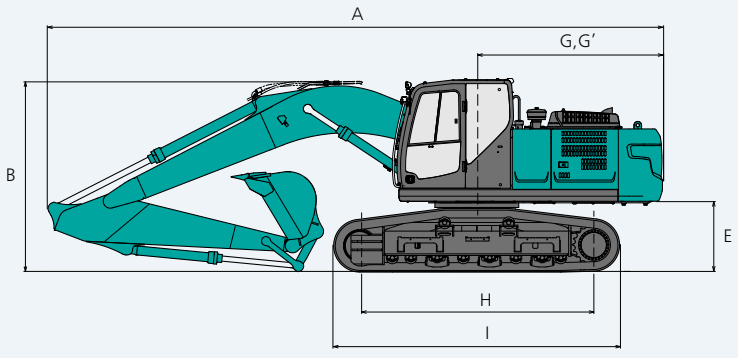
Dimensions

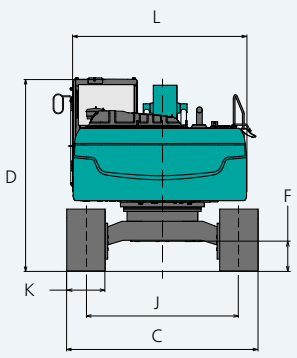
Unit: mm

Arm length		Standard 2.94 m	Short 2.4 m
A	Overall length	9,600	9,680
B	Overall height (to top of boom)	2,980	3,220
C	Overall width	2,990	
D	Overall height (to top of cab)	3,020	
E	Ground clearance of rear end*	1,070	
F	Ground clearance*	435	

G	Tail swing radius	2,910
G'	Distance from center of swing to rear end	2,900
H	Tumbler distance	3,660
I	Overall length of crawler	4,460
J	Track gauge	2,390
K	Shoe width	600
L	Overall width of upperstructure	2,710

*Without including height of shoe lug

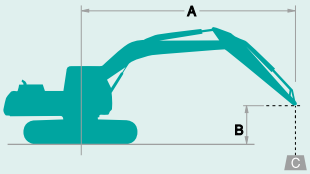




Operating Weight & Ground Pressure

In standard trim, with standard boom, 2.94 m arm, and 0.8 m³ ISO heaped bucket

Shaped		Triple grouser shoes (even height)
Shoe width	mm	600
Overall width	mm	2,990
Ground pressure	kPa	47
Operating weight	kg	22,500



Rating over front

Rating over side or 360 degrees

A: Reach from swing centerline to arm top
B: Arm top height above/below ground
C: Lifting capacities in Kilograms
Bucket: Without bucket
Relief valve setting: 34.3MPa (350kgf/cm²)

SK220XDLC		Boom: 5.65 m Arm: 2.94 m, Bucket: without Shoe: 600 mm												
A / B		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach		Radius
7.5 m	kg							*4,810	*4,810			*3,850	*3,850	6.26 m
6.0 m	kg							*5,260	*5,260			*3,560	*3,560	7.36 m
4.5 m	kg							*5,740	5,150	*5,270	3,590	*3,480	3,180	8.03 m
3.0 m	kg					*8,370	7,470	*6,490	4,870	5,430	3,470	*3,550	2,890	8.38 m
1.5 m	kg					*9,860	6,900	*7,240	4,600	5,280	3,330	*3,760	2,790	8.45 m
G.L.	kg			*5,750	*5,750	*10,540	6,600	7,200	4,410	5,180	3,240	*4,150	2,840	8.25 m
-1.5 m	kg	*6,080	*6,080	*10,050	*10,050	*10,380	6,510	7,110	4,330	5,150	3,210	*4,880	3,090	7.75 m
-3.0 m	kg	*10,650	*10,650	*13,030	12,880	*9,380	6,590	*6,940	4,380			*5,620	3,670	6.89 m
-4.5 m	kg			*9,600	*9,600	*7,030	6,860					*5,280	5,190	5.49 m

SK220XDLC		Boom: 5.65 m Arm: 2.4 m, Bucket: without Shoe: 600 mm										
A / B		3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach		Radius
7.5 m	kg									*5,730	*5,730	5.59 m
6.0 m	kg					*5,820	5,270			*5,210	4,240	6.80 m
4.5 m	kg			*7,440	*7,440	*6,220	5,100	*5,310	3,560	*5,080	3,540	7.52 m
3.0 m	kg			*9,080	7,330	*6,910	4,840	5,430	3,470	5,000	3,200	7.89 m
1.5 m	kg			*10,340	6,850	7,410	4,600	5,310	3,370	4,860	3,090	7.97 m
G.L.	kg			*10,680	6,640	7,240	4,450	5,240	3,300	5,010	3,160	7.75 m
-1.5 m	kg	*10,410	*10,410	*10,200	6,630	7,210	4,420			5,550	3,490	7.22 m
-3.0 m	kg	*11,750	*11,750	*8,830	6,760	*6,420	4,530			*5,880	4,290	6.28 m
-4.5 m	kg			*5,510	*5,510					*5,050	*5,050	4.71 m

Notes:

1. Do not attempt to lift or hold any load that is greater than these lift capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lift capacities.
2. Lift capacities are based on machine standing on level, firm, and uniform ground. User must make allowance for job conditions such as soft or uneven ground, out of level conditions, side loads, sudden stopping of loads, hazardous conditions, experience of personnel, etc.
3. Arm top defined as lift point.
4. The above lifting capacities are in compliance with ISO 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Lifting capacities marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.
5. Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine. Rules for safe operation of equipment should be adhered to at all times.
6. Lift capacities apply to only machine as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.
7. The above figures indicate machine capacity, but in practice the machine should not be used for lifting loads.

STANDARD EQUIPMENT

ENGINE
- Engine, HINO J05E, diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12V - 104Ah)
- Starting motor (24V - 5 kW), 60 amp alternator
- Automatic engine shut-down for low engine oil pressure
- Engine oil pan drain cock
- Double element air cleaner
- Pre-air cleaner

CONTROL
- Working mode selector (H-mode, S-mode and ECO-mode)
- Power Boost

SWING SYSTEM & TRAVEL SYSTEM
- Straight propel system
- Two-speed travel with automatic shift down
- Sealed & lubricated track links
- Grease-type track adjusters
- 600mm HD triple grouser shoe
- Automatic swing brake
- Tow eyes
- Travel alerm

HYDRAULIC
- Boom regeneration system
- Arm interflow system
- Auto warm up system
- Aluminum hydraulic oil cooler
- Hydraulic fluid filter clog detector
- 1 way piping (Breaker)

MIRRORS & LIGHTS
- Two rear view mirrors
- Four front working lights (One for boom, one for boom cylinder, one for right storage box and one for cab)

CAB & CONTROL
- Two control levers, pilot-operated
- Horn, electric
- Rops cab, all weather sound suppressed type
- Cab light (interior)
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat
- Headrest
- Handrails
- Intermittent windshield wiper with double-spray washer
- Tinted safety glass
- Pull-up type front window and removable lower front window
- Easy-to-read multi-display color monitor
- Automatic air conditioner
- Emergency escape hammer
- Excavator Remote Monitoring System
- 7-way adjustable suspension seat
- Double slide seat
- 24V outlet

OPTIONAL EQUIPMENT

- Refilling pump
- Rear view camera
- Cab guards
- Rotating beacon
- 2 way piping (Nibbler & Breaker)
- 2.4m^3 short arm
- 0.93m^3 bucket
- 1.0m^3 bucket

Note: Standard and optional equipment may vary. Consult your KOBELCO dealer for specifics.

EXCAVATOR REMOTE MONITORING SYSTEM

Remote Monitoring System is a satellite-based system for receiving machine information. Manage your machines anywhere in the world using the Internet. Location, workload and diagnostic data aid business operations.

Direct Access to Operational Status

Location Data
Accurate location data can be obtained even from sites where communications are difficult.

Operating Hours
A comparison of operating times of machines at multiple locations shows which locations are busier and more profitable.
Operating hours on site can be accurately recorded, for running time calculations needed for rental machines, etc.

Fuel Consumption Data
Data on fuel consumption and idling times can be used to indicate improvements in fuel consumption.

Graph of Work Content
The graph shows how working hours are divided among different operating categories, including digging, idling, traveling, and optional operations (N&B).

Maintenance Data and Warning Alerts

Machine Maintenance Data
Provides maintenance status of separate machines operating at multiple sites.
Maintenance data is also relayed to KOBELCO service personnel, for more efficient planning of periodic servicing.

Security System

Engine Start Alarm
Sends a notification if the engine is started outside of pre-defined hours.

Area Alarm
Sends a notification if the machine leaves a pre-defined area.

Note: Remote monitoring system is not applicable in some area due to country regulation of the communication lines or availability of infrastructure.

Note: This catalog may contain attachments and optional equipment that are not available in your area. And it may contain photographs of machines with specifications that differ from those of machines sold in your areas. Please consult your nearest KOBELCO distributor for those items you require. Due to our policy of continuous product improvements all designs and specifications are subject to change without advance notice.
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