

KOBELCO

SK500XDLC/SK520XDLC

SK500XD_{LC} SK520XD_{LC}

■ **Bucket Capacity :**

2.1 – 3.4 m³ (ISO heaped)

■ **Engine Power :**

257 kW/1,850 min⁻¹ (ISO 14396)

■ **Operating Weight :**

51,200 – 52,700 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 SK500XDLC/SK520XDLC meets the needs of the most punishing mining sites with a performance that simply astounds.





Increase in productivity means "Power"

10% Enhanced fuel saving means "Efficiency"

*Compared to H-mode on SK500HDL-8.

Even Stronger Attachment & Component

Built to Operate in Tough Working Environment

Hydraulic Drive for Engine Cooling Fan; Independent Oil Cooler Fan NEW

Hydraulic drive optimizes the cooling fan rotation speed to improve fuel economy and reduce noise. Also, the independent oil cooler fan better matches cooling to the hydraulic oil temperature, for optimal oil temperature control.



Cooling fan for inter-cooler & radiator.



Cooling fan for oil cooler.



Upper Under Covers

Thick covers with increased durability compared to SK500HDL-8.





Increase in productivity means "Power"

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

Rock Guards

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



Reinforced Arm Exhibits Strength

Thickness of steel plate for arm top and arm foot has been increased to deliver more strength for toughest working conditions.

ME Arm **NEW**



Arm top



Arm foot

Newly Developed Boom Strengthened by Additional Plates

The XD boom features reinforcing plates, which increases longevity even under the toughest working conditions.

ME Boom **NEW**



Boom side



Bottom side of Boom



Boom foot/Boom foot boss

Increase in Productivity Means "Power"

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

Crawlers Built for Unbeatable Durability

Reinforced Guide Frame ❶



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

Reinforced Guide Frame ❷



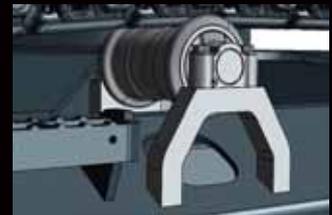
Inside of guide frame is reinforced.

Track Guides



Large, reinforced track guides are installed in four locations.

Double-Support Outer Flange Upper Rollers



Double-support outer flanged upper rollers can withstand powerful vibrations.

Thicker Steel Plate for Shoes



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

Track Links



The durability of the track link is increased compared to SK500HDL-8.

Lower Frame Underside Cover



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



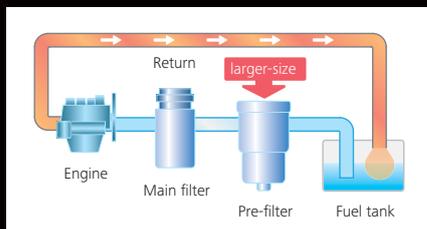
Improved Filtration System Reliability

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 maximizes filtering performance.



Hydraulic Fluid Filter NEW

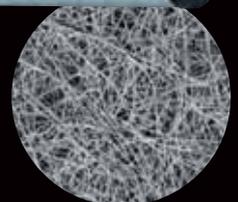
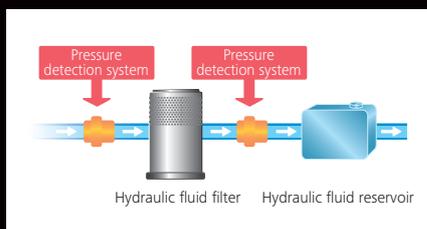
Recognized as the best in the industry, our Premium-fine filter separates out even the smallest particles. New cover prevents contamination when changing filters.

Metal Mesh Cover Air Cleaner NEW

Metal mesh cover ensures strength and durability.

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.



Enlarged filter image

Evolution Continues, with Improved Fuel Efficiency

10%*
Enhanced fuel saving means "Efficiency"

The new arm interflow system more efficiently controls hydraulic fluid flow, and significant reduction of in-line resistance and pressure loss. This improves fuel efficiency.

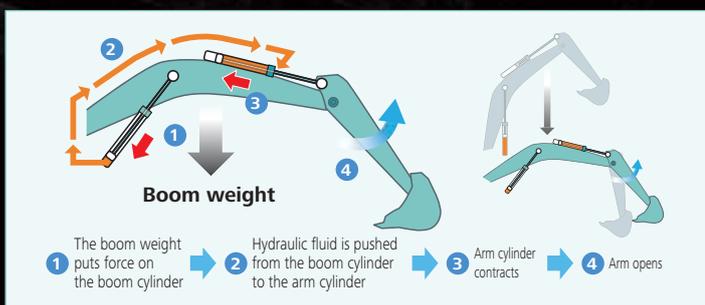
*Compared to H-mode on SK500HDLC-8.



Hydraulic System: Revolutionary Technology Saves Fuel

Arm Interflow System NEW

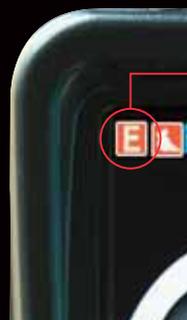
When lowering the boom, this system uses the downward force generated by the boom's weight to push fluid to the shovel arm. This greatly reduces the need to apply power from outside the system.



Energy Saving System Saves Fuel Further

Fuel Efficient Work Mode ECO-Mode NEW

The fuel-saving ECO-mode is newly provided to the operation mode, selectable according to a desired operation. Fuel consumption can be greatly reduced.



- E** Minimum fuel consumption for utility projects and other work that demands precision
ECO-mode, 21% decrease
- H** Used to prioritize the amount of work done
H-mode, 10% decrease
- S** Used to strike a balance between workloads and fuel efficiency
S-mode, 10% decrease



Get More Output Faster with Superior Operability

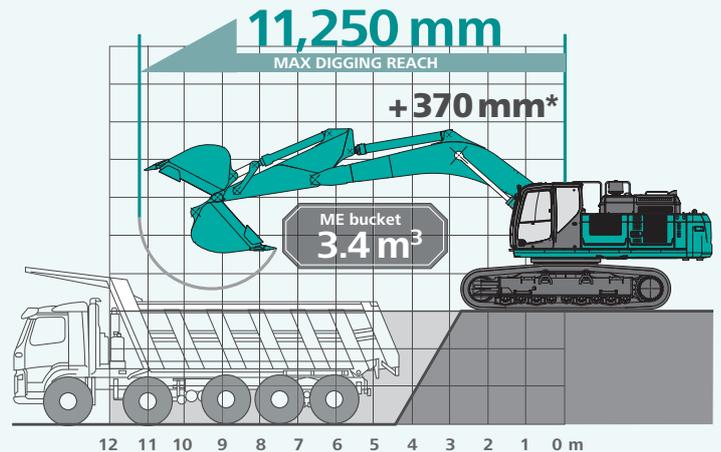
ME 2.6 m Arm

■ Max. Bucket Digging Force	■ Max. Digging Reach:
Normal: 282 kN	11,250 mm
With power boost: 308 kN	■ Max. Digging Depth:
	6,820 mm
■ Max. Arm Digging Force	■ Max. Vertical Digging Depth:
Normal: 239 kN	6,090 mm
With power boost: 261 kN	

Short 3.0 m Arm

■ Max. Bucket Digging Force	■ Max. Digging Reach:
Normal: 267 kN	11,690 mm
With power boost: 292 kN	■ Max. Digging Depth:
	7,360 mm
■ Max. Arm Digging Force	■ Max. Vertical Digging Depth:
Normal: 223 kN	6,580 mm
With power boost: 244 kN	

Equipped with a 3.1 m³ ME bucket, the maximum digging reach stretches 370 mm farther than the SK500HDL-8, resulting in a reach of over 11 m. NEW



*Compared to SK500HDL-8.

Top Class Traveling Force

Powerful traveling force and drawbar pulling force deliver plenty of speed when climbing slopes or negotiating bad roads, and the agility to change direction swiftly and smoothly.

■ Drawbar Pulling Force: **415 kN**

Comfortable Cab Is Now Safer than Ever

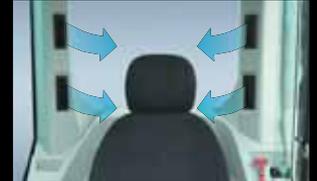
A work environment that is quieter and more comfortable. A cab that puts the operator first is key to improved safety.



Large Cab ^{NEW}

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

Air Conditioner ^{NEW} Louvers behind the Seat



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.

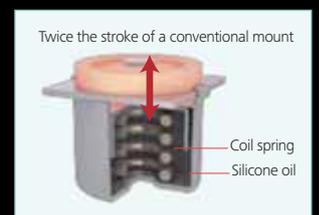
Super-Airtight Cab ^{NEW}



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

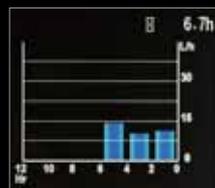
Low Vibration ^{NEW}

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

	INTERVAL	REMAINING TIME	EXCHANGE DAY
ENGINE OIL	250	245	--/--
FUEL FILTER	500	485	--/--
HYD. FILTER	1000	995	--/--

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

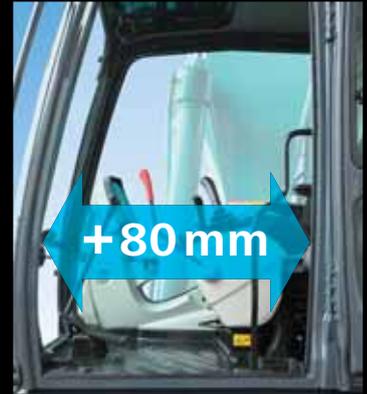


Broad View ^{NEW} Helps the Operator

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 ^{NEW} to Get In and Out of

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



+80 mm

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, ^{NEW} Less Tiring Work



38%
Less

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



12 V outlet



Large cup holder

Safety

ROPS Cab



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.

Rear View Camera (optional) ^{NEW}



Hammer for emergency exit



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

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.



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.



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

Battery shut off switch NEW



Left side

Right side

Simple layout for easy access to radiator and cooling system elements.

- 1 Engine oil filter
- 2 Pilot filter
- 3 Pump drain filter
- 4 Fuel filter with built-in water separator

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.



Floor mat with raised edges

Floor mat's raised edges help keep the cab floor free of mud, simplify cleaning.



Engine oil pan

Engine oil pan equipped with drain valve.



Double-element air cleaner

More Efficient Maintenance inside the Cab

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



Air conditioner filters

Specifications

Engine

Model	HINO P11C-WF
Type	Water-cooled, 4-cycle 6-cylinder direct injection type diesel engine with intercooler turbo-charger
No. of cylinders	6
Bore and stroke	122 mm x 150 mm
Displacement	10.52 L
Rated power output	257 kW/1,850 min ⁻¹ (ISO 14396)
Max. torque	1,400 N·m/1,400 min ⁻¹ (ISO 14396)

Hydraulic System

Pump	
Type	Two variable displacement pumps + One gear pump
Max. discharge flow	2 x 370 L/min
Relief valve setting	
Excavating circuits (main)	31.4 MPa
Power Boost	34.3 MPa
Travel circuit	34.3 MPa
Swing circuit	26.0 MPa
Pilot control circuit	5.0 MPa
Pilot control pump	Gear type
Main control valve	8-spool
Oil cooler	Air cooled type

Swing System

Swing motor	Axial piston motor
Brake	Hydraulic; locking automatically when the swing control lever is in neutral position
Parking brake	Wet multiple plate, hydraulic operated automatically
Swing speed	7.6 min ⁻¹

Attachments

Backhoe bucket and combination

Use		Backhoe bucket			
		General digging	Heavy digging	Mass Excavating	
Bucket capacity	ISO heaped m ³	2.1	2.5	3.1	3.4
Opening width	With side cutters mm	1,570	1,820	1,760	1,900
	Without side cutters mm	1,470	1,700	1,670	1,810
No. of teeth		5	5	5	6
Bucket weight	kg	2,470	2,850	2,320	2,410
Combination	ME 6.5 m boom and ME 2.6 m arm	—	—	○	○
	Short arm 3.0 m with 9,800 kg counterweight	○	—	—	—
	Short arm 3.0 m with 11,200 kg counterweight	○	○	—	—

○ Recommended — Not applicable

Travel System

Travel motors	Variable displacement piston pump
Travel brakes	Hydraulic
Parking brakes	Wet multiple plate
Travel shoes	50 each side
Travel speed (high/low)	5.4/3.4 km/h
Drawbar pulling force	415 kN
Gradeability	70% (35 deg)

Cab & Control

Cab	
International Comfort Cab with dust free enclosure and with internal pressure of 97 Pa (earlier cab 27 Pa). 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	170 mm x 1,590 mm	
Arm cylinder	190 mm x 1,970 mm	
Bucket cylinder	ME 2.6 m arm	170 mm x 1,429 mm
	Short 3.0 m arm	160 mm x 1,410 mm

Refilling Capacities & Lubrications

Fuel tank	638 L
Cooling system	47.4 L
Engine oil	42.5 L
Travel reduction gear	2 x 15 L
Swing reduction gear	2 x 5 L
Hydraulic oil tank	371 L tank oil level
	631 L hydraulic system

Specifications



Working Ranges

Unit: m

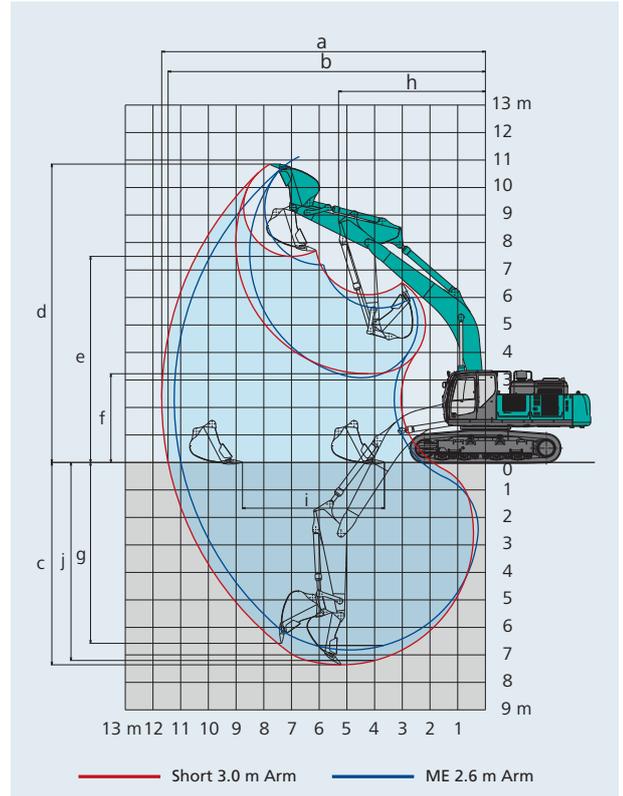
Boom	Arm	ME 6.5 m	7.0 m
Range		ME 2.6 Arm	Short 3.0 Arm
a- Max. digging reach		11.25	11.69
b- Max. digging reach at ground level		11.01	11.45
c- Max. digging depth		6.82	7.36
d- Max. digging height		11.12	10.85
e- Max. dumping clearance		7.18	7.49
f- Min. dumping clearance		3.07	3.23
g- Max. vertical wall digging depth		6.09	6.58
h- Min. swing radius		4.96	5.31
i- Horizontal digging stroke at ground level		3.87	5.12
j- Digging depth for 2.4 m (8') flat bottom		6.66	7.20
Bucket capacity ISO heaped m ³		3.40	2.10

Digging Force (ISO 6015)

Unit: kN

Arm length	ME 2.6 Arm	Short 3.0 Arm
Bucket digging force	282/308*	267/292*
Arm crowding force	239/261*	223/244*

*Power Boost engaged.



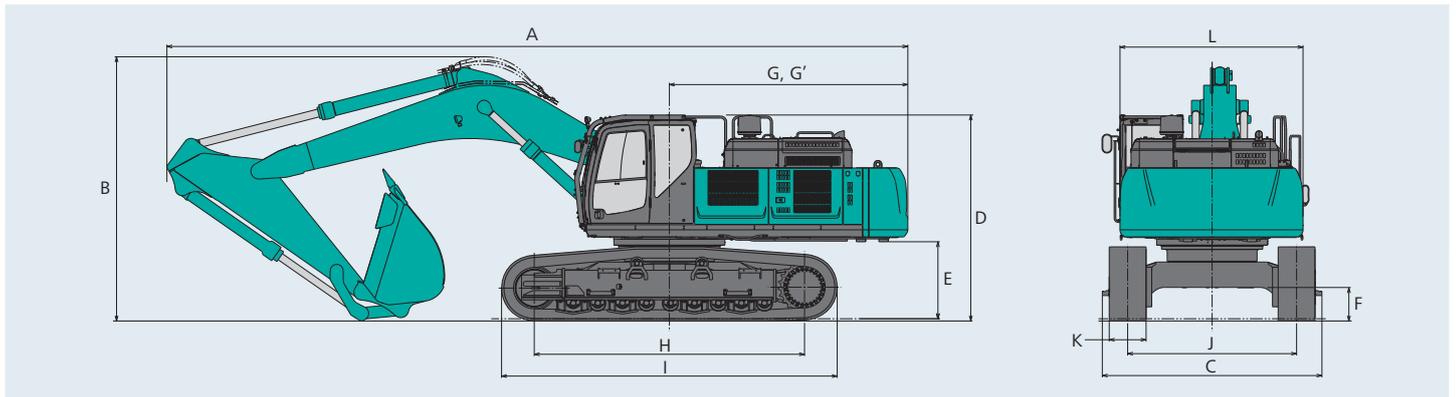
Dimensions

Arm length	ME 2.6 Arm	Short 3.0 Arm
A Overall length	12,060	12,210
B Overall height (to top of boom)	4,330	3,780
C Overall width	3,580	
D Overall height (to top of cab)	3,380	
E Ground clearance of rear end*	1,260*	
F Ground clearance*	510*	

Unit: mm

G Tail swing radius	SK500XDLC	3,800
	SK520XDLC	3,880
G' Distance from center of swing to rear end	SK500XDLC	3,800
	SK520XDLC	3,880
H Tumbler distance		4,400
I Overall length of crawler		5,460
J Track gauge		2,750
K Shoe width		600
L Overall width of upperstructure		2,980

*Without including height of shoe lug.



Operating Weight & Ground Pressure

In standard trim, with ME 6.5 m boom, ME 2.6 m arm, 3.4 m³ ISO heaped bucket, and 11,200 kg counterweight

Shaped	Triple grouser shoes (even height)	
Shoe width	mm	600
Overall width of crawler	mm	3,350
Ground pressure	kPa	90
Operating weight	kg	52,700

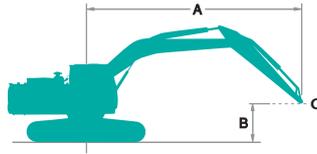
In standard trim, with 7.0 m boom, 3.0 m arm, 2.1 m³ ISO heaped bucket, and 9,800 kg counterweight

Shaped	Triple grouser shoes (even height)	
Shoe width	mm	600
Overall width of crawler	mm	3,350
Ground pressure	kPa	88
Operating weight	kg	51,200

Lift Capacities

SK500XD^{LC}
SK500XDLC-10

SK520XD^{LC}
SK520XDLC-10



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
Relief valve setting: 31.4 MPa

SK500XDLC		Boom: 7.0 m Arm: 3.0 m Bucket: without Counterweight: 9,800 kg Shoe: 600 mm HD													
B	A	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		At Max. Reach		Radius	
9.0 m													*9,660	*9,660	7.25 m
7.5 m	kg							*9,450	*9,450				*9,000	*9,000	8.41 m
6.0 m	kg							*9,900	*9,900	*9,400	8,360		*8,770	8,050	9.18 m
4.5 m	kg			*17,250	*17,250	*12,830	*12,830	*10,770	*10,770	*9,690	8,170		*8,810	7,270	9.65 m
3.0 m	kg					*14,720	14,020	*11,780	10,280	*10,190	7,900		*9,100	6,850	9.88 m
1.5 m	kg					*16,150	13,300	*12,660	9,850	*10,660	7,660		*9,660	6,730	9.86 m
G.L.	kg			*16,970	*16,970	*16,830	12,930	*13,190	9,570	*10,910	7,520		*10,140	6,900	9.62 m
-1.5 m	kg	*13,370	*13,370	*22,030	19,750	*16,710	12,850	*13,180	9,480	*10,620	7,520		*10,410	7,410	9.11 m
-3.0 m	kg	*23,860	*23,860	*20,270	20,070	*15,710	13,000	*12,350	9,610				*10,620	8,490	8.31 m
-4.5 m	kg	*21,890	*21,890	*17,130	*17,130	*13,320	*13,320						*10,520	*10,520	7.10 m

SK520XDLC		Boom: ME 6.5 m Arm: ME 2.6 m Bucket: without Counterweight: 11,200 kg Shoe: 600 mm HD													
B	A	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		At Max. Reach		Radius	
9.0 m													*11,140	*11,140	6.24 m
7.5 m	kg							*10,760	*10,760				*9,660	*9,660	7.56 m
6.0 m	kg					*11,590	*11,590	*10,570	*10,570				*8,980	*8,980	8.41 m
4.5 m	kg					*13,110	*13,110	*11,200	*11,200				*8,700	*8,700	8.93 m
3.0 m	kg					*14,840	*14,840	*12,050	11,050	*10,630	8,480		*8,720	8,240	9.17 m
1.5 m	kg					*16,170	14,450	*12,790	10,660	*10,850	8,320		*9,010	8,130	9.15 m
G.L.	kg					*16,720	14,110	*13,150	10,430				*9,640	8,410	8.88 m
-1.5 m	kg			*21,550	*21,550	*16,350	14,090	*12,790	10,430				*10,810	9,220	8.34 m
-3.0 m	kg	*24,720	*24,720	*19,170	*19,170	*14,750	14,360						*10,670	*10,670	7.45 m
-4.5 m	kg			*14,540	*14,540								*9,500	*9,500	6.06 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'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 P11C-WF, diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12 V - 112 Ah)
- Starting motor (24 V - 6 kW), 60 amp alternator
- Automatic engine shut-down for low engine oil pressure
- Engine oil pan drain valve
- Double element air cleaner
- Battery shut down
- Pre air cleaner
- Emergency engine shut-off switch

CONTROL

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

SWING SYSTEM & TRAVEL SYSTEM

- Swing rebound prevention system
- Two-speed travel with automatic shift down
- Sealed & lubricated track links
- Grease-type track adjusters
- 600 mm HD triple grouser shoe
- Lower under cover
- Travel alarm
- Automatic swing brake
- Tow eyes
- Four track guides each side
- Straight propel system

HYDRAULIC

- Arm interflow system
- Auto warm up system
- Aluminum hydraulic oil cooler
- Hydraulic fluid filter clog detector

MIRRORS & LIGHTS

- Two rear view mirrors, right bottom clearance mirror
- Five front working lights (Two for boom, one for right storage box and two for cab)

CAB & CONTROL

- Two control levers, pilot-operated
- Horn, electric
- Cab light (interior)
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat
- Headrest
- Handrails
- Intermittent windshield wiper with double-spray washer
- Skylight
- 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
- Suspension seat
- 12 V outlet

OPTIONAL EQUIPMENT

- Refilling pump
- Rear view camera
- 600 mm HD double grouser shoe
- N&B Piping

- Cab guard
- Top guard
- Heavy counterweight
- Cat walk
- Rotatory beacon

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).

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



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: 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. Copyright by **KOBELCO CONSTRUCTION MACHINERY CO., LTD.** No part of this catalog may be reproduced in any manner without notice.

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