STANDARD EQUIPMENT

ENGINE
- Engine, CUMMINS B4.5, diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12 V - 130 Ah)
- Starting motor (24 V - 4.5 kW), 100 amp alternator
- Removable clean-out screen for radiator
- Double element air cleaner
- Pre-air cleaner

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

SWING SYSTEM & TRAVEL SYSTEM
- Swing rebound prevention system
- Straight propel system
- Two-speed travel with automatic shift down
- Sealed track links
- Grease-type track adjusters
- Automatic swing brakes
- Three track guides

HYDRAULIC
- Boom and Arm regeneration system
- Aluminum hydraulic oil cooler
- Hydraulic Fluid Filter Clog Detector
- Pilot line filter

MIRRORS & LIGHTS
- Two rearview mirrors
- Five front LED work lights (one for boom, one for boom cylinder, one for right storage box and two for cab)

CAB & CONTROL
- Cab, all-weather sound suppressed type
- Two control levers, pilot-operated
- Horn, electric
- Integrated left-right slide-type control box
- Cab light (interior)
- Coat hook
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat
- Double slide seat
- 7-way adjustable suspension seat
- Headrest
- Handrails
- Heater and defroster
- Intermittent windshield wiper with double-spray washer
- Tinted safety glass
- Pull-up type front window and removable lower front window
- Easy-to-read color monitor
- Fuel level indicator
- Engine coolant temp indicator
- Engine oil pressure warning
- Automatic air conditioner
- Air cleaner clogging warning
- Emergency escape hammer
- GEOSCAN
- 24 V outlet

OPTIONAL EQUIPMENT

- Front, Top guard protective structures
- Various optional arms
- Various optional buckets
- 800 mm HD shoes
- Refilling pump
- Travel alarm
- Grease gun
- Filter wrench
- Toolbox
- One counterweight light (LED)
- Breaker piping

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

GEOSCAN

Total Support for Machines with Network Speed and Accuracy

GEOSCAN is a telematics 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 communication is difficult.

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

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.

Graph of Work Content
The graph shows how working hours are divided among different operating categories.



Maintenance Data and Warning Alerts

Machine Maintenance Data
Provides maintenance status of 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: 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 area. 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 notice.
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KOBELCO CONSTRUCTION EQUIPMENT INDIA PVT. LTD.
Servspaces 03, #202, 2nd Floor, D 5&6, Sector 3, Noida,
Gautam Buddha Nagar, Uttar Pradesh- 201301, India
Ph.: 0120 4079900
www.kobelco-in.com
kcei.info@kobelco.com

Inquiries To:

SK230XDLC-10E_IND_1E_2609

KOBELCO

SK230XDLC

- **Bucket Capacity :** 1.00 - 1.20 m³ (ISO heaped)
- **Engine Power :** 150 HP (112 kW)/2,000 min⁻¹ (ISO 14396)
- **Operating Weight :** 22,000 - 22,600 kg



We Save You Fuel
Achieving a Low-Carbon Society

Power Meets Efficiency

Increase in productivity means "Power"

19%* Higher fuel Saving means "Efficiency"

In line with KOBELCO's concept of heavy-duty construction machinery that will work long and hard under demanding operating conditions, the rugged machine body is newly designed, and comprehensive reinforcement makes the attachment more robust. It all adds up to KOBELCO's toughest ever heavy-duty excavator. The latest hydraulic technology delivers both powerful performance and lower fuel consumption. As the 10th generation model of KOBELCO's SK series, the SK230XDLC meets the needs of the most demanding job sites with outstanding performance.

Long-life hydraulic oil: 6,000 hours

Hydraulic Filter Replacement Cycle: 2,000 hours

Significantly extended hydraulic oil and hydraulic filter service intervals.
Reduced maintenance workload and effort, while minimizing downtime and contributing to higher operational efficiency on site.
It is applicable for bucket application.

Hydraulic Oil Replacement Interval: +20%

Hydraulic Oil Filter Replacement Interval: +100%

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

Even Stronger Attachment

Increase in productivity means "Power"

The boom and arm, which endure the most stress, are significantly reinforced.

Reinforced Arm Exhibits Strength

Thick Steel Plate



Arm top

Thickness of steel plate has been increased.



Arm foot

Base plate thickness has been increased.

Modified Foot Boss Shape



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 are installed to prevent damage to arm.

Newly Developed Reinforced Boom Made of Thicker Steel Plate

Big Cross-section Boom



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

Upper Under Covers Protect Machine Body

Upper Under Covers



Thick covers with increased durability compared to standard models.

Increase in Productivity Means “Power”

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

Crawlers Built for Unbeatable Durability



Reinforced Guide Frame

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



Track Guides

Large, reinforced track guides are installed in three locations.



Thicker Steel Plate for Shoes

Thickness of HD shoes has been increased by 1.2 times as compared to SK210HDLC-8.



Strengthened Travel Motor Cover

The plate of reinforced travel motor cover is 1.7 times thicker than that of SK210HDLC-8.



Lower Frame Underside Cover

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



Track Links

The size of the track link is increased by 8% compared to SK210HDLC-8.

Improved Reliability of Filtration System

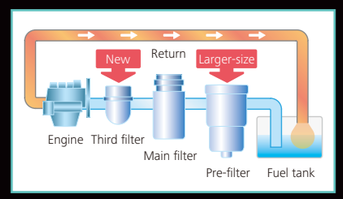
Clean, contaminant-free fuel and hydraulic fluid are essential for a stable performance.
The improved filtration systems reduce the risk of mechanical trouble and enhance longevity and durability.

Pilot Filter NEW

Removes fine contaminants to help protect hydraulic components, while the cartridge-type design improves serviceability.

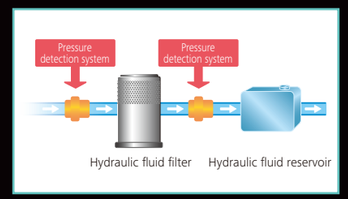
Fuel Filter

The combination of a pre-filter with a built-in water separator and a newly adopted maintenance-free third fuel filter delivers excellent filtration performance.



Hydraulic Fluid Filter Clog Detector

Hydraulic tank pressure sensor monitors the pressure difference between the return line and tank's 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 inside the filter and it can replace the trapped contamination before it reaches the hydraulic oil in the tank.



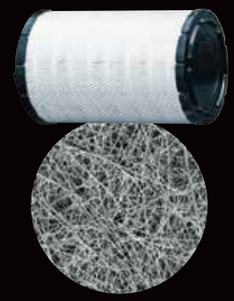
Hydraulic Fluid Filter NEW

Recognized as the best in the industry, our Long-life Premium Filter separates out even the smallest particles. New cover prevents contamination when changing filters.



Metal Mesh Cover Air Cleaner

Metal mesh cover ensures strength and durability.



Enlarged filter image

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 in the SK210HDLC-8

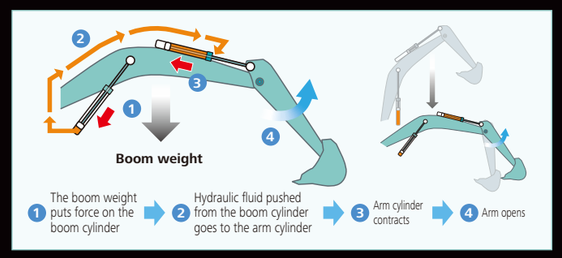
2.40 m arm (Bucket capacity 1.00 m³)

- Max. Bucket Digging Force
  - Normal: 143 kN
  - With power boost: 157 kN
- Max. Arm crowding Force
  - Normal: 121 kN
  - With power boost: 133 kN
- Max digging reach: 9,420 mm
- Max digging depth: 6,160 mm
- Max vertical digging depth: 5,570 mm

Hydraulic System: Revolutionary Technology that Saves Fuel

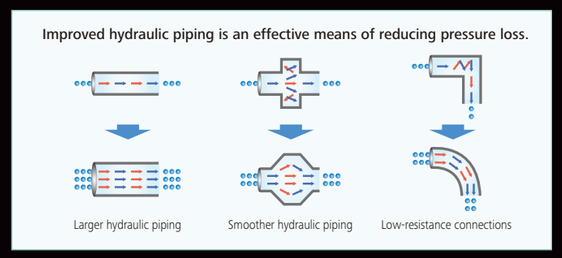
Arm Regeneration System

When lowering the boom, this system uses the downward force generated by the boom's weight to redirect 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 and improving the hydraulic line layout to control friction resistance loss and minimizing valve resistance.



In Pursuit of Improved Fuel Efficiency

Operation Mode

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

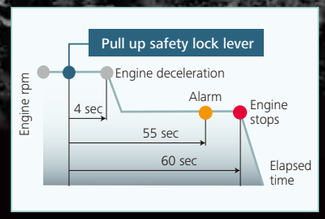
■ Compared to previous models



- H-mode ... About 16% improvement
- S-mode ... About 14% improvement
- E-mode ... About 19% improvement

AIS (Auto Idle Stop)

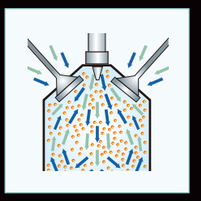
If the boarding/disembarking lever is lifted up, the engine will stop automatically.
This eliminates unnecessary idling during standby, saving fuel and reducing CO_2 emissions as well.



Committed to maximum fuel efficiency

Common Rail System

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



Pressurized Coolant Tank

The pressurized coolant tank helps reduce the frequency of coolant replenishment.



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.

Images are for illustrative purposes only. Actual product specifications may differ.

Larger Cab

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

Larger Cab is Easy to Get in and out of



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

A Lighter Touch Lever, Means Smoother, Less Tiring Work



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

Air Conditioner Louvers behind the Seat



The large air-conditioner has vents on the back pillars that blow air from behind 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



The high level of air-tightness keeps dust out of the cab. (97 pa earlier 27 pa)

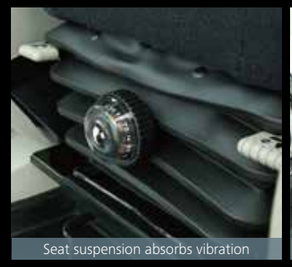
Comfort



Wide View for Operator Advantage

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

More Comfortable Seat Means Higher Productivity



Seat suspension absorbs vibration



Seat recliner can be pushed back flat



Double slides allow adjustment for optimum comfort

Images are for illustrative purposes only. Actual product specifications may differ.

Interior Equipment Adds to Comfort and Convenience



24V power outlet



Spacious storage tray



Large cup holder

Safety

Expanded Field of View for Greater Safety



Greater safety assured by rearview mirrors on left and right.



Hammer for emergency exit



LED Lights

Cab, boom and storage box lights have been upgraded to LED. In addition, an optional LED light is available on the counterweight, enhancing visibility during nighttime and low-light operations and contributing to improved safety.

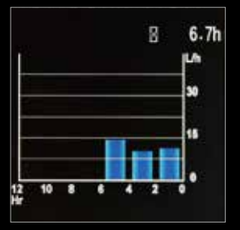
Operator-friendly Features Include Controls that are Easy to See, Easy to Use



1 Digital gauge provides an intuitive reading of fuel level and engine water temperature
2 Fuel consumption
3 Digging mode switch
4 Monitor display switch

Multi-Display in Color

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

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.

Efficient Maintenance Keeps the Machine in Peak Operating Condition.





Example for maintenance information display

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 less for easy entry and exit. And the mechanic can work in comfort, without contortions or uncomfortable body positions. Finally, the hood is light in weight and easy to lift and drop.



Generous space for maintenance work



Step/Handrail

Maintenance Work, Daily Checks, and Much More 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

Easy access to radiator and cooling system elements



Fuel filter with built-in water-separator



Main fuel filter



Third filter



Right side

1. Main fuel filter
2. Fuel filter with built-in water-separator
3. Engine oil filter
4. Pilot filter
5. Third filter

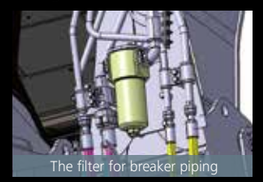
More Efficient Maintenance Inside the Cab



Air conditioner filters

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

Easy Maintenance



The filter for breaker piping

The kobelco original filter for breaker piping is installed with breaker hydraulic line.

Easy Cleaning



Detachable two-piece floor mat

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

Maintenance-Free



Pre-Air Cleaner

Automatically ejects dust, helping reduce maintenance frequency.

Specifications

Engine

Model	CUMMINS B4.5
Type	Four-stroke, water-cooled, direct-injection, diesel engine turbocharged with inter-cooler CRDI engine
No. of cylinders	4
Bore and stroke	107 mm x 124 mm
Displacement	4.5 L
Rated power output	145 HP (108 kW)/2,000 min^{-1} (ISO 9249: with fan)
	150 HP (112 kW)/2,000 min^{-1} (ISO 14396: without fan)
Max. torque	638 N·m/1,500 min^{-1} (ISO 9249: with fan)
	655 N·m/1,500 min^{-1} (ISO 14396: without fan)

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 {51 kgf/cm^2}
Pilot control pump	Gear type
Main control valve	8-spool valve
Oil cooler	Air cooled type

Swing System

Swing motor	Fixed displacement axial piston motor
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}
Tail swing radius	2,910 mm
Min. front swing radius	3,560 mm

Travel System

Travel motors	Variable displacement piston motor
Travel brakes	Hydraulic
Parking brakes	Wet multiple plate
Travel shoes	49 each side
Travel speed	6.0 / 3.6 km/h
Drawbar pulling force	228 kN
Gradeability	70 % {35°}

Cab & Control

Cab
All-weather, sound-suppressed steel cab mounted on the silicone-sealed viscous mounts and equipped with a heavy, insulated floor mat.
Control
Two hand levers and two foot pedals for travel
Two hand levers for excavating and swinging
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	17 L
Travel reduction gear	2 x 4.5 L
Swing reduction gear	2.7 L
Hydraulic oil tank	138.7 L tank oil level
	244 L hydraulic system

Attachments

Backhoe bucket and combination

Application	Working Conditions	Bucket Capacity (m^3)	Width (with side cutter) (mm)	Weight (with side cutter) (kg)	SK230XDLC	
					2.40 m Arm	2.94 m Arm
Light Duty Digging	Dry, Loose soil and Loading	1.2	1,610	1,020	□	×
		1.0	1,250	970	○	□
Rock	Blue Metal Quarry	1.0	1,250	970	○	×
Heavy Duty	Granite / Marble Quarry	1.0	1,250	970	○	×
Coal	Coal Re-Handling	1.2	1,610	1,020	□	×
		1.0	1,250	970	□	△

○: General purpose use, material weight up to 1.8t/m^3 □: General purpose use, material weight up to 1.6t/m^3 △: Light duty work, material weight up to 1.2t/m^3 ×: Not usable

Working Ranges

Unit: m

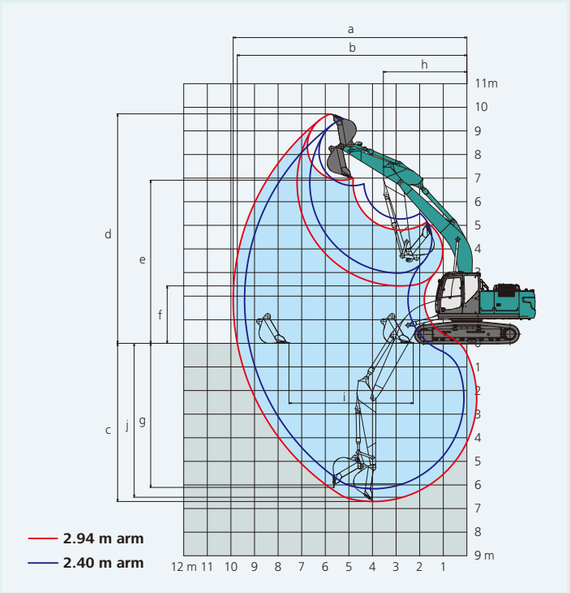
Boom	5.65 m	
Arm / Range	2.40 m	2.94 m
a- Max. digging reach	9.42	9.90
b- Max. digging reach at ground level	9.24	9.73
c- Max. digging depth	6.16	6.70
d- Max. digging height	9.51	9.72
e- Max. dumping clearance	6.68	6.91
f- Min. dumping clearance	2.98	2.43
g- Max. vertical wall digging depth	5.57	6.10
h- Min. swing radius	3.56	3.55
i- Horizontal digging stroke at ground level	4.08	5.27
j- Digging depth for 2.4 m (8') flat bottom	5.95	6.52
Bucket capacity ISO heaped m³	1.00	1.00

Digging force (ISO 6015)

Unit: kN

Arm length	2.40 m	2.94 m
Bucket digging force	143 157*	
Arm crowding force	121 133*	102 112*

*Power Boost engaged.



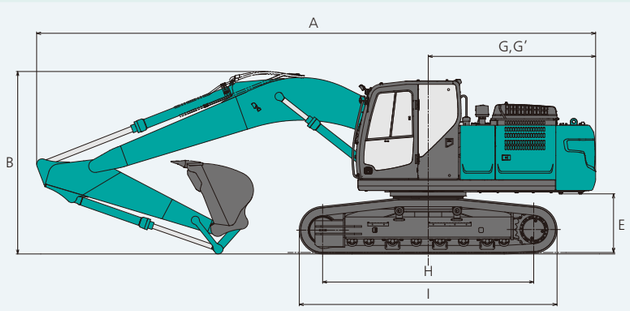
Dimensions

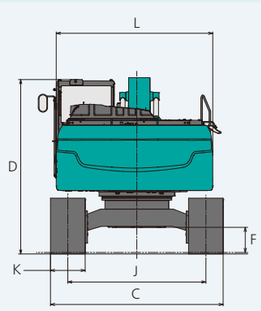
Unit: mm

Arm length		2.40 m	2.94 m
A	Overall length	9,680	9,600
B	Overall height (to top of boom)	3,160	2,980
C	Overall width of crawler	2,990	
D	Overall height (to top of cab)	3,020	
E	Ground clearance of rear end*	1,010	
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	2,780

*Without including height of shoe lug



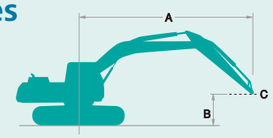


Operating Weight & Ground Pressure

In standard trim, with standard boom, 2.40 m arm, and 1.00 m³ ISO heaped bucket

Shaped		Triple grouser shoes (even height)	
Shoe width	mm	600	800
Overall width of crawler	mm	2,990	3,190
Ground pressure	kPa	45.6	35.2
Operating weight	kg	22,000	22,600

Lift Capacities



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: Lift point
Bucket: Without bucket
Relief valve setting: 37.8MPa (385kgf/cm²)

SK230XDLC		Boom: 5.65 m, Arm: 2.40 m, Bucket: without, Shoe: 600 mm, Counterweight: 4,300 kg (Power Boost)										
A / B		3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach		Radius
7.5 m	kg									*6,330	5,930	5.59 m
6.0 m	kg					*6,500	5,310			*5,770	4,280	6.80 m
4.5 m	kg			*8,310	8,020	*6,960	5,140	5,550	3,590	5,520	3,560	7.52 m
3.0 m	kg			*10,150	7,390	7,720	4,880	5,460	3,500	5,030	3,220	7.89 m
1.5 m	kg			*11,580	6,900	7,450	4,640	5,340	3,390	4,880	3,110	7.97 m
G. L.	kg			11,500	6,690	7,280	4,490	5,270	3,330	5,030	3,190	7.75 m
-1.5 m	kg	*11,490	*11,490	*11,440	6,670	7,240	4,450			5,580	3,510	7.21 m
-3.0 m	kg	*13,200	*13,200	*9,920	6,810	*7,220	4,570			*6,620	4,320	6.28 m
-4.5 m	kg			*6,240	*6,240					*5,730	5,730	4.71 m

SK230XDLC		Boom: 5.65 m, Arm: 2.94 m, Bucket: without, Shoe: 600 mm Counterweight: 4,300 kg (Power Boost)												
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							*5,300	*5,300			*4,250	*4,250	6.26 m
6.0 m	kg							*5,920	5,400			*3,930	3,800	7.36 m
4.5 m	kg							*6,480	5,220	5,620	3,650	*3,850	3,240	8.03 m
3.0 m	kg					*9,450	7,590	*7,350	4,950	5,490	3,530	*3,930	2,950	8.38 m
1.5 m	kg					*11,170	7,060	7,520	4,700	5,360	3,410	*4,160	2,850	8.45 m
G. L.	kg			*6,330	*6,330	11,600	6,770	7,310	4,520	5,260	3,320	4,590	2,910	8.25 m
-1.5 m	kg	*6,710	*6,710	*11,060	*11,060	11,500	6,690	7,230	4,440	5,230	3,300	5,000	3,160	7.75 m
-3.0 m	kg	*11,730	*11,730	*14,840	13,190	*10,670	6,760	7,280	4,490			5,980	3,760	6.89 m
-4.5 m	kg			*11,020	*11,020	*8,060	7,010					*6,070	5,300	5.49 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 lift capacities are in compliance with ISO 10567. They do not exceed 87% of hydraulic lift capacity or 75% of tipping load. Lift capacities marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.
5. Operator should be fully acquainted with the Operator 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.