

STANDARD EQUIPMENT

ENGINE

- Engine, MITSUBISHI D04FR-KDP2TAAC, Diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Batteries (2 x 12V - 96Ah)
- 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

CONTROL

- Working mode selector (H-mode and S-mode)

SWING SYSTEM & TRAVEL SYSTEM

- Swing rebound prevention system
- Straight propel system
- Two-speed travel with automatic shift down
- Sealed & lubricated track links
- Grease-type track adjusters
- Automatic swing brake

HYDRAULIC

- Arm regeneration system
- Aluminum hydraulic oil cooler

MIRRORS & LIGHTS

- Two rearview mirrors
- Two front and two rear working lights
- Swing flashers

CAB & CONTROL

- Two control levers, pilot-operated
- Tow eyes
- Horn, electric
- Integrated left-right slide-type control box
- Cab, all-weather sound suppressed type
- Ashtray
- Cigarette lighter
- Cab light (interior)
- Coat hook
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat
- 7-way adjustable suspension seat
- Retractable seatbelt
- Headrest
- Handrails
- Heater and defroster
- Intermittent windshield wiper with double-spray washer
- Skylight
- Tinted safety glass
- Pull-type front window and removable lower front window
- Easy-to-read multi-display monitor
- Automatic air conditioner
- Emergency escape hammer

OPTIONAL EQUIPMENT

- Wide range of buckets
- Various optional arms
- Wide range of shoes
- Front-guard protective structures
- Additional hydraulic circuit

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

KOBELCO CONSTRUCTION MACHINERY U.S.A. INC.

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Inquiries To:

Hydraulic Excavators

SK140_{LC}

- Bucket Capacity:
0.5 – 0.7 m³
- Engine Power:
99 HP/2,100 rpm (ISO14396)
- Operating Weight:
13,000 – 13,500 kg

SK140_{LC}

DRIVEN BY
PASSION

The Power Wave of Change

The new SK series, developed using KOBELCO's most advanced technologies, features hydraulic excavators that offer superlative solutions for all the requirements of today's construction industry. Their streamlined power drives a work performance that maximizes capacity and minimizes waste, offering a completely new working style while taking care for the environment to a new level.



Pursuing the "Three E's"
The Perfection of Next-Generation

Enhancement

Greater Performance Capacity

- Hydraulic circuitry minimizes pressure loss
- High-efficiency, electronically controlled Common Rail Fuel Injection Engine
- Powerful travel and arm/bucket digging force

Economy

Improved Cost Efficiency

- Advanced power plant that reduces fuel consumption
- Easy maintenance that reduces upkeep costs
- High structural durability and reliability that retain machine value longer

Environment

Features That Go Easy on the Earth

- Meets the latest exhaust emission standards
- Noise reduction measures (with improvement of the sound quality) minimize noise and vibration

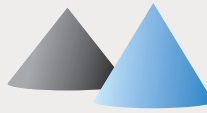
Efficient Performance!

Popular for its outstanding productivity and fuel economy



Fuel Consumption*

10 % decrease in fuel consumption even when performing more work volume. (S-mode)



Work Volume*

3 % increase in work volume using the same amount of fuel. (S-mode)

“Top-Class” Powerful Digging

*Max. arm crowding force: **6,567 kgf**

*Max. bucket digging force: **9,188 kgf**

Powerful Travel

Travel Speed: **5.6/3.4 km/h**

Drawbar pulling force: **14,174 kgf**

Greater Swing Power, Shorter Cycle Times

Swing torque: **40.0 kN·m**

Swing speed: **11.0 min⁻¹**

Significant Extension of Continuous Working Hours

The combination of a large-capacity fuel tank and excellent fuel efficiency delivers an impressive 37 %* increase in continuous operation hours.

Fuel tank: **275 L**

Light Lever Operation

Lighter levers mean less operator fatigue over long hours of operation.



Photos in this catalog are the optional specs with 0.57 m³ bucket, 700 mm shoes, N&B piping, and rock guard.

3E Technology New Hydraulic System

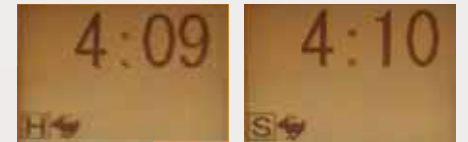
Rigorous inspections for pressure loss are performed on all components of the hydraulic piping, from the spool of the control valve to the connectors. This regimen, combined with the use of a new, high-efficiency pump, cuts energy loss to a minimum.

3E Technology Next-Generation Electronic Engine Control

The high-pressure, common-rail fuel-injection engine features a cooled EGR (Exhaust Gas Recirculation) device that lowers the air intake temperature to keep the oxygen concentration down. The multiple injection system features adjustable control to maximize fuel efficiency and provides powerful medium/low-speed torque. The result is a highly fuel-efficient engine that greatly reduces emissions of PM (Particulate Matter) and NOx into the atmosphere.



Simple Select: Two Digging Modes



- H** For heavy duty when a higher performance level is required.
- S** For normal operations with lower fuel consumption.

N&B (crusher and breaker)

The operator selects the desired mode from inside the cab, and the selector valve automatically configures the machine accordingly.

Attachment Mode Selector Switch

There's a choice of three different attachment functions, to accommodate bucket, crusher or breaker, and the desired attachment mode can be selected with a switch, which automatically configures the selector valve. All attachment modes can be used in either S-mode or H-mode.



Seamless, Smooth Combined Operations

The SK machines have inherited the various systems that make inching and combined operations easy and accurate, with further refinements that make a good thing even better. Leveling and other combined operations can be carried out with graceful ease.

- Electronic Active Control System
- Arm regeneration system
- Boom lowering system
- Variable swing priority system
- Swing rebound prevention system

3E Technology Total Tuning Through Advanced ITCS Control

The next-generation engine control is governed by a new version of ITCS, which responds quickly to sudden changes in hydraulic load to ensure that the engine runs as efficiently as possible with a minimum of wasted output.

ITCS (Intelligent Total Control System) is an advanced, computerized system that provides comprehensive control of all machine functions.

*The value shows results from actual measurements taken by KOBELCO when compared with other KOBELCO 13-ton class machines.

The Value and Quality of Sturdy Construction!

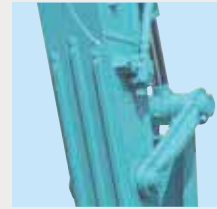
Standardized Attachment Strength

Every part of the attachment features cast or forged components. Together, the reinforced boom, heavy-duty arm and reinforced bucket offer superlative durability and enhanced reliability.

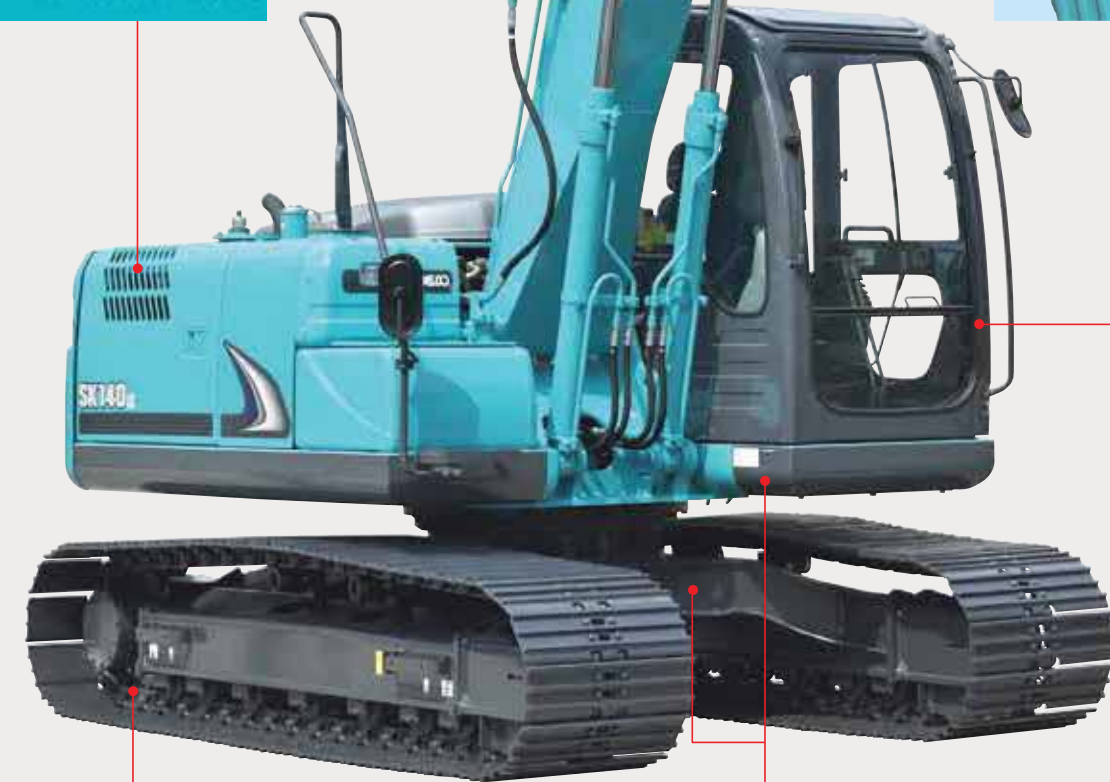
Ventilation Openings for tropical temperatures



Rock guard



HD arm



Reinforced Crawler Shoes

The diameter of the track link pins has been made a size larger for even greater strength.

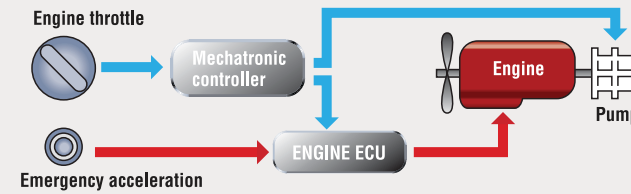
Reinforced upper and lower frames

The front section of the upper frame and the entire lower frame are constructed of thicker steel plate. As a result, the durability of the machine body is higher.

Emergency Acceleration (Dial) Permits Continued Operation in the Unlikely Event of Malfunction



If unexpected trouble is experienced with the ITCS mechatronic control system, the machine can still be operated using the emergency acceleration system. Digging modes are also automatically relayed to an emergency system so that digging can continue temporarily until a service person arrives to repair the primary system.



Durability That Retains Machine Value in the Future

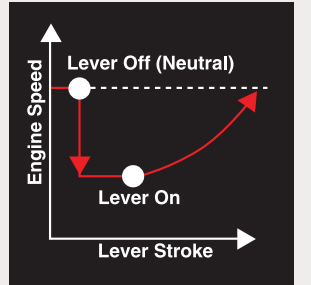
- Operator's seat covered in durable material
- High-quality urethane paint
- Easily repaired bolted hand rails

Photos in this catalog are the optional specs with 0.57 m³ bucket, 700 mm shoes, N&B piping, and rock guard.

Designed for the Environment and the Future!

Automatic Acceleration/Deceleration Function Reduces Engine Speed

Engine speed is automatically reduced when the control lever is placed in neutral, effectively saving fuel and reducing noise and exhaust emissions. The engine quickly returns to full speed when the lever is moved out of neutral. The proportional Deceleration recovery speed smoothly.



Low Noise Level and Mild Sound Quality

The electronically controlled common-rail engine has a unique fuel injection system that runs quietly. Also, the hydraulic pumps have been redesigned to produce a more pleasant sound during pressure relief. In short, the SK series meets all requirements cited in latest standards.

Meets EMC (Electromagnetic Compatibility) Standards in Europe.

Measures have been taken to ensure that the SK machines do not cause electro-magnetic interference.

“On the Ground” Maintenance!

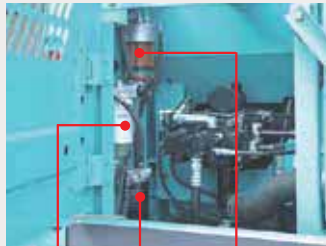
Comfortable "On the Ground" Maintenance



The machine layout was designed with easy inspection and maintenance in mind.

Access through the right side cover

A new fuel filter system has been installed that can handle the most punishing conditions. It now has a pre-filter (with built-in water separator), an ultra-fine 4-micron main filter, and an additional third filter, to ensure complete removal of dust and other impurities in the fuel.



Main fuel filter Third filter Pre-fuel filter (with built-in water separators)



Main fuel filter

Quick Oil Drain Valves for Quick Maintenance



Quick drain valve



Fuel drain valve

1 A quick drain valve, which requires no tools, is provided as standard equipment.

2 To facilitate fuel tank cleaning, the fuel drain valve fitted with a flange on the bottom.

More Efficient Maintenance Inside the Cab



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



4 Easy-access fuse box differentiated fuses, easy to locate malfunctions.



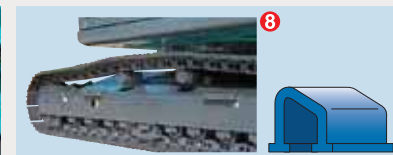
5 Air conditioner filter can be easily removed without tools for cleaning.



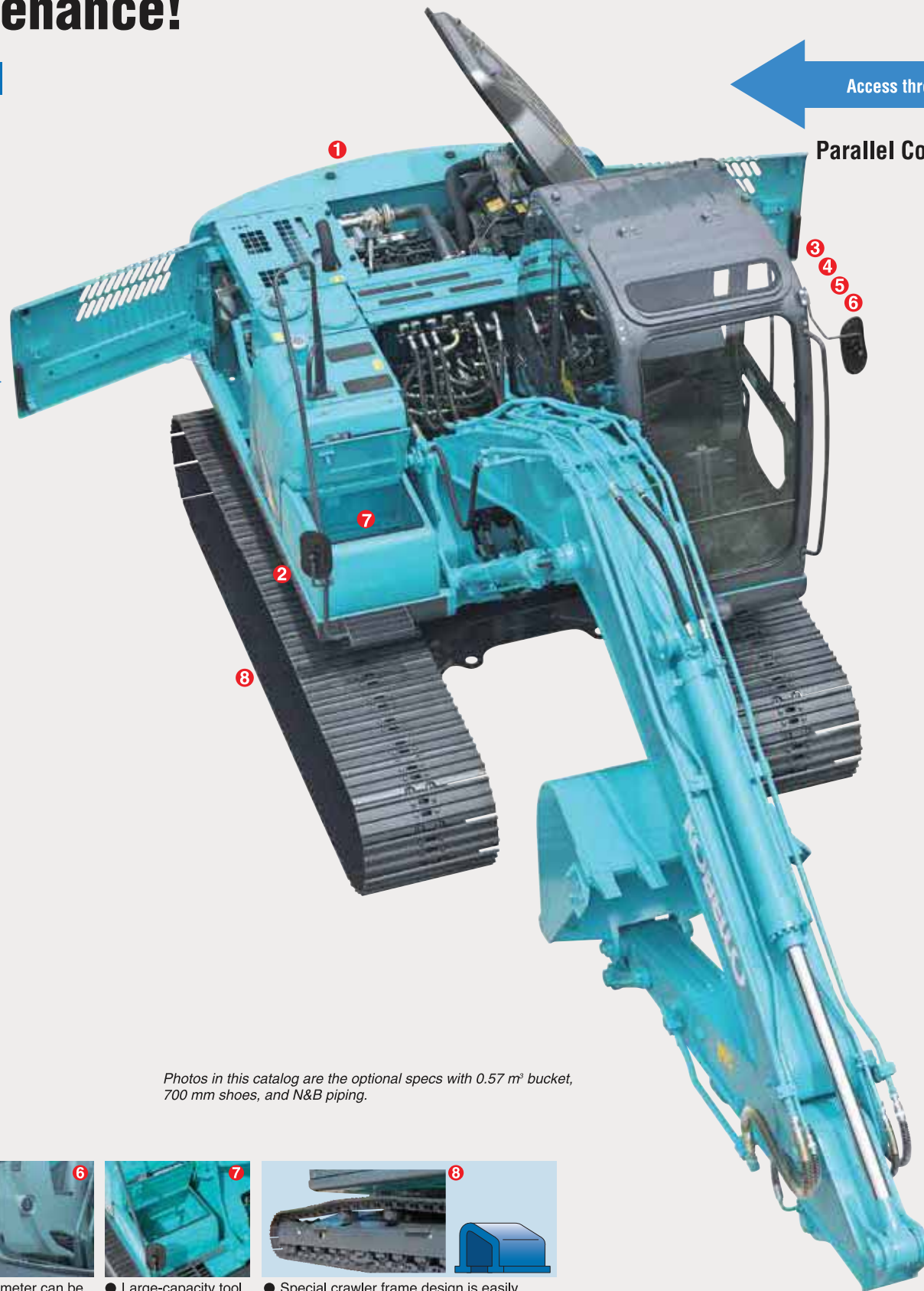
6 Hour meter can be checked while standing on the ground.



7 Large-capacity tool box can hold up to three pails.

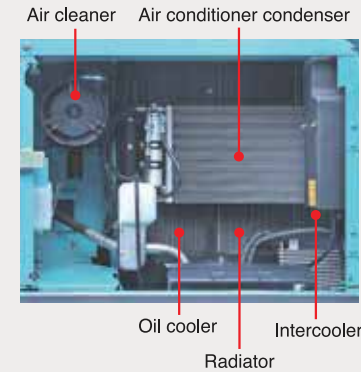


8 Special crawler frame design is easily cleaned of mud.



Access through the left side cover

Parallel Cooling Units Are Easy to Clean



Highly Durable Super-fine Filter



Super-fine filter

The high-capacity hydraulic oil filter incorporates glass fiber with superior cleaning power and durability. With a replacement cycle of 1,000 hours and a construction that allows replacement of the filter element only, it's both highly effective and highly economical.

Double-Element Air Cleaner as Standard



The large-capacity element features a double-filter structure that keeps the engine running clean even in dusty environments.

Air cleaner (double element)

Monitor Display with Essential Information for Accurate Maintenance Checks



- Displays only the maintenance information that's needed, when it's needed.
- Self-diagnostic function that provides early-warning detection and display of electrical system malfunctions.
- Record previous breakdowns, including irregular and transient malfunctions.

Choice of 16 Languages for Monitor Display



With messages including those requiring urgent action displayed in the local language, users in all parts of the world can work with greater peace of mind.

充電不良	Lichtmaschine defekt	CHARGE ERROR	CHARGE ERROR
Chinese	German	English	English (US)
ERREUR DE CHARGE	PENGISIAN BATT. RUSAK		ERRORE DI CARICA
French	Indonesian	ISO	Italian
チャージ	KESALAHAN CAS	အမှတ်ပေးပါ	ERRO DE CARGA
Japanese	Malay	Myanmar(Burmese)	Portuguese
ERROR EN CARGA	தவறாக சிவரிததல்	အမှတ်ပေးပါ	Sạc Điện Bị Lỗi
Spanish	Tamil	Thai	Vietnamese

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Designed from the Operator's Point of View



Big Cab Same as Larger Class Machines

The "Big Cab" has the same width and height as the cabs installed on much larger machines. With more space to the front and rear of the operator, it feels more roomy, and the larger area of floor space means greater comfort from the feet up. The operator has plenty of space in front for easy, comfortable operation, with ample foot room.

Excellent Visibility

The wide, open view in front combines with minimized blind spots around the machine for greater onsite safety.



- New "rise-up" wipers keep the view clear and clean
- Broad wiper area improves visibility in bad weather
- Rearview mirrors mounted both to the right and left improve safety in back
- Rear-mounted mirror eliminates counterweight blind spot

Plenty of Foot Room

Front-to-back foot room in the cab is a comfortable 750 mm. Big travel pedal for operator comfort.

Reduced Vibration for Fatigue-Free Operation

The rigid cab construction and liquid-filled viscous cab mounts minimize cab vibration. In addition, the use of new lower rollers on the crawlers cuts travel vibration in half compared with previous models.

Information Display Prioritizes Visual Recognition



The analog gauge provides information that's easy to read regardless of the operating environment. The information display screen has been enlarged, and a visor is attached to further enhance visibility.



Creating a Comfortable Operating Environment



● Seat can be reclined to horizontal position



- Double slide and suspension seat
- Powerful automatic air conditioner
- Spacious luggage tray
- Two-speaker FM radio with station select
- Interior design and materials create an elegant feel
- One-touch lock release simplifies opening and closing the front window
- Large cup holder

Imagining Possible Scenarios and Preparing in Advance

Cab Brackets



The SK140LC has a safety rating equivalent to FOPS level 1. In addition to the standard roof guard, optional front and head guards are available. They can be easily attached with bolts to the standard cab brackets.

Safety Features That Take Various Scenarios into Consideration



● Firewall separates the pump compartment from the engine



● Hammer for emergency exit



● Swing flashers/rear working lights

- Thermal guard prevents contact with hot components during engine inspections
- Retractable seatbelt requires no manual adjustment



Photos in this catalog are the optional specs with 0.57 m³ bucket, 700 mm shoes, N&B piping, and rock guard.



Engine

Model	MITSUBISHI D04FR-KDP2TAAC
Type:	Direct injection, water-cooled, 4-cycle diesel engine with turbocharger, intercooler
No. of cylinders:	4
Bore and stroke:	102 mm x 130 mm
Displacement:	4,249 L
Rated power output	99 HP/2,100 rpm (ISO 14396: 2002) 38.2 kgf-m/1,600 rpm (ISO14396:2002)



Hydraulic System

Pump	
Type:	Two variable displacement pumps + 1 gear pump
Max. discharge flow:	2 x 130 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 (285 kgf/cm ²)
Control circuit:	5.0 MPa (50 kgf/cm ²)
Pilot control pump:	Gear type
Main control valves:	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 the neutral position
Parking brake:	Hydraulic brake
Swing speed	11.0 min ⁻¹ (rpm)
Swing torque	40.0 kN-m
Tail swing radius	2,190 mm
Min. front swing radius	2,620 mm



Attachments

Backhoe bucket and arm combination

Use	Backhoe bucket				
	Normal digging				
Bucket capacity	ISO heaped	m ³	0.50	0.57	0.70
	Struck	m ³	0.38	0.43	0.50
Opening width	With side cutter	mm	1,000	1,100	—
	Without side cutter	mm	900	1,000	1,150
No. of bucket teeth			5	5	5
Bucket weight		kg	410	400	400
Combinations	2.09 m Short arm		☒	☒	☐
	2.38 m Standard arm		☒	☒	—

☐ Standard ☒ Recommended ☐ Earth work digging



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:	46 each side
Travel speed:	5.6/3.4 km/h
Drawbar pulling force:	139 kN (14,200 kgf) (SAE J 1309)
Gradeability:	70 % (35°)



Cab & Control

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



Boom, Arm & Bucket

Boom cylinders:	100 mm x 1,092 mm
Arm cylinder:	115 mm x 1,120 mm
Bucket cylinders:	95 mm x 903 mm



Refilling Capacities & Lubrications

Fuel tank:	275 L
Cooling system:	14 L
Engine oil:	18.5 L
Travel reduction gear:	2 x 2.1 L
Swing reduction gear:	1.65 L
Hydraulic oil tank:	101 L tank oil level 172 L hydraulic system



Working Ranges

Range	Boom Arm	4.68 m		
		Short 2.09 m	Standard 2.38 m	Long 2.84 m
a- Max. digging reach		8.04	8.34	8.78
b- Max. digging reach at ground level		7.89	8.19	8.64
c- Max. digging depth		5.23	5.5	5.98
d- Max. digging height		8.27	8.50	8.81
e- Max. dumping clearance		5.85	6.09	6.39
f- Min. dumping clearance		2.53	2.23	1.79
g- Max. vertical wall digging depth		4.68	4.88	5.55
h- Min. swing radius		2.61	2.62	2.75
i- Horizontal digging stroke at ground level		3.59	4.21	4.70
j- Digging depth for 2.4 m (8') flat bottom		4.97	5.29	5.79
Bucket capacity ISO heaped m ³		0.57	0.50	0.38

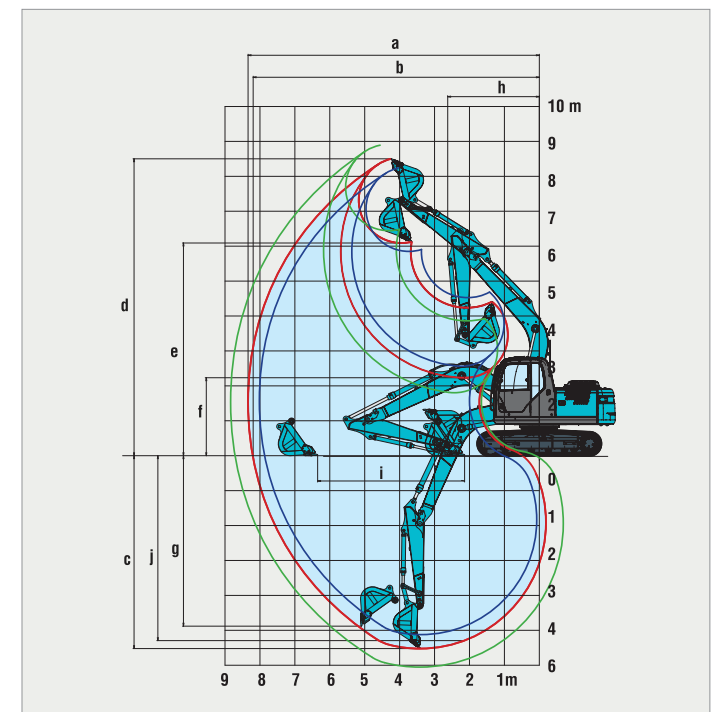
Digging Force (ISO 6015)

Arm length	Short 2.09 m	Standard 2.38 m	Long 2.84 m
Bucket digging force	89.2 (9.1)	90.1 (9.2)	89.3 (9.1)
Arm crowding force	71.9 (7.3)	64.4 (6.6)	58.1 (5.9)



Dimensions

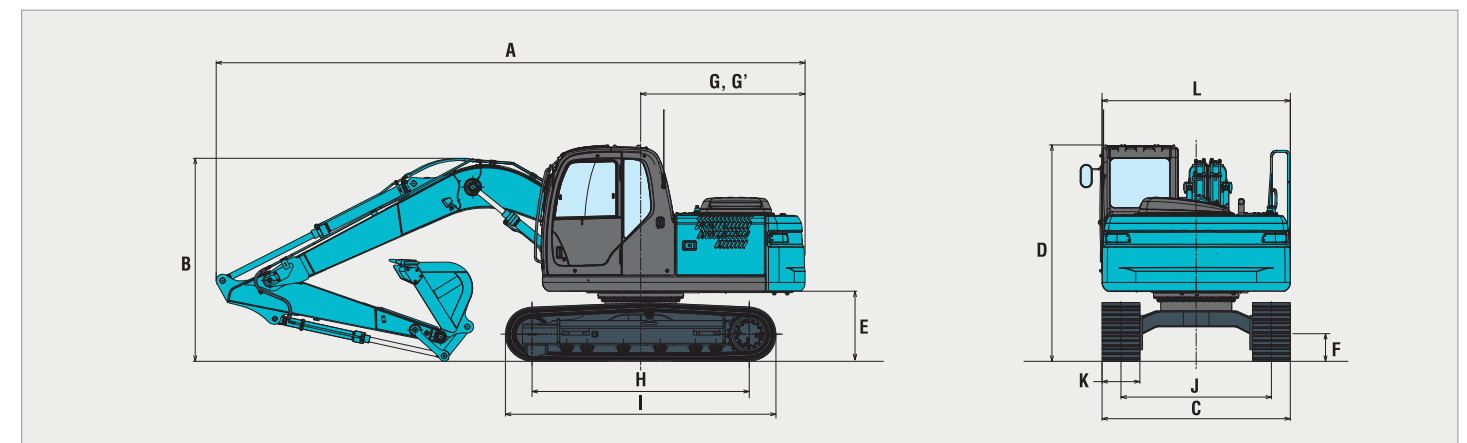
Arm length	Short 2.09 m	Standard 2.38 m	Long 2.84 m
A Overall length	7,810	7,790	7,790
B Overall height (to top of boom)	2,730	2,710	3,080
C Overall width	2,490	2,490	2,490
D Overall height (to top of cab)	2,870	2,870	2,870
E Ground clearance of rear end*	910	910	910
F Ground clearance*	440	440	440



— Short Arm — Standard Arm — Long Arm

Unit: mm			
G Tail swing radius	2,190	2,190	2,190
G' Distance from center of swing to rear end	2,180	2,180	2,180
H Tumbler distance	3,040	3,040	3,040
I Overall length of crawler	3,750	3,750	3,750
J Track gauge	1,990	1,990	1,990
K Shoe width	500/600/700		
L Overall width of upperstructure	2,490	2,490	2,490

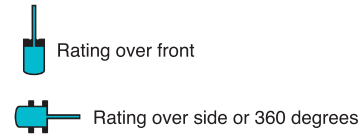
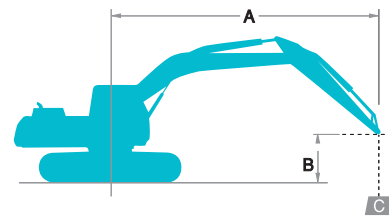
* Without including height of shoe lug.



Operating Weight & Ground Pressure

In standard trim, with standard boom, 2.38 m arm, and 0.5 m³ ISO heaped bucket.

Shaped		Triple grouser shoes (even height)		
		500	600	700
Shoe width	mm	500	600	700
Overall width	mm	2,490	2,590	2,690
Ground pressure	kPa (kgf/cm ²)	39 (0.40)	33 (0.34)	28 (0.29)
Operating weight	kg	13,000	13,300	13,500



A: Reach from swing centerline to arm tip
 B: Arm tip height above/below ground
 C: Lifting capacities in kilograms
 Bucket: without bucket
 Max. discharge pressure: 34.3 MPa {350 kgf/cm²}

SK140LC		Standard Arm: 2.38 m Bucket: without Shoe: 600 mm										
B	A	1.5 m		3.0 m		4.5 m		6.0 m		At max. reach		Radius
		Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	
6.0 m	kg					*3,250	*3,250			*1,830	*1,830	5.47 m
4.5 m	kg					*3,530	*3,530	*3,260	2,360	*1,690	*1,690	6.44 m
3.0 m	kg			*6,290	*6,290	*4,380	3,530	3,560	2,280	*1,680	*1,680	6.96 m
1.5 m	kg			*5,630	*5,630	5,350	3,270	3,450	2,180	*1,770	1,690	7.11 m
G. L.	kg			*6,080	5,580	5,150	3,100	3,350	2,090	*1,980	1,720	6.93 m
-1.5 m	kg	*5,200	*5,200	*9,150	5,580	5,090	3,050	3,330	2,070	*2,420	1,910	6.40 m
-3.0 m	kg	*8,950	*8,950	*7,840	5,710	5,160	3,100			*3,530	2,450	5.39 m

SK140LC		Short Arm: 2.09 m Bucket: without Shoe: 600 mm										
B	A	1.5 m		3.0 m		4.5 m		6.0 m		At max. reach		Radius
		Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	
6.0 m	kg					*3,500	*3,500			*2,500	*2,500	5.07 m
4.5 m	kg					*3,720	3,650	*2,950	2,270	*2,300	2,190	6.11 m
3.0 m	kg			*6,800	6,300	*4,530	3,410	3,480	2,200	*2,310	1,850	6.65 m
1.5 m	kg					5,230	3,150	3,370	2,100	*2,460	1,730	6.81 m
G. L.	kg			*5,700	5,440	5,050	3,000	3,280	2,020	*2,800	1,760	6.63 m
-1.5 m	kg	*5,630	*5,630	*8,760	5,490	5,010	2,970	3,280	2,020	3,230	1,990	6.06 m
-3.0 m	kg			*7,270	5,650	*4,940	3,060			*4,230	2,680	4.98 m

SK140LC		Long Arm: 2.84 m Bucket: without Shoe: 600 mm												
B	A	1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		At max. reach		Radius
		Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	Rating over front	Rating over side or 360 degrees	
7.5 m	kg											*2,070	*2,070	4.49 m
6.0 m	kg							*1,870	*1,870			*1,710	*1,710	6.04 m
4.5 m	kg							*3,050	2,370			*1,590	*1,590	6.93 m
3.0 m	kg			*5,280	*5,280	*3,920	3,550	*3,390	2,270			*1,580	*1,580	7.41 m
1.5 m	kg			*8,100	5,900	*4,990	3,260	3,420	2,150	*1,950	1,520	*1,660	1,500	7.55 m
G. L.	kg			*6,310	5,500	5,110	3,050	3,300	2,040			*1,830	1,510	7.39 m
-1.5 m	kg	*4,450	*4,450	*8,650	5,440	5,010	2,960	3,250	1,990			*2,180	1,660	6.89 m
-3.0 m	kg	*7,530	*7,530	*8,330	5,530	5,030	2,990					*2,970	2,050	5.96 m
-4.5 m	kg			*5,920	5,800							*3,780	3,340	4.34 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.
 - 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.
 - Arm tip pin is 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.