KOBELCO

SK520XDLC

Bucket Capacity :

2.1 - 3.4 m^3 (ISO heaped)

Engine Power :

344 HP (257 kW)/1,850 min^{-1}
(ISO 14396)

Operating Weight :

50,800 - 51,100 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 SK520XDLC meets the needs of the most punishing mining sites with a performance that simply astounds.

GENERATION 10


Increase in productivity means "Power"
10%
Enhanced fuel saving means "Efficiency"
KOBELCO

Even Stronger Attachment & Component

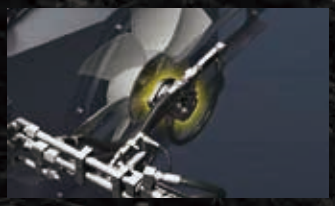
Built to operate in tough working environment

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 SK500HDLC-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.

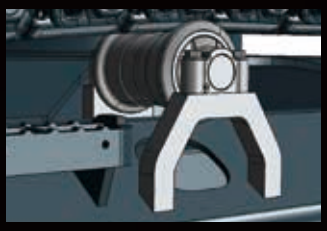
Reinforced Guide Frame ❷

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 SK500HDLC-8.

Lower Frame Underside Cover (optional)

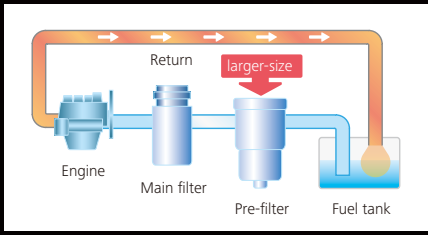
Hydraulic piping and equipment protected against damage from rubble and stony ground.

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.

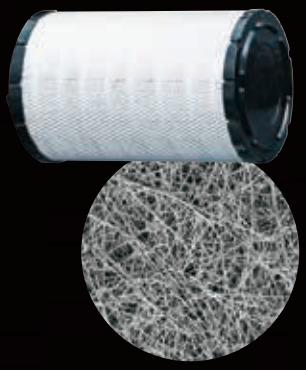


Hydraulic Fluid Filter NEW

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

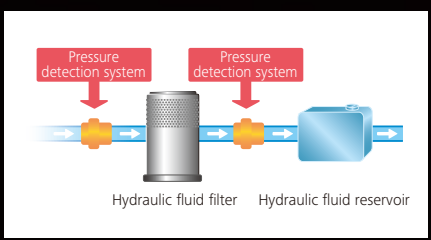
Metal mesh cover ensures strength and durability.



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.

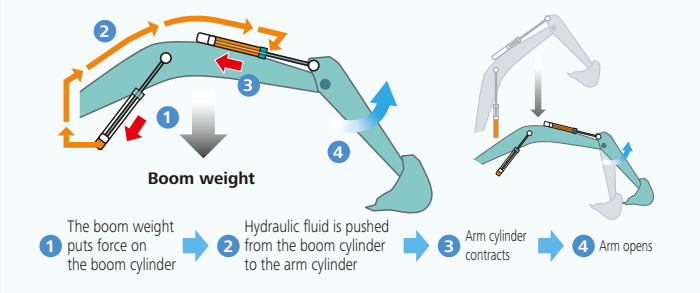
10%
Enhanced fuel saving means "Efficiency"

Boom to Arm Regeneration system more efficiently controls hydraulic fluid flow, and significant reduction of in-line resistance and pressure loss. This improves fuel efficiency.

Hydraulic System: Revolutionary technology saves fuel

Boom to Arm Regeneration 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

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
Normal: **282kN**
With power boost: **308kN**

■ Max. Arm Digging Force
Normal: **239kN**
With power boost: **261kN**

■ Max digging reach: **11,250mm**

■ Max digging depth: **6,820mm**

■ Max vertical digging depth: **6,110mm**

Short 3.0 m arm

■ Max. Bucket Digging Force
Normal: **270kN**
With power boost: **295kN**

■ Max. Arm Digging Force
Normal: **224kN**
With power boost: **245kN**

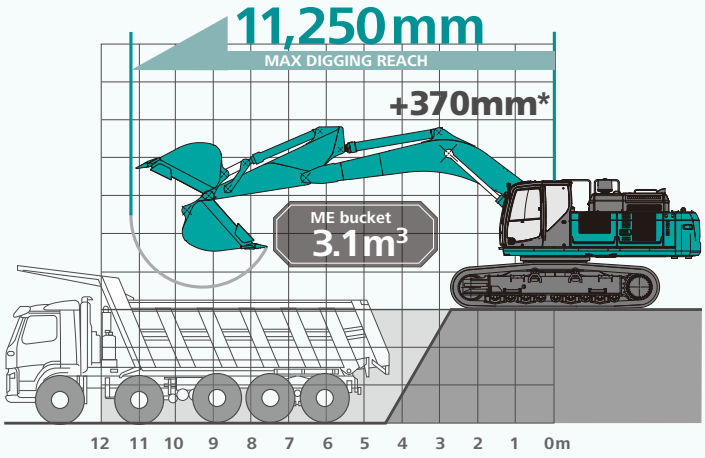
■ Max digging reach: **11,770mm**

■ Max digging depth: **7,360mm**

■ Max vertical digging depth: **6,670mm**

NEW

Equipped with a 3.1m³ ME bucket, the maximum digging reach stretches 370mm farther than the SK500HDLC-8, resulting in a reach of over 11m.



*Compared to SK500HDLC-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: **415kN**

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

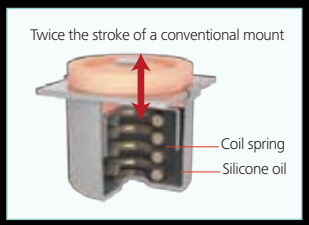
The large air-conditioner has louvers on the back pillars that blow from behind and to the right and left of the operator's seat. They can be adjusted to put a direct flow of cool/warm air on the operator, which means a more comfortable operating environment.

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 Helps 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


Bluetooth installed radio


USB/AUX


24V outlet


Large cup holder

Safety

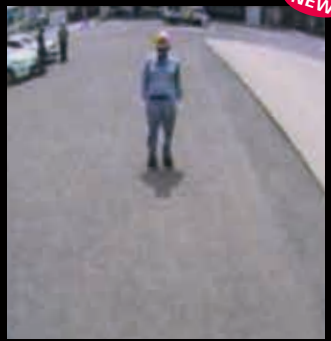
Improved Operational Safety Cab Guard (optional) NEW

The top guard (FOPS, Top Guard Level II. (Meets ISO10262)) provided as option. The top-mounted working light ensures a wide field of view.

Wide View During Operations High Visibility for Safety

Greater safety assured by rearview mirrors on left and right.

Rear View Camera (optional)



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


Swing flasher / Rear working light


Emergency engine shut-off switch

- **Travel alarm(optional)** NEW
- **Hammer for emergency exit**

Efficient Maintenance Keeps the Machine in Peak Operating Condition.

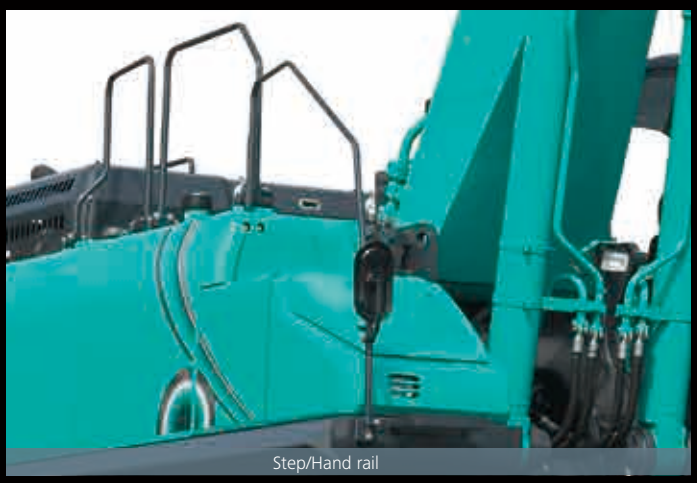
Examples of displaying maintenance information

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

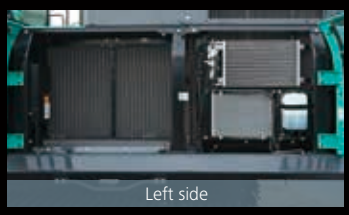
Maintenance Work, Daily Checks, Etc., Can Be Done from Ground Level

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

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

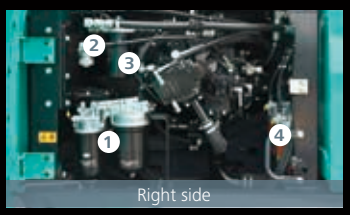
NEW

Battery shut off switch



Left side

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



Right side

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

Engine

Model	HINO P11C-WF
Type	Water-cooled, 4cycle 6cylinder direct injection type diesel engine with intercooler turbo-charger
No. of cylinders	6
Bore and stroke	122 mm × 150 mm
Displacement	10.52 L
Rated power output	344 HP (257 kW)/1,850 min^{-1} (ISO 14396)
Max. torque	1,470 N·m/1,400 min^{-1} (ISO 14396)

Hydraulic System

Pump	
Type	Two variable displacement pumps + One gear pump
Max. discharge flow	2 × 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}

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 97pa (earlier cab 27pa). 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 × 1,590 mm
Arm cylinder		190 mm × 1,970 mm
Bucket cylinder	ME 2.6 m arm	170 mm × 1,429 mm
	Short 3.0 m arm	160 mm × 1,410 mm

Refilling Capacities & Lubrications

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

Attachments

Backhoe bucket and combination

Use			Backhoe bucket			
			Heavy digging	Mass Excavating		
Bucket capacity	ISO heaped	m^3	2.1	2.6	3.1	3.4
Opening width	With side cutters	mm	1,660	1,550	1,760	1,920
	Without side cutters	mm	1,580	1,440	1,670	1,810
No. of teeth			5	5	5	6
Bucket weight		kg	2,270	2,370	2,580	2,710
Combination	6.5m ME boom and 2.6 ME arm		—	○	○	○
	3.0m short arm		◎	—	—	—

◎ Standard ○ Recommend — Not applicable

Working Ranges

Unit: m

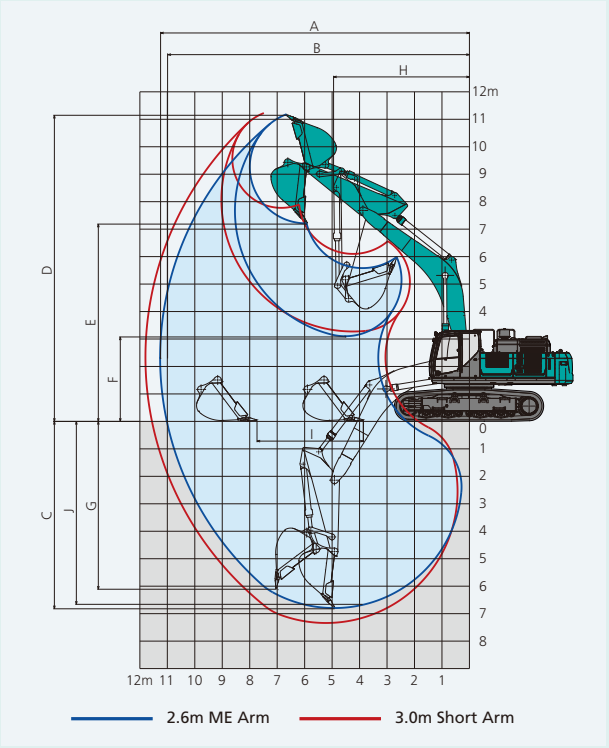
Boom	ME 6.5 m	7.0 m
Arm / Range	ME 2.6 Arm	Short 3.0 Arm
A- Max. digging reach	11.25	11.77
B- Max. digging reach at ground level	11.01	11.54
C- Max. digging depth	6.82	7.36
D- Max. digging height	11.15	11.16
E- Max. dumping clearance	7.18	7.72
F- Min. dumping clearance	3.07	3.23
G- Max. vertical wall digging depth	6.11	6.67
H- Min. swing radius	4.96	5.28
I- Horizontal digging stroke at ground level	3.87	5.21
J- Digging depth for 2.4 m (8') flat bottom	6.66	7.2
Bucket capacity ISO heaped m³	3.1	2.1

Digging Force (ISO 6015)

Unit: kN

Arm length	ME 2.6 Arm	Short 3.0 Arm
Bucket digging force	282/308*	270/295*
Arm crowding force	239/261*	224/245*

*Power Boost engaged.

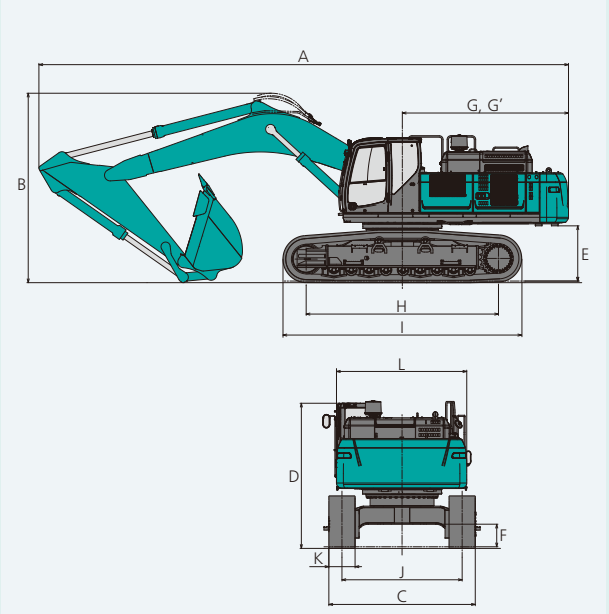


Dimensions

Unit: mm

Arm length		ME 2.6 Arm	Short 3.0 Arm
A	Overall length	11,980	12,210
B	Overall height (to top of boom)	4,330	3,800
C	Overall width	3,350	
D	Overall height (to top of cab)	3,320	
E	Ground clearance of rear end*	1,260*	
F	Ground clearance*	510*	
G	Tail swing radius	3,800	
G'	Distance from center	3,800	
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

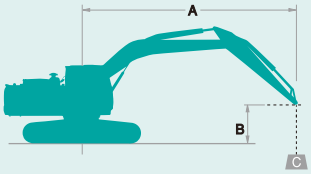
In standard trim, with 6.5 m ME boom, 2.6 m ME arm, and 3.1 m³ ISO heaped bucket

Shaped		Triple grouser shoes (even height)
Shoe width	mm	600
Overall width of crawler	mm	3,350
Ground pressure	kPa	88
Operating weight	kg	51,100

In standard trim, with 7.0 m boom, 3.00 m arm, and 2.1 m³ ISO heaped bucket

Shaped		Triple grouser shoes (even height)
Shoe width	mm	600
Overall width of crawler	mm	3,350
Ground pressure	kPa	87
Operating weight	kg	50,800

Lifting 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: Lifting capacities in Kilograms
Bucket: Without bucket
Relief valve setting: 34.3 MPa

SK520XDLC-10		Boom: 6.5m Arm: 2.6m Bucket: without Counterweight: 9,800kg Shoe: 600mm (Power Boost)												
A / B		3.0m		4.5m		6.0m		7.5m		9.0m		At Max. Reach		Radius
9.0m	kg											*12,280	*12,280	6.24m
7.5m	kg							*12,370	11,180			*10,690	*10,690	7.56m
6.0m	kg					*13,290	*13,290	*12,180	11,100			*9,970	9,110	8.41m
4.5m	kg					*15,080	14,950	*12,920	10,710			*9,680	8,130	8.93m
3.0m	kg					*17,100	14,050	*13,920	10,260	*12,300	7,870	*9,710	7,650	9.17m
1.5m	kg					*18,650	13,390	*14,790	9,890	12,480	7,710	*10,040	7,540	9.15m
G.L.	kg					*19,280	13,070	*15,200	9,670			*10,760	7,800	8.88m
-1.5m	kg			*24,800	20,030	*18,870	13,040	*14,800	9,660			*12,060	8,530	8.34m
-3.0m	kg	*28,580	*28,580	*22,140	20,410	*17,070	13,280					*12,410	10,120	7.45m
-4.5m	kg			*16,960	*16,960							*11,180	*11,180	6.06m

SK520XDLC-10		Boom: 7.0m Arm: 3.0m Bucket: without Counterweight: 9,800kg Shoe: 600mm (Power Boost)												
A / B		3.0m		4.5m		6.0m		7.5m		9.0m		At Max. Reach		Radius
9.0m	kg											*11,190	*11,190	7.36m
7.5m	kg							*10,690	*10,690			*10,840	9,250	8.51m
6.0m	kg							*11,230	*11,230	*10,710	8,370	*10,760	7,930	9.27m
4.5m	kg			*19,550	*19,550	*14,560	*14,560	*12,250	10,800	*11,060	8,190	*10,830	7,190	9.74m
3.0m	kg					*16,760	14,060	*13,440	10,310	*11,640	7,940	10,880	6,800	9.96m
1.5m	kg					*18,430	13,390	*14,460	9,900	*12,190	7,710	10,770	6,700	9.95m
G.L.	kg					*19,220	13,040	*15,080	9,650	12,310	7,570	11,090	6,870	9.70m
-1.5m	kg	*10,210	*10,210	*23,780	19,930	*19,100	12,960	*15,080	9,560	*12,170	7,580	*11,740	7,380	9.20m
-3.0m	kg	*22,160	*22,160	*23,210	20,220	*17,990	13,110	*14,150	9,680			*11,890	8,440	8.41m
-4.5m	kg	*25,270	*25,270	*19,700	*19,700	*15,310	13,510					*11,680	10,650	7.21m

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 P11C-WF, diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12V - 104Ah)
- Starting motor (24V - 6kW), 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
- 600mm HD triple grouser shoe
- Automatic swing brake
- Tow eyes
- Four track guides each side
- Straight propel system

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

MIRRORS & LIGHTS
- Two rear view mirrors
- Six front working lights (Two for boom, one for boom cylinder, 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
- GEOSCAN
- Suspension seat
- Cab 2 lights
- Swing flasher
- Bluetooth radio, AUX/USB
- 24V outlet

OPTIONAL EQUIPMENT

- Refilling pump
- Rear view camera
- 600mm HD double grouser shoe
- N&B Piping
- Travel alarm
- Lower under cover
- Top guard
- Heavy counterweight

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

GEOSCAN

GEOSCAN allows you to use the Internet to manage information from your office for machines operating in all areas. This provides a wide range of support for your business operations.

GEO SCAN

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 permission.

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