KOBELCO

SK140-10E/SK145XDLC-10E

SK 140
SK145 XD LC

■ **Bucket Capacity :**

0.60 – 0.70 m^3 (ISO heaped)

■ **Engine Power :**

97.9 HP (73.0 kW)/2,000 min^{-1}
(ISO 14396)

■ **Operating Weight :**

13,100 – 14,200 kg

We Save You Fuel
Achieving a Low-Carbon Society

Power Meets Efficiency

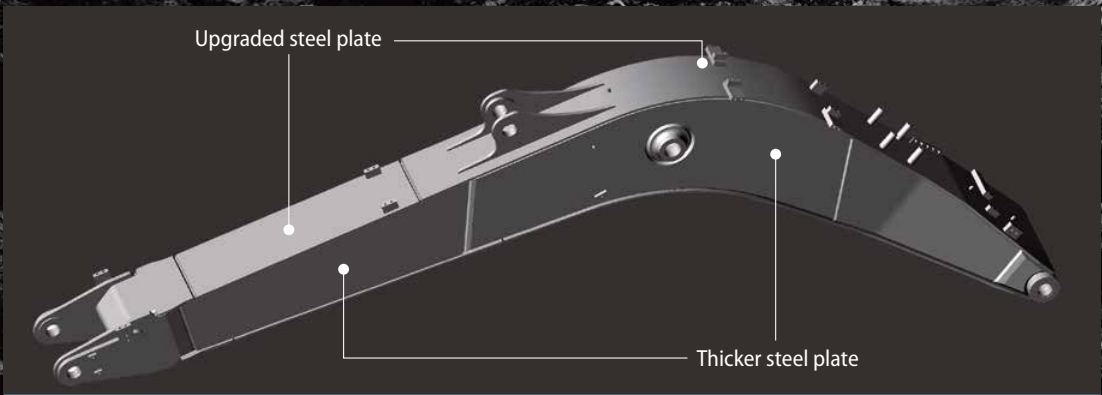
In line with KOBELCO's concept of robust construction machinery that will work long and hard on any site on the planet, the rugged machine body is newly designed, and comprehensive reinforcement makes the attachment more robust.
It all adds up to KOBELCO's toughest ever excavator.
The latest hydraulics technology delivers both high-powered output and lower fuel consumption.
As the 10th generation model of KOBELCO's SK series, the SK140 meets the needs of civil engineering and the SK145XDLC meets the needs of the punishing sites with a performance that simply astounds.

Photos: Specifications may vary in your areas.

Even Stronger Attachment

Newly Developed Robust Arm and Boom Made of Optimized Steel Plate

Improved Boom Strengthened by Optimized Steel Plate



4.68 m boom

The 4.68 m boom features thicker and upgraded plates compared to the previous boom, which delivers more strength for the toughest working conditions.

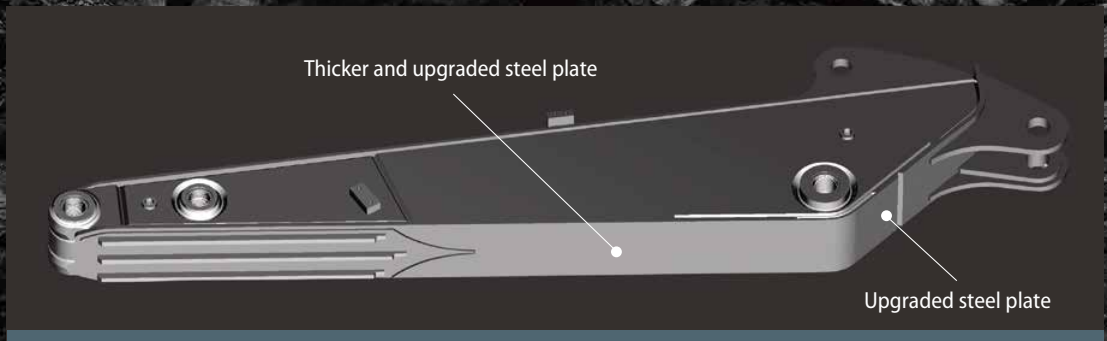
Rock Guards

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.

Improved Arm Exhibits Strength



2.09 m arm

The 2.09 m arm features thicker and upgraded plates compared to the previous arm, which delivers more strength for the toughest working conditions.

Increase in Productivity Means "Power"

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

Crawlers Built for Unbeatable Durability


Outside


Inside

Reinforced Guide Frame

Reinforced guide frame prevents deformation caused by impact or encroaching of loose stones. (For SK145XDLC only)

Track Guides

Large, reinforced track guides are installed in one location.

Lower Frame Underside Cover

Hydraulic piping and equipment protected against damage from rubble and stony ground. (Standard for SK145XDLC)

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.

Pilot Line Filter

An enlarged cartridge-type pilot filter simplifies maintenance.

Hydraulic Fluid Filter

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

Evolution Continues, with Improved Fuel Efficiency

Higher fuel saving means "Efficiency"

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

Bucket with Power and Efficiency

Improved bucket shape reduces resistance while excavating.
Excellent on-site performance leads to higher productivity.

2.38 m Arm

- Max. bucket digging force
  Normal: **89.2 kN**
- Max. arm crowding force
  Normal: **57.9 kN**
- Max. digging reach:
  8,380 mm
- Max. digging depth:
  5,560 mm
- Max. vertical digging depth:
  5,120 mm

Energy Saving System Saves Fuel Further

Fuel Efficient Work Mode ECO-mode

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

■ Operation Mode

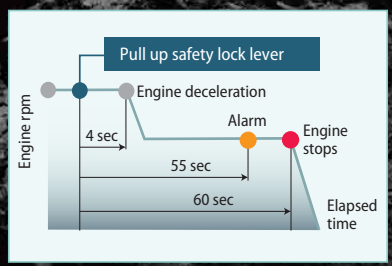
E ECO-mode
Minimum fuel consumption for utility projects and other work that demands precision

H H-mode
Maximum power for maximum productivity on your toughest jobs

S S-mode
Ideal balance of productivity and fuel efficiency for a range of urban engineering projects

AIS (Auto Idle Stop)

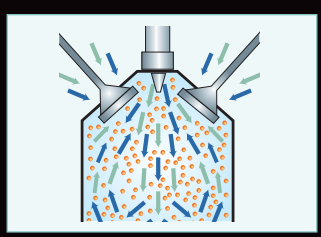
If the boarding/disembarking lever is lifted up, the engine will stop automatically. This eliminates wasteful idling during standby, saving fuel and reducing CO_2 emissions as well.



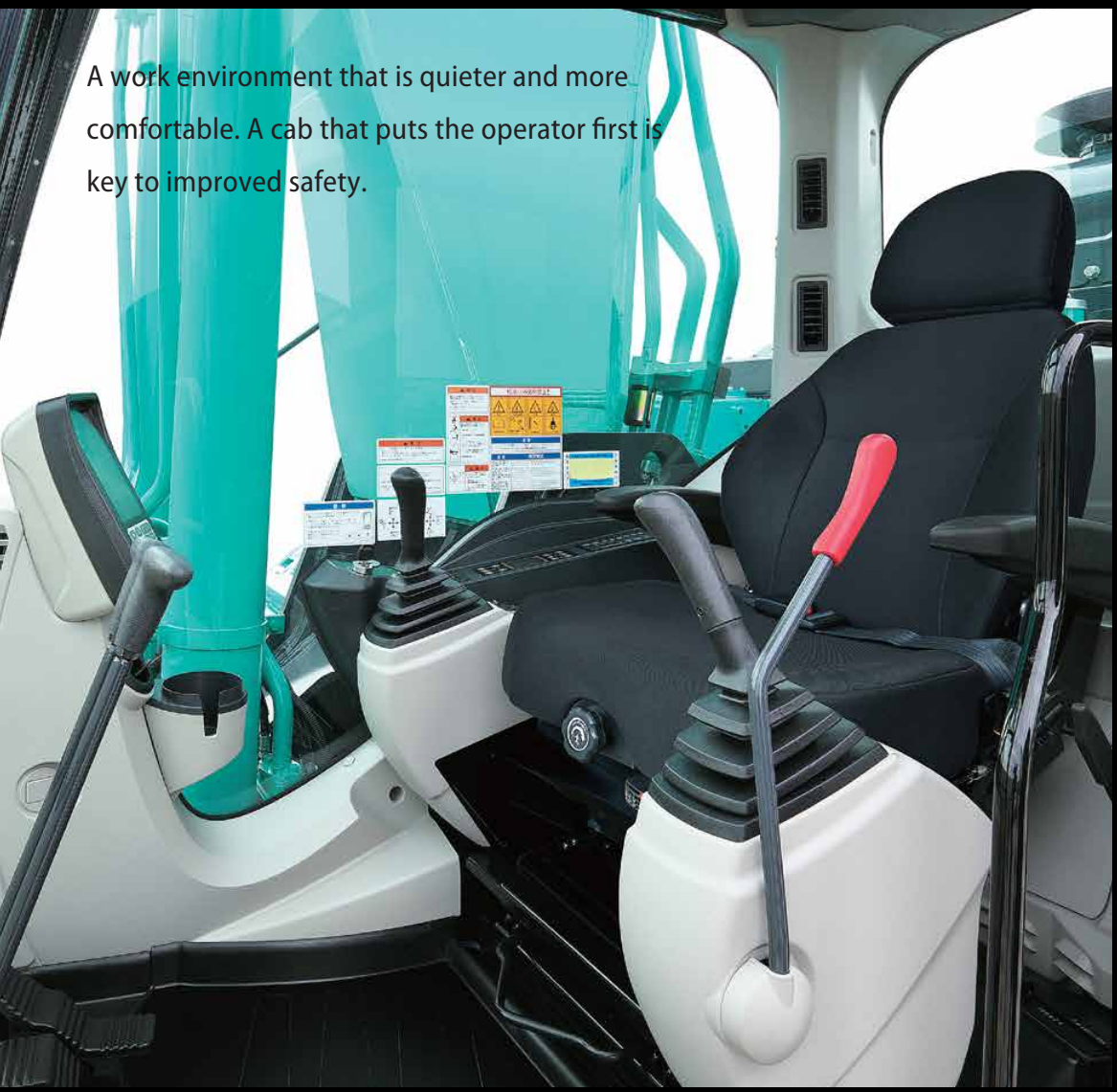
Pursuing Maximum Fuel Efficiency

Common Rail System

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



Comfortable Cab Is Now Safer than Ever



Large cab

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

Air Conditioner Louvers behind the Seat

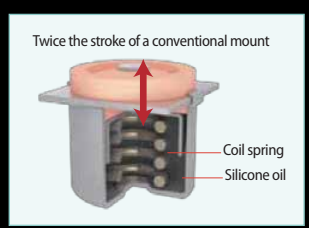
The large air-conditioner has louvers on the back pillars that blow from behind and to the right and left of the operator's seat. They can be adjusted to put a direct flow of cool/warm air on the operator, which means a more comfortable operating environment.

Super-Airtight Cab

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

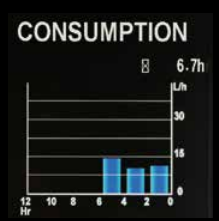
Low Vibration

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

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



Fuel consumption

Maintenance

Breaker mode

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

One-Touch Attachment Mode Switch

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

Comfort

Broad View Liberates the Operator

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

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

More Comfortable Seat Means Higher Productivity


Seat suspension absorbs vibration


Seat recliner can be pushed back flat


Double slides allow adjustment for optimum comfort

Interior Equipment Adds to Comfort and Convenience


24V outlet


Spacious storage tray


Large cup holder

A Light Touch on the 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.

Safety

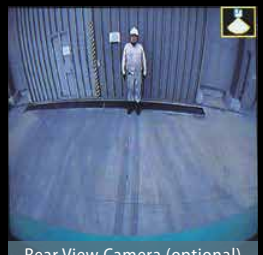
ROPS Cab

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.


Hammer for emergency exit


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.

Efficient Maintenance Keeps the Machine in Peak Operating Condition

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

Examples of displaying maintenance information

Pre-Air Cleaner (Optional for SK140)

Superior capacity of new pre-air cleaner equipped as standard on SK145XDLC keeps the engine running clean even in tough environments. Collected contaminant is automatically discharged to outside.


Pre-air cleaner

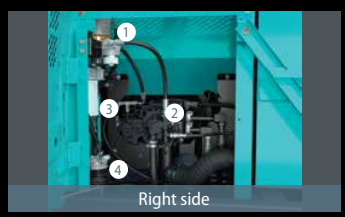
Maintenance Work, Daily Checks, Etc., Can Be Done from Ground Level

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


Double-element air cleaner


Left side

Laid out for easy access to radiator and cooling system elements



Right side

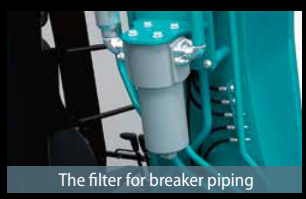
1. Pre-fuel filter with built-in water-separator
2. Pilot line filter
3. Main fuel filter
4. Third filter

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

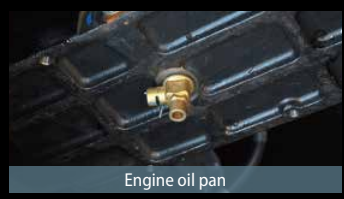

The filter for breaker piping

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.


Engine oil pan

Engine oil pan equipped with drain valve.

EXCAVATOR REMOTE MONITORING SYSTEM

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

Direct Access to Operational Status

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

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

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

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

Maintenance Data and Warning Alerts

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

Security System

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

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

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

Engine

Model	ISUZU 4JJ1
Type	Four cycle, water cooled, overhed camshaft, vertical in-line, direct injection type, with turbocharger
No. of cylinders	4
Bore and stroke	95.4 mm × 104.9 mm
Displacement	2.999 L
Rated power output	65.4 kW / 2,000 min^{-1} (ISO 9249 : with fan)
	73.0 kW / 2,000 min^{-1} (ISO 14396: without fan)
Max. torque	341 N•m / 1,600 min^{-1} (ISO 9249 : with fan)
	365 N•m / 1,600 min^{-1} (ISO 14396: without fan)

Hydraulic System

Pump	
Type	Two variable displacement pumps + one gear pump
Max. discharge flow	2 x 130.4 L/min, 1 x 20 L/min
Relief valve setting	
Boom, arm and bucket	34.3 MPa {350 kgf/cm^2}
Travel circuit	34.3 MPa {350 kgf/cm^2}
Swing circuit	28.0 MPa {286 kgf/cm^2}
Control circuit	5.0 MPa {51 kgf/cm^2}
Pilot control pump	Gear type
Main control valve	12 -Spool valve
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	Oil disc brake, hydraulic operated automatically
Swing speed	10.9 min^{-1}{rpm}
Tail swing radius	2,330 mm
Min. front swing radius	2,620 mm

Travel System

Travel motors		2 x axial-piston, two-step motors
Travel brakes		Hydraulic brake per motor
Parking brakes		Oil disc brake per motor
Travel shoes	SK140	44 each side
	SK145XDLC	46 each side
Travel speed (Low / High)		3.3 / 5.7 km/h
Drawbar pulling force		142 kN (14,500 kgf) SAE
Gradeability		70 % {35°}

Cab & Control

Cab
All-weather, sound-suppressed steel cab mounted on the high suspension mounts filled with silicone oil and equipped with a heavy, insulated floor mat.
Control
Two hand levers and two foot pedals for travel
Two hand levers for excavating and swing
Electric rotary-type engine throttle

Boom, Arm & Bucket

Boom cylinders	100 mm x 1,092 mm
Arm cylinder	115 mm x 1,116 mm
Bucket cylinder	95 mm x 903 mm

Refilling Capacities & Lubrications

Fuel tank	271 L
Cooling system	12 L
Engine oil	17 L
Travel reduction gear	2 x 2.1 L
Swing reduction gear	1 x 1.65 L
Hydraulic oil tank	94.5 L tank oil level
	197 L hydraulic system

Attachments

Backhoe bucket and combination

Use			Backhoe bucket	
			Normal digging	
Bucket capacity	ISO heaped	m^3	0.60 (Bolt the side cutter)	0.70 (Bolt the side cutter)
	ISO Struck	m^3	0.43	0.50
Opening width	With side cutter	mm	1,120	1,270
	Without side cutter	mm	1,010	1,160
No. of teeth			5	5
Bucket weight		kg	540	590
Combination	2.09 m with R/G	SK140	◎	—
		SK145XDLC	○	◎
	2.38 m (Middle east Africa only)	SK140	△	—
		SK145XDLC	○	△
	2.84 m	SK140	—	—
		SK145XDLC	○	△

◎ Standard combination ○ Recommended △ Loading only — Not applicable

Working Ranges

Unit: mm

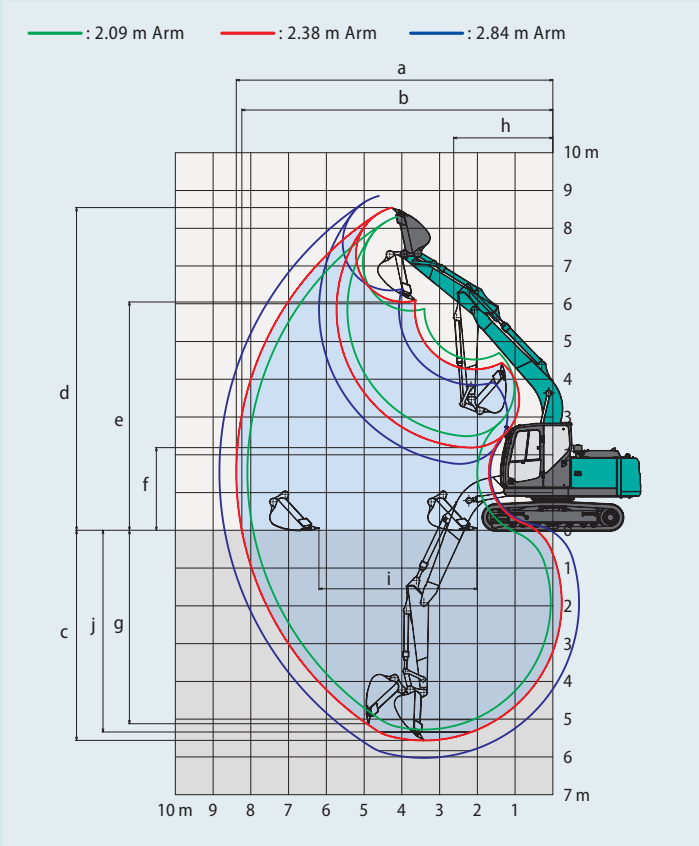
Boom	4.68 m		
Arm / Range	Short 2.09 m	Standard 2.38 m	Long 2.84 m
a- Max. digging reach	8,090	8,380	8,830
b- Max. digging reach at ground level	7,930	8,240	8,690
c- Max. digging depth	5,280	5,560	6,030
d- Max. digging height	8,300	8,550	8,850
e- Max. dumping clearance	5,810	6,050	6,350
f- Min. dumping clearance	2,490	2,190	1,760
g- Max. vertical wall digging depth	4,880	5,120	5,620
h- Min. swing radius	2,620	2,640	2,800
i- Horizontal digging stroke at ground level	3,580	4,190	4,670
j- Digging depth for 2.4 m (8') flat bottom	5,020	5,340	5,840
Bucket capacity ISO heaped m^3	0.70/0.60	0.60	0.60

Digging Force (ISO 6015)

Unit: kN

Arm length	Short 2.09 m	Standard 2.38 m	Long 2.84 m
Bucket digging force	89.2	89.2	89.3
Arm crowding force	71.5	57.9	57.9

*Figures are based on 0.6 m^3 bucket.



Dimensions

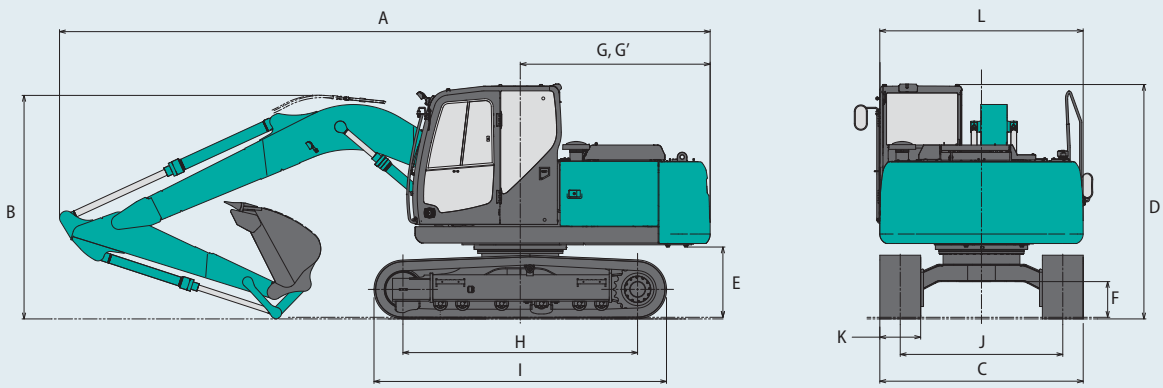
Unit: mm

Arm length			Short 2.09 m	Standard 2.38 m	Long 2.84 m
A	Overall length		7,970	7,950	7,940
B	Overall height (to top of boom)		2,740	2,710	3,130
C	Overall width of crawler		2,490		
D	Overall height (to top of cab)		2,880		
E	Ground clearance of rear end*		860		
F	Ground clearance*	SK140	435		
		SK145XDLC	415		

Unit: mm

G	Tail swing radius		2,330
G'	Distance from centre of swing to rear end		2,330
H	Tumbler distance	SK140	2,870
		SK145XDLC	3,040
I	Overall length of crawler	SK140	3,580
		SK145XDLC	3,750
J	Track gauge		1,990
K	Shoe width		500
L	Overall width of upperstructure		2,490

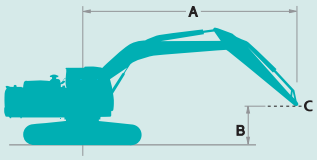
*Without including height of shoe



Operating Weight & Ground Pressure

In standard trim, with standard boom, 2.38 m arm, and 0.60 m^3 ISO heaped bucket.

Shaped			Triple grouser shoes (even height)	
Shoe width		mm	500	700
Overall width of crawler	SK140	mm	2,490	2,690
	SK145XDLC	mm	2,490	2,690
Ground pressure	SK140	kPa	41.2	30.2
	SK145XDLC	kPa	41.2	30.2
Operating weight	SK140	kg	13,100	13,500
	SK145XDLC	kg	13,800	14,200



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: 34.3 MPa (350 kgf/cm²)

SK140-10E	Boom: 4.68 m	Arm: 2.38 m	Bucket: without	Shoe: 500 mm	Counterweight: 2,000 kg									
A / B		1.5m		3.0m		4.5m		6.0m		At max. reach		Radius
6.0m	kg					*3,220	*3,220			*1,810	*1,810	5.47 m
4.5m	kg					*3,500	3,400	3,100	2,100	*1,670	*1,670	6.44 m
3.0m	kg			*6,240	5,930	*4,330	3,160	3,010	2,010	*1,660	1,560	6.96 m
1.5m	kg			*5,610	5,120	4,470	2,880	2,880	1,900	*1,750	1,460	7.11 m
G.L.	kg			*6,070	4,880	4,270	2,700	2,790	1,810	*1,960	1,480	6.93 m
-1.5m	kg	*5,180	*5,180	8,470	4,880	4,200	2,640	2,760	1,780	*2,400	1,650	6.39 m
-3.0m	kg	*8,940	*8,940	*7,730	5,020	4,270	2,700			3,290	2,130	5.38 m

SK145XDLC-10E	Boom: 4.68 m	Arm: 2.38 m	Bucket: without	Shoe: 500 mm	Counterweight: 2,480 kg									
A / B		1.5m		3.0m		4.5m		6.0m		At max. reach		Radius
6.0m	kg					*3,550	*3,550			*2,530	*2,530	5.07 m
4.5m	kg					*3,770	3,750	*2,980	2,350	*2,340	2,270	6.11 m
3.0m	kg			*6,880	6,460	*4,590	3,520	3,580	2,280	*2,340	1,930	6.65 m
1.5m	kg					5,370	3,260	3,470	2,180	*2,490	1,800	6.81 m
G.L.	kg			*5,730	5,600	5,190	3,100	3,390	2,100	*2,840	1,840	6.63 m
-1.5m	kg	*5,670	*5,670	*8,830	5,630	5,150	3,070	3,380	2,100	3,330	2,070	6.06 m
-3.0m	kg			*7,330	5,790	*4,990	3,160			*4,280	2,770	4.98 m

SK145XDLC-10E	Boom: 4.68 m	Arm: 2.09 m	Bucket: without	Shoe: 500 mm	Counterweight: 2,480 kg									
A / B		1.5m		3.0m		4.5m		6.0m		At max. reach		Radius
6.0m	kg					*3,540	*3,540			*2,520	*2,520	5.07 m
4.5m	kg					*3,760	3,740	*2,980	2,330	*2,330	2,250	6.11 m
3.0m	kg			*6,860	6,440	*4,570	3,500	3,570	2,270	*2,330	1,910	6.65 m
1.5m	kg					5,350	3,240	3,450	2,160	*2,480	1,790	6.81 m
G.L.	kg			*5,720	5,570	5,170	3,080	3,370	2,090	*2,830	1,820	6.63 m
-1.5m	kg	*5,660	*5,660	*8,800	5,610	5,130	3,050	3,360	2,080	3,320	2,050	6.06 m
-3.0m	kg			*7,300	5,760	*4,970	3,140			*4,260	2,750	4.98 m

SK145XDLC-10E	Boom: 4.68 m	Arm: 2.84 m	Bucket: without	Shoe: 500 mm	Counterweight: 2,480 kg											
A / B		1.5m		3.0m		4.5m		6.0m		7.5m		At max. reach		Radius
7.5m	kg											*2,060	*2,060	4.49 m
6.0m	kg							*1,860	*1,860			*1,700	*1,700	6.04 m
4.5m	kg							*3,020	2,370			*1,580	*1,580	6.93 m
3.0m	kg			*5,240	*5,240	*3,890	3,580	*3,350	2,270			*1,570	*1,570	7.41 m
1.5m	kg			*8,020	5,910	*4,940	3,270	3,440	2,140	*1,940	1,510	*1,640	1,490	7.55 m
G.L.	kg			*6,300	5,490	5,140	3,040	3,320	2,030			*1,820	1,500	7.39 m
-1.5m	kg	*4,440	*4,440	*8,630	5,420	5,030	2,950	3,260	1,980			*2,170	1,650	6.88 m
-3.0m	kg	*7,510	*7,510	*8,230	5,520	5,060	2,970					*2,960	2,040	5.96 m
-4.5m	kg			*5,830	5,800							*3,710	3,330	4.34 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
- ISUZU 4JJ1 diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12 V - 110 Ah)
- Starting motor (24 V - 4 kW), 50 amp alternator
- Engine oil pan drain valve
- Double element air cleaner
- Pre-air cleaner

BUCKET
- 0.60 m^3 bucket

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

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
- Lower under side cover*
- 500 mm HD shoe plate

HYDRAULIC
- Aluminum hydraulic oil cooler
- Pilot line filter

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

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

OPTIONAL EQUIPMENT

- Two cab LED lights
- Rear view camera
- 0.70 m^3 bucket*
- Breaker piping
- N&B piping
- HD short arm 2.09 m
- HD long arm 2.84 m
- 700 mm HD shoe plate
- Travel alarm

*for SK145XDLC
Note: Standard and optional equipment may vary. Consult your KOBELCO Dealer for specifics.

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.

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