KOBELCO

Bucket Capacity :
 0.93 - 1.2m³ (ISO heaped)

Engine Power :

158HP (118kW)/2,000min⁻¹ (ISO 14396)

Operating Weight :
 21,800 - 22,800 kg



SK220XD SK220XDLC

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 SK220XD/SK220XDLC meets the needs of the most punishing mining sites with a performance that simply astounds.



Increase in productivity means "Power"

YOBELC

ONTE

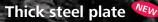
19%^{*}

Higher fuel Saving means "Efficiency"

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

Even stronger attachment

Reinforced arm exhibits strength





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 installed to prevent damage to arm.

Increase in productivity means "Power"

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

Newly developed mining 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 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 Travel Motor Cover

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



Track Guides Large, reinforced track guides are installed in three locations.



Lower Frame Underside Cover Hydraulic piping and equipment protected against damage from rubble and stony ground.



Thicker steel plate for shoes Reinforced HD shoes of thickness has been increased 1.2 times compared to SK210HDLC-8.



Track Links The size of the track link are increased by 8% compared to SK210HDLC-8.



Improved Filtration System Reliability

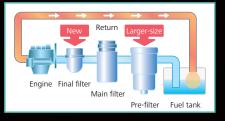
Clean, contaminant-free fuel and hydraulic fluid are essential to stable performance. The improved filtration systems reduce the risk of mechanical trouble and enhance longevity and durability.

Fuel filter 👐

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 Clog Detector 🦇

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.



Pressure detection system detection syst

Hydraulic Fluid Filter 🌆

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 🦇

Metal mesh cover ensures strength and durability.



Enlarged filter image

Evolution Continues, with Improved Fuel Efficiency.

19%*

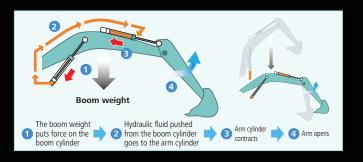
Higher fuel Saving means "Efficiency"

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 on the SK210HDLC-8

Hydraulic System: Revolutionary Technology Saves Fuel

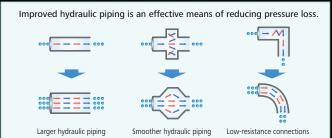
Arm Regeneration System 🦇

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.



7

2.4 m arm (Bucket capacity 1.1 m³)

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

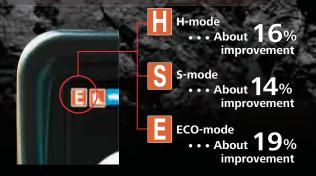
cal digging depth:

In Pursuit of Improved Fuel Efficiency

NEW **Operation Mode**

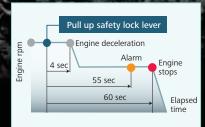
Fuel consumption is lower in H-mode/S-mode/ECO-mode in comparison with the previous model (Generation 8).

Compared to previous models



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 CO2 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.

Larger cab 🛯

THUM W

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

Larger Cab is Easy 🦇 to Get in and out of



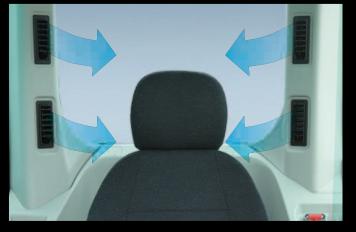
The expanded cab provides plenty of room for a large door, more headroom and smoother entry and exit.

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 🦇 Konditioner 🕬



The large air-conditioner has vents 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 🦇



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

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





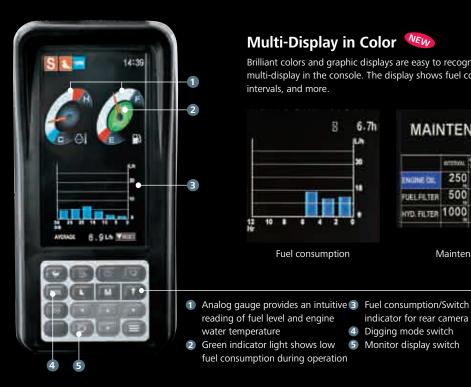


Interior Equipment Adds to Comfort and Convenience



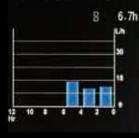


Operator-friendly Features Include Controls that Are Easy to See, Easy to Use



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



Maintenance

indicator for rear camera images

Digging mode switch

5 Monitor display switch

4

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.

Safety

Expanded Field of View for Greater Safety





Greater safety assured by rearview mirrors on left and right, and a third mirror mounted at lower right.



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

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.





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.







Laid out for easy access to radiator and cooling system elements



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

Easy Maintenance



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

Easy Cleaning



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

11



Model	J05ETA
	Direct injection, water-cooled, 4-cycle
Туре	diesel engine with turbocharger, intercooler
	(Tier3-compliant engine)
No. of cylinders	4
Bore and stroke	112 mm x 130 mm
Displacement	5.123 L
Rated power output	158HP (118kW)/2,000min ⁻¹ (ISO14396)
Max. torque	592 N·m/1,600 min⁻¹ (ISO 14396)



Hydraulic System

Pump	
Turne	Two variable displacement pumps +
Туре	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
Oil cooler	Air cooled type



Swing motor	Axial piston motor
Brake	Hydraulic; locking automatically when the
DIAKE	swing control lever is in neutral position
Darking brake	Oil disc brake, hydraulic operated
Parking brake	automatically
Swing speed	13.3 min ⁻¹ {rpm}
Tail swing radius	2,910 mm
Min. front swing radius	3,560 mm



Travel motors		2 x axial-piston, two-step motors		
Travel brakes		Hydraulic brake per motor		
Parking brakes		Oil disc brake per motor		
Travel shoes	SK220XDLC	49 each side		
	SK220XD	46 each side		
Travel speed		6.0/3.6 km/h		
Drawbar pulling force	SK220XDLC	227 kN (ISO 7464)		
	SK220XD	228 kN (ISO 7464)		
Gradeability		70 % {35°}		

P Cab & Control

Cak

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	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

Attachments

Backhoe bucket and combination

0	Working Conditions	Bucket Capacity (m³)	Width (with side cutter) (mm)	Weight (with side cutter) (kg)	SK220XDLC		SK220XD	
Application					2.4m Arm	2.94m Arm	2.4m Arm	2.94m Arm
General Digging	Sand, Gravel, Clay, Trenching and Loading & General Construction Job	1.1	1,495	970	0			Δ
Light Duty Digging	Dry, Loose soil and Loading	1.2	1,610	1,020		×	\triangle	×
		1.1	1,495	970	0			Δ
Heavy Duty	Granite / Marble Quarry	0.93	1,360	870	0	×	-	-
		1.1	1,495	970	0	×	-	-
Coal	Coal Re-Handling	1.2	1,610	1,020		\triangle	\triangle	\triangle
		1.1	1,495	970		\triangle	\bigtriangleup	\triangle

🔆 General purpose use, material weight up to 1.8t/m³ 🗆 : General purpose use, material weight up to 1.6t/m³ 🛆 : Light duty work, material weight up to 1.2t/m³ ×: Not usable

Specifications



Working Ranges

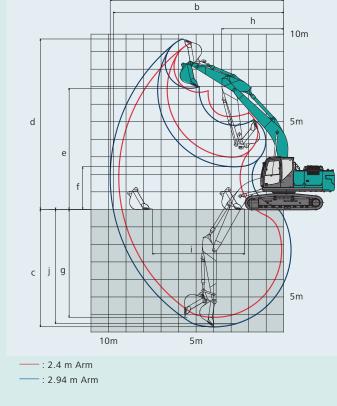
		Unit: m	
Boom	5.65 m		
Arm	2.4 m	2.94 m	
a-Max. digging reach	9.42	9.9	
b-Max. digging reach at ground level	9.24	9.73	
c- Max. digging depth	6.16	6.7	
d-Max. digging height	9.51	9.72	
e-Max. dumping clearance	6.68	6.91	
f- Min. dumping clearance	2.98	2.43	
g-Max. vertical wall digging depth	5.57	6.1	
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 m ³	1.1	0.93	

Digging Force (ISO 6015)

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

*Power Boost engaged.

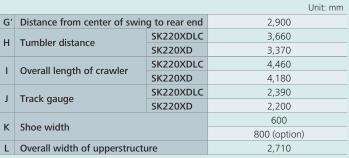
Unit[,] kN



а

Dimensions

Arm length		2.4 m	2.94 m		
А	Overall length		9,680	9,600	
В	B Overall height (to top of boom)		3,220	2,980	
c	Overall width of crawler	SK220XDLC	2,990		
C	SK220XD		2,800		
D	O Overall height (to top of cab)		3,020		
Е	Ground clearance of rear end*		1,070		
F	Ground clearance*	435			
G	Tail swing radius	2,910			



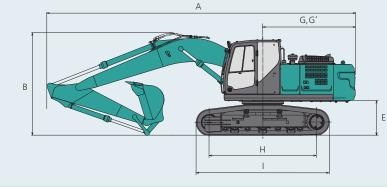
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Operating Weight & Ground Pressure

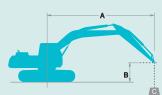
In standard trim, with standard boom, 2.4 m arm, and 0.93 m³ ISO heaped bucket

Shaped			Triple grouser shoes (even height)		
Shoe width	Shoe width mm		600 800		
Overall width of crawler	SK220XDLC	mm	2,990	3,190	
Overall width of crawler	SK220XD mm		2,800	3,000	
SK220XDLC kP		kPa	46	36	
Ground pressure	SK220XD	kPa	49	38	
Operating weight SK220XDLC		kg	22,200	22,800	
Operating weight	SK220XD	kg	21,800	22,300	

^{*}Without including height of shoe



SK220XD-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: Lifting capacities in Kilograms Bucket: Without bucket Relief valve setting: 37.8MPa (385kgf/cm²)

SK220XDL	с	Boom: 5	Boom: 5.65 m Arm: 2.4 m, Bucket: without Shoe: 600 mm (Power Boost)												
A B		3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach					
			-		₫—	ŀ		ł	₫—		₫-	Radius			
7.5 m	kg									*6,330	5,890	5.59 m			
6.0 m	kg					*6,510	5,270			*5,770	4,240	6.80 m			
4.5 m	kg			*8,320	7,950	*6,980	5,100	5,520	3,560	5,490	3,540	7.52 m			
3.0 m	kg			*10,170	7,330	7,680	4,840	5,430	3,470	5,000	3,200	7.89 m			
1.5 m	kg			*11,600	6,850	7,410	4,600	5,310	3,370	4,860	3,090	7.97 m			
G.L.	kg			11,450	6,640	7,240	4,450	5,240	3,300	5,010	3,160	7.75 m			
-1.5 m	kg	*11,480	*11,480	11,430	6,630	7,210	4,420			5,550	3,490	7.22 m			
-3.0 m	kg	*13,240	13,190	*9,950	6,760	*7,240	4,530			*6,640	4,290	6.28 m			
-4.5 m	kg			*6,270	*6,270					*5,750	*5,750	4.71 m			

SK220XDL	с	Boom: 5.65 m Arm: 2.94 m, Bucket: without Shoe: 600 mm (Power Boost)												
\sim	А	A 1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach		
в		Ļ	₫—		₫		,	ł	₫-		₫			Radius
7.5 m	kg							*5,330	*5,330			*4,270	*4,270	6.26 m
6.0 m	kg							*5,900	5,340			*3,950	3,750	7.36 m
4.5 m	kg							*6,440	5,150	5,560	3,590	*3,870	3,180	8.03 m
3.0 m	kg					*9,380	7,470	*7,300	4,870	5,430	3,470	*3,940	2,890	8.38 m
1.5 m	kg					*11,070	6,900	7,410	4,600	5,280	3,330	*4,180	2,790	8.45 m
G.L.	kg			*6,360	*6,360	11,410	6,600	7,200	4,410	5,180	3,240	4,520	2,840	8.25 m
-1.5 m	kg	*6,730	*6,730	*11,090	*11,090	11,310	6,510	7,110	4,330	5,150	3,210	4,930	3,090	7.75 m
-3.0 m	kg	*11,760	*11,760	*14,680	12,880	*10,570	6,590	7,170	4,380			5,890	3,670	6.89 m
-4.5 m	kg			*10,880	*10,880	*7,970	6,860					*6,000	5,190	5.49 m

SK220XD		Boom: 5	Boom: 5.65 m Arm: 2.4 m, Bucket: without Shoe: 600 mm (Power Boost)												
A B		3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach					
		ŀ			,		—	ł				Radius			
7.5 m	kg									*6,330	5,340	5.59 m			
6.0 m	kg					*6,510	4,770			*5,770	3,840	6.80 m			
4.5 m	kg			*8,320	7,160	*6,980	4,610	4,920	3,210	4,890	3,190	7.52 m			
3.0 m	kg			*10,170	6,560	6,790	4,360	4,820	3,120	4,450	2,880	7.89 m			
1.5 m	kg			10,140	6,090	6,530	4,120	4,710	3,020	4,310	2,770	7.97 m			
G.L.	kg			9,900	5,890	6,370	3,980	4,640	2,960	4,440	2,830	7.75 m			
-1.5 m	kg	*11,480	11,230	9,880	5,870	6,330	3,940			4,910	3,120	7.22 m			
-3.0 m	kg	*13,240	11,470	*9,950	6,000	6,460	4,050			6,070	3,840	6.28 m			
-4.5 m	kg			*6,270	*6,270					*5,750	*5,750	4.71 m			

SK220XD		Boom: 5.65 m Arm: 2.94 m, Bucket: without Shoe: 600 mm (Power Boost)												
\sim	А	1.!	5 m	3.0 m		4.5 m		6.0 m		7.5 m		At Max. Reach		
в		L	₫-		₫—	L	₫-	ł	₫-		-	L		Radius
7.5 m	kg							*5,330	4,860			*4,270	*4,270	6.26 m
6.0 m	kg							*5,900	4,850			*3,950	3,380	7.36 m
4.5 m	kg							*6,440	4,660	4,950	3,240	*3,870	2,860	8.03 m
3.0 m	kg					*9,380	6,690	6,830	4,380	4,820	3,120	*3,940	2,590	8.38 m
1.5 m	kg					10,210	6,140	6,530	4,110	4,680	2,990	3,910	2,490	8.45 m
G.L.	kg			*6,360	*6,360	9,860	5,840	6,330	3,930	4,580	2,890	4,000	2,540	8.25 m
-1.5 m	kg	*6,730	*6,730	*11,090	10,960	9,770	5,760	6,240	3,850	4,550	2,870	4,360	2,750	7.75 m
-3.0 m	kg	*11,760	*11,760	*14,680	11,170	9,860	5,840	6,300	3,900			5,200	3,280	6.89 m
-4.5 m	kg			*10,880	*10,880	*7,970	6,090					*6,000	4,640	5.49 m

Notes:

- 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.

- 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.
 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.
- 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.



CAB & CONTROL

Horn, electric

Cab light (interior)

Coat hook

Headrest

Handrails

Skylight

Luggage tray

Large cup holder

Double slide seat

Heater and defroster

Easy-to-read color monitor

Automatic air conditioner
 Emergency escape hammer

Two control levers, pilot-operated

Detachable two-piece floor mat

7-way adjustable suspension seat

Intermittent windshield wiper with double-spray washer

Safety glass Pull-up type front window and removable lower front window

Integrated left-right slide-type control box

Cab, all-weather sound suppressed type



STANDARD EQUIPMENT

ENGINE

- Engine, HINO J05ETA, Diesel engine with turbocharger and intercooler (Tier3-compliant engine)
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12V 104Ah)
- Starting motor (24V 5 kW), 50 amp alternator
- Removable clean-out screen for radiator
- Automatic engine shut-down for low engine oil pressure
- Engine oil pan drain valve
- 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 brake
- Tow eyes
- Boom and Arm regeneration system
- Aluminum hydraulic oil cooler
- Hydraulic Fluid Filter Clog Detector
- Pilot line filter
- MIRRORS & LIGHTS
- Two rearview mirrors
- Five front working lights (one for boom, one for boom cylinder, one for right storage box and two for cab)

OPTIONAL EQUIPMENT

- Radio, AM/FM Stereo with speakers
- Wide range of buckets
- Front, Top guard protective structures

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.



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

KOBELCO CONSTRUCTION EQUIPMENT INDIA PVT. LTD.

H-200, Sector-63, Noida, Distt: G.B. Nagar, U.P. - 201 307, INDIA Tel : +91-120-4079900 www.kobelconet.in/ info@kobelconet.in

Piping for additional attachment
 Refilling pump
 Travel alarm