KOBELCO

SK75SR-3

SK75SR

- Bucket Capacity:
  0.28 m^3 ISO heaped
- Engine Power:
  42 kW/2,200 min^{-1} (ISO14396)
- Operating Weight:
  7,440 kg

Complies with the latest exhaust emission regulations

US
EPA Tier III

EU (NRMM)
Stage IIIA

Latest Japanese
Regulations

We Save You Fuel
Achieving a Low-Carbon Society

Fuel Consumption Gives You the Competitive Edge

KOBELCO's SR hydraulic excavator has seen a new evolution. KOBELCO has installed its full range of fuel-saving technologies in this SR model, resulting in unmatched low fuel consumption that heads the class in engine-driven hydraulic excavators.

Outstanding performance in tight spaces, on-site safety, less stress for the operator… KOBELCO was first to understand these demands and in response developed SR, short rear swing, excavators. The acclaimed SR concept went on to be adopted throughout the industry.

But KOBELCO didn't stop there. Aware of changing needs among machine users in a changing social environment, KOBELCO has taken the SR concept through a further evolution with value-added features.

Adding an AIS auto-idling-stop feature — another first in the industry — helps save energy, and KOBELCO's unique design for engine cooling, the iNDr system, cuts noise to extremely low levels.

The newest KOBELCO approach to low fuel consumption, NEXT-3E, now also applies to short rear swing models, to maximize work volumes while saving on fuel. And the new ECO-mode in the SK75SR creates even greater savings on fuel to turn SR models into exceptional high-earning machines.

KOBELCO continues to lead the field in short rear swing excavators.

Five Ways the SK75SR Scores:

- More Work with Less Fuel!
- Efficient Performance!
- Fast, Accurate and Low-Cost Maintenance
- A Working Environment that Helps Operator Concentrate on the Job
- Low Noise: iNDr

NEXT-3E

Pursuing the "Three E's"

The Perfection of Next-Generation, Network Performance

Enhancement
Greater Performance Capacity

Economy
Improved Cost Efficiency

Environment
Features That Go Easy on the Earth

More Work with Less Fuel!

Fuel Consumption and Work Volume

The new hydraulic system and an additional ECO-mode have cut fuel consumption by up to 27%.

H-mode (vs previous SK70SR in H-mode)

Fuel consumption (L/h)

6 % decrease

Work volume per liter of fuel (m^3/L)

6 % increase

S-mode (vs previous SK70SR in H-mode)

Fuel consumption (L/h)

13 % decrease

Work volume per liter of fuel (m^3/L)

15 % increase

ECO-mode (vs previous SK70SR in S-mode)

Great leap forward in energy-saving performance

Fuel consumption (L/h)

27 % decrease

Work volume per liter of fuel (m^3/L)

31 % increase

※ Figures for fuel consumption: fuel consumed per hour (L/h) compared with previous model, in KOBELCO tests.

※ Figures for work volume: digging volume per liter of fuel (m^3/L) com pared with previous model, in KOBELCO tests.

Significant Extension of Continuous Working Hours

The combination of a large-capacity fuel tank and excellent fuel efficiency delivers an impressive increase in the length of continuous working.

Fuel tank capacity:
120 L

ECO-mode

Work modes for a closer match to the job in hand. An addition to the existing H-mode and S-mode, the new ECO-mode saves even more energy.

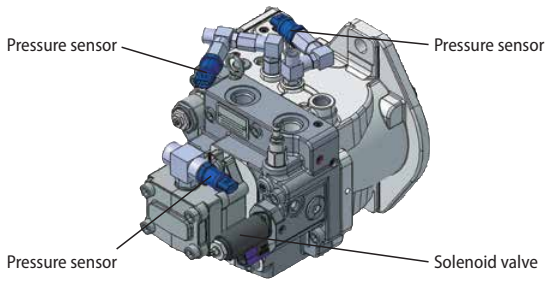
H-mode: For heavy duty when a higher performance level is required.

S-mode: For normal operations with lower fuel consumption.

ECO-mode: Puts priority on low fuel consumption and economic performance.

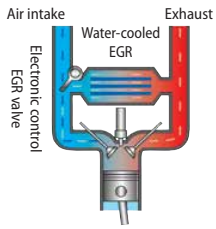
1 NEXT-3E Technology
New Hydraulic System

KOBELCO's hydraulic circuit analysis is combined with the use of new, high-efficiency pumps in a three-pump electro-hydraulic actuator control system that replaces the conventional mechanical system. It all adds up to a hydraulic system that delivers the best outcome: top-class work performance on less fuel.



2 NEXT-3E Technology
High Reliable Engine

The engine is a PFR-pump fuel injection engine for high reliability. It is equipped with cooled EGR that lowers the temperature of the air intake to reduce its oxygen concentration. It achieves big reductions in particulate matter (PM) and NOx emissions while boosting output.



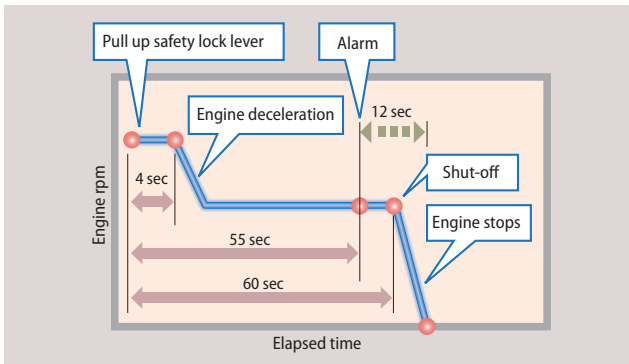
3 NEXT-3E Technology
Total Tuning Through Advanced ITCS Control

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.

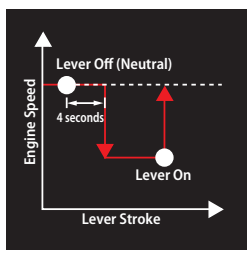
Auto Idle Stop Provided as Standard Equipment

This function saves fuel and cut emissions by shutting down the engine automatically when the machine is on stand by. It also stops the hourmeter, which helps to retain the machine's asset value.



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 the previous speed when the lever is moved out of neutral.



Efficient Performance!

Top-Class Powerful Digging

For more efficient work performance.

Max. arm crowding force: 39.4 kN {4.0 tf}

Max. bucket digging force: 52.7 kN {5.4 tf}

Powerful Travel, Powerful Steering

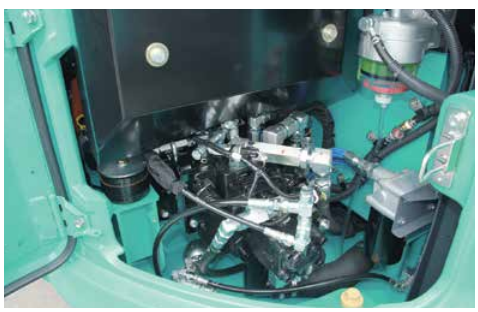
A new type of travel motor boosts travel torque by 6%, and lighter machine weight improves steering performance by 10% over the previous model, for better maneuverability and crisper turns.

Travel torque: 6 % increase

Drawbar pulling force: 76.8 kN {7.8 tf}

Dozer Simultaneous Operations

With separate pumps for travel motor and dozer there's no hydraulic interference when traveling at top speed. Dozer operation is fast, rugged and stress-free.



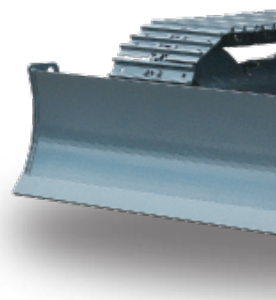
N&B Hosing (option)

A circuit for nibbler/breaker use is fitted as optional. The selector valve is under the engine guard on the right and can be operated from the ground without the use of tools.

Selector

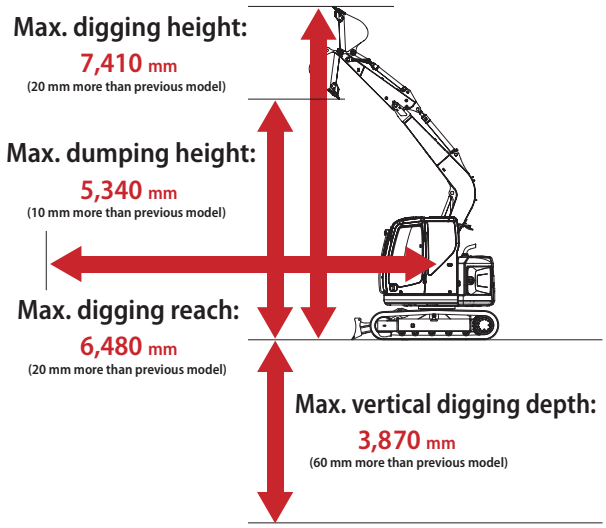
Flow limitter for breaker

N&B pedal



Excellent Working Ranges

Greater working ranges with class-topping vertical digging depth.



Great Swing Power, Short Cycle Times

Powerful swing power and top-class swing speed.

Swing torque: 19.1 kN·m

Swing speed: 11.5 min^{-1}

Requires 3.0 m of Working Space

The compact design allows the machine to perform continuous dig, 180° swing and dump operations within a working space of 3.0 m.

Working radius equals the sum of the minimum front swing radius and tail swing radius.

Mild Operating Sound

The iNDr cooling system also helps to keep the machine quiet, even at close quarters.

Meets EMC (Electromagnetic Compatibility) Standards in Europe

Electrical shielding ensured that the machines clear all European standards and neither cause or are affected by electromagnetic interference.

Fast, Accurate and Low-Cost Maintenance

Comfortable "On the Ground" Maintenance

All of components that require regular maintenance are laid out for easy access. Newly designed, the bonnet opens widely and at lower level.
And in a new layout, equipment that requires maintenance is positioned in easily accessible locations. The servicing jobs can be completed from ground or in the cab.

Easy access to cooling units

Left side

Double element air cleaner

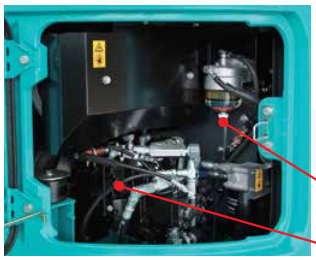
Easy access to engine

Center

Radiator reservoir tank

Easy access to pump & filters

Right side



Water separator

Hydraulic pump

Tool box

Fast Maintenance

Fuel tank equipped with bottom flange and large drain valve

Hour meter can be checked while standing on the ground

Easy-access fuse box. More finely differentiated fuses make it easier to locate malfunctions.

Washer fluid tank located under the cab floor mat.

iNDr Means Easy Maintenance

iNDr Filter Blocks Out Dust

Outside air goes directly from the intake duct through the iNDr filter for dust removal. The filter features a 60-mesh screen, which means it has sixty holes per inch both vertically and horizontally, with a wide front surface area accordion structure that resist clogging.

Easy access to main control valves

N&B selector (optional)

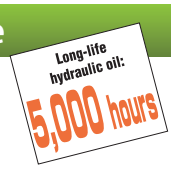
Multi control valve (optional)

Visual Checking and Easy Cleaning

When checking and cleaning the cooling system, one must deal with several different components like the radiator, oil cooler and intercooler, which all must be handed in different ways. But with the iNDr filter, there's just one filter in one place. If it looks dirty during start-up inspection, it can be cleaned easily and quickly.

Long-Interval Maintenance

Long-life hydraulic oil reduces cost and labor.



Super-Fine Filter

High-performance, super-fine filter has a 1,000 hour replacement cycle.

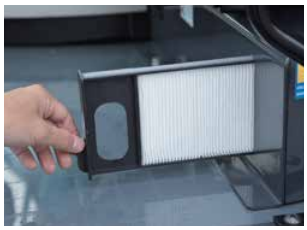
Double-Element Air Cleaner

The high-performance air cleaner has twice the capacity and service life of previous air cleaners and is installed behind the iNDr filter for even more effective cleaning performance.

Easy Cleaning

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

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



- Special crawler frame designed is easily cleaned of mud.

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 function of previous breakdowns including irregular and transient malfunction.

Choice of 16 Languages for Monitoring 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.

A Working Environment that Helps the Operator

Big Cab

The “Big cab” provides a roomy operating space with plenty of legroom, and the door opens wide for entry and exit. As well as giving a wide, open view to the front, the cab has increased window areas on both sides and to the rear, for improved visibility in all directions.

Excellent Visibility

Taking out the right-side cab support to make a single window has improved visibility to the right.

Wide-Access Cab Aids Smooth Entry and Exit

Easy entry and exit assured with wider cab entry and safety lock lever integrated with mounting for control levers.

Comfortable Operating Environment

Double slide seat

Reclining seat

Powerful automatic air conditioner

Travel speed select switch

The switch is equipped with the dozer lever.

One-touch lock release simplifies opening and closing front window

Concentrate on the Job at Hand!

Spacious luggage tray

Large cup holder

Always Easy to Read! New Information Display

Large gauges with large numbers and letters and glare-reducing visors are always easy to read regardless of working conditions.

ROPS Cab

The newly developed, 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.

Level 2 FOPS Guard (ISO 10262) is available as option.

Safety Features That Take Various Scenarios into Consideration

Firewall separates the pump compartment from the engine

Retractable seatbelt requires no manual adjustment

Rear view camera & monitor (optional)

- Hammer for emergency exit
- Handrails meet European standards
- Thermal guard prevents contact with hot components during engine inspections

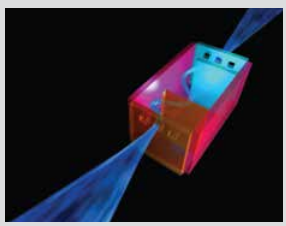
The Revolutionary Integrated Noise and Dust Reduction Cooling System

Ultimate Low Noise

KOBELCO's exclusive iNDr Cooling System delivers amazingly quiet operation. In fact the SK75SR is 5 dB quieter than the value designated by the Japanese governments requirement for ultra-low-noise machinery.

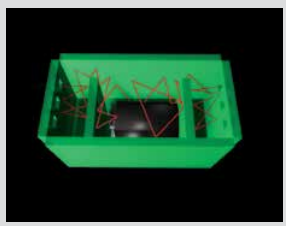
iNDr Integrated Noise & Dust Reduction Cooling System

The iNDr revolution



Concept

KOBELCO has developed the revolutionary integrated Noise and Dust Reduction Cooling System, with the engine compartment placed inside a single duct that connects the air intake to the exhaust outlet.



Reduces Noise

The intake and exhaust are offset, with the holes and joints in the sections corresponding to the duct wall completely covered to reduce noise at the intake and exhaust apertures. This design, plus the generous use of insulation-material inside the duct, minimizes engine noise.

Reduces Dust

The high-performance iNDr filter removes dust from the intake air, ensuring a quieter, cleaner engine and keeping the cooling unit free of clogging so that no regular cleaning is necessary.

Engine

Model	ISUZU AU-4LE2X
Type	Direct injection, water-cooled, 4-cycle diesel engine With turbocharger, intercooler (Complies with EU (NRMM) Stage IIIA, US EPA Tier III, and act on regulation, etc. of emission from non-road special motor vehicles (Japan))
No. of cylinders	4
Bore and stroke	85 mm x 96 mm
Displacement	2.179 L
Rated power output	42 kW /2,200 min^{-1} (ISO14396: Without fan)
	41 kW /2,200 min^{-1} (ISO9249: With fan)
Max. torque	211 N·m/1,600 min^{-1} {rpm} (ISO14396: Without fan)
	210 N·m/1,600 min^{-1} {rpm} (ISO9249: With fan)

Hydraulic System

Pump	
Type	Two variable displacement pumps + one gear pump
Max. discharge flow	2 x 66 L/min, 1 x 18 L/min
Relief valve setting	
Boom, arm and bucket	32.9 MPa {335 kgf/cm^2}
Travel circuit	29.4 MPa {300 kgf/cm^2}
Dozer blade circuit	22.1 MPa {225 kgf/cm^2}
Swing circuit	24.5 MPa {250 kgf/cm^2}
Control circuit	5.0 MPa {50 kgf/cm^2}
Pilot control pump	Gear type
Main control valves	12-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	Oil disc brake, hydraulic operated automatically
Swing speed	11.5 min^{-1} {rpm}
Tail swing radius	1,290 mm
Min. front swing radius	1,710 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	39 each side
Travel speed	5.3/2.6 km/h
Drawbar pulling force	76.8 kN {7,830 kgf} (ISO 7464)
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 cylinder	110 mm x 916 mm
Arm cylinder	95 mm x 833 mm
Bucket cylinder	80 mm x 735 mm

Dozer Blade

Dozer cylinder	135 mm x 129 mm
Dimension	2,300 mm (width) x 460 mm (height)
Working range	360 mm (up) x 250 mm (down)

Refilling Capacities & Lubrications

Fuel tank	120 L
Cooling system	8.5 L
Engine oil	11 L
Travel reduction gear	2 x 1.35 L
Swing reduction gear	1.5 L
Hydraulic oil tank	36 L tank oil level 85 L hydraulic system

Attachments

Backhoe bucket and arm combination

Type			Backhoe bucket			
			Normal	Reinforced	Narrow	Wide
Bucket capacity	ISO heaped	m^3	0.28	0.28	0.22	0.35
Opening width	With side cutter	mm	750	750	650	850
	Without side cutter	mm	680	680	580	780
No. of bucket teeth			4	4	4	4
Bucket weight		kg	210	240	190	210
Combinations	1.71 m standard arm		◎	◎	○	△
	2.13 m long arm		△	△	◎	—

◎Standard ○Recommended △Loading only — Not recommended

Working Ranges

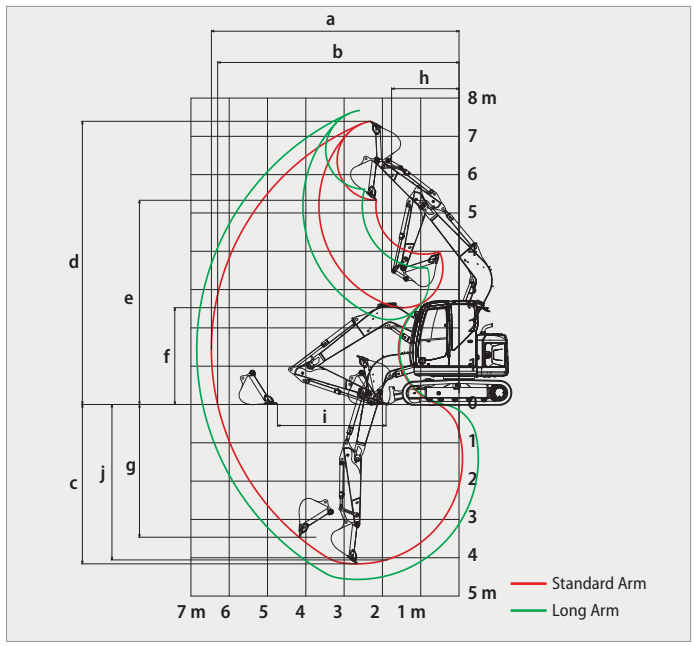
Unit: m

Boom	3.84 m	
Arm / Range	Standard 1.71 m	Long 2.13 m
a- Max. digging reach	6.48	6.88
b- Max. digging reach at ground level	6.35	6.76
c- Max. digging depth	4.16	4.58
d- Max. digging height	7.41	7.75
e- Max. dumping clearance	5.34	5.67
f - Min. dumping clearance	2.46	2.19
g- Max. vertical wall digging depth	3.87	4.34
h- Min. swing radius	1.71	2.11
i - Horizontal digging stroke at ground level	2.83	3.21
j - Digging depth for 2.4 m (8') flat bottom	3.80	4.31
Bucket capacity ISO heaped m³	0.28	0.22

Digging Force (ISO 6015)

Unit: kN (kgf)

Arm length	Standard 1.71 m	Long 2.13 m
Bucket digging force	52.7 {5,370}	52.7 {5,370}
Arm crowding force	39.4 {4,020}	35.2 {3,450}



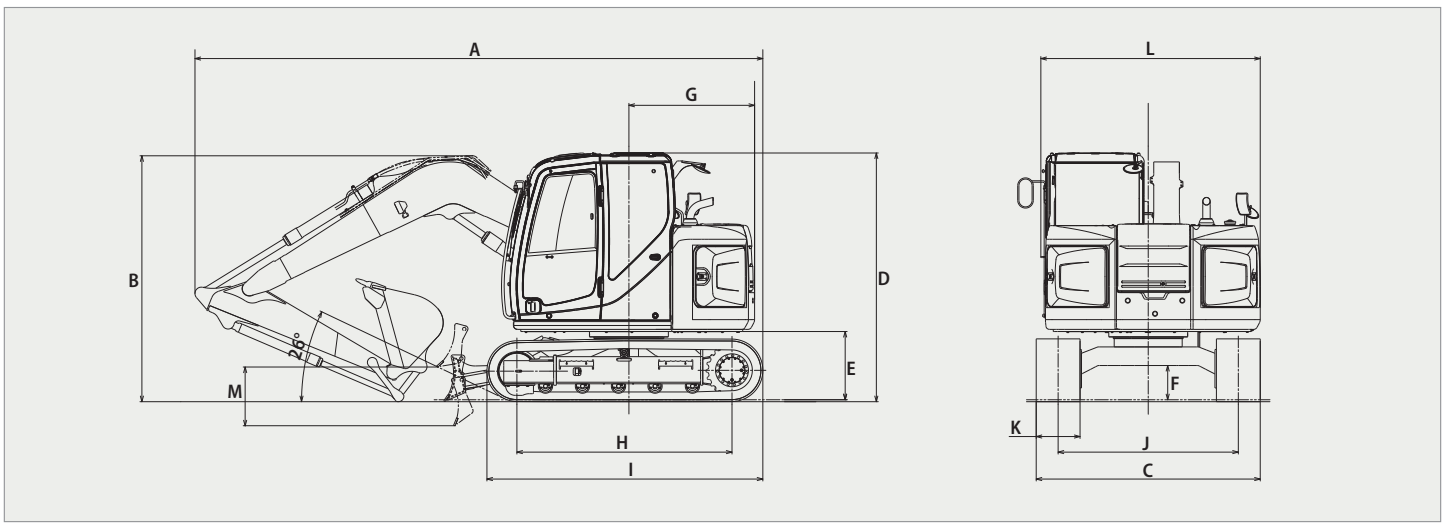
Dimensions

Unit: mm

Arm length		Standard 1.71 m	Long 2.13 m
A	Overall length	5,830	6,360
B	Overall height (to top of boom)	2,520	2,490
C	Overall width of crawler	2,300	
D	Overall height (to top of cab)	2,550	
E	Ground clearance of rear end*	700	
F	Ground clearance*	350	

G	Tail swing radius	1,290
H	Tumbler distance	2,210
I	Ovrall length of crawler	2,830
J	Track gauge	1,850
K	Shoe width	450/600
L	Overall width of upperstructure	2,250
M	Dozer blade (up/down)	360 (26°)/250

* Without including height of shoe lug

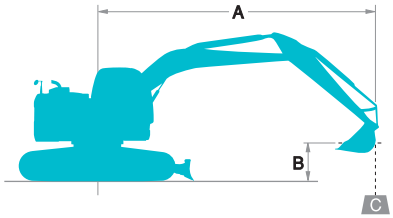


Operating Weight & Ground Pressure

In standard trim, with standard boom, 1.71 m arm and 0.28 m³ ISO heaped bucket.

Shaped		Triple grouser shoes (even height)	
Shoe width	mm	450	600
Overall width of crawler	mm	2,300	2,450
Ground pressure	kPa {kgf/cm²}	33.4 {0.34}	25.8 {0.26}
Operating weight	kg	7,440	7,660

Specifications



Rating over front

Rating over side or 360 degrees

A – Reach from swing centerline for bucket hook
B – Bucket hook height above/below ground
C – Lifting capacities in kilograms
* Max. discharge pressure: 29.4 MPa {300 kgf/cm²}

SK75SR		Standard Arm: 1.71 m Bucket: 0.28 m³ ISO heaped 210 kg Shoe: 450 mm With dozer blade								
A / B		1.5 m		3.0 m		4.5 m		At Max. Reach		Radius
6.0 m	kg			*1,680	*1,680			*1,520	*1,520	3.15 m
4.5 m	kg			*1,950	*1,950	*1,550	1,310	*1,320	1,230	4.64 m
3.0 m	kg	*4,730	*4,730	*2,510	*2,510	1,500	1,250	1,090	900	5.34 m
1.5 m	kg			2,760	2,200	1,390	1,150	960	790	5.56 m
G.L.	kg			2,560	2,020	1,310	1,060	980	800	5.37 m
-1.5 m	kg	*4,060	*4,060	2,530	1,990	1,290	1,050	1,200	980	4.70 m
-3.0 m	kg	*2,450	*2,450	*1,700	*1,700			*1,510	*1,510	3.28 m

SK75SR		Standard Arm: 1.71 m Bucket: 0.28 m³ ISO heaped 210 kg Shoe: 600 mm With dozer blade								
A / B		1.5 m		3.0 m		4.5 m		At Max. Reach		Radius
6.0 m	kg							*1,540	*1,540	3.00 m
4.5 m	kg			*1,930	*1,930	*1,370	1,320	*1,320	1,300	4.59 m
3.0 m	kg	*4,510	*4,510	*2,460	*2,460	1,520	1,270	1,140	950	5.33 m
1.5 m	kg			2,790	2,790	1,410	1,170	1,000	830	5.56 m
G.L.	kg	*1,810	*1,810	2,580	2,580	1,330	1,090	1,020	840	5.37 m
-1.5 m	kg	*4,130	*4,130	2,560	2,560	1,310	1,070	1,260	1,030	4.68 m
-3.0 m	kg	*2,340	*2,340	*1,600	*1,600			*1,490	*1,490	3.21 m

SK75SR		Long Arm: 2.13 m Bucket: 0.22 m³ ISO heaped 190 kg Shoe: 450 mm With dozer blade								
A / B		1.5 m		3.0 m		4.5 m		At Max. Reach		Radius
6.0 m	kg							*1,300	*1,300	3.82 m
4.5 m	kg					*1,560	1,320	1,160	1,010	5.12 m
3.0 m	kg			*2,190	*2,190	1,500	1,240	920	760	5.76 m
1.5 m	kg			2,790	2,230	1,370	1,130	820	660	5.96 m
G.L.	kg			2,520	1,980	1,270	1,030	820	660	5.78 m
-1.5 m	kg	*3,470	*3,470	2,450	1,920	1,230	990	980	790	5.17 m
-3.0 m	kg	*3,410	*3,410	*2,120	1,980			*1,490	1,280	3.93 m

SK75SR		Long Arm: 2.13 m Bucket: 0.22 m³ ISO heaped 190 kg Shoe: 600 mm With dozer blade								
A / B		1.5 m		3.0 m		4.5 m		At Max. Reach		Radius
6.0 m	kg							*1,320	*1,320	3.70 m
4.5 m	kg					*1,550	1,330	*1,160	1,070	5.07 m
3.0 m	kg			*2,150	*2,150	1,510	1,260	970	800	5.74 m
1.5 m	kg			2,820	2,260	1,390	1,150	850	700	5.96 m
G.L.	kg	*1,770	*1,770	2,550	2,010	1,290	1,050	860	700	5.78 m
-1.5 m	kg	*3,540	*3,540	2,480	1,950	1,250	1,010	1,030	830	5.16 m
-3.0 m	kg	*3,290	*3,290	*2,040	*2,020			*1,480	1,370	3.87 m

Notes:

1. Do not attempt to lift or hold any load that is greater than these lifting capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lifting capacities.
2. Lifting 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. Bucket lift hook is defined as lift point.
4. The above lifting capacities are in compliance with SAE J/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 machines as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.

STANDARD EQUIPMENT

ENGINE
- Engine, ISUZU AU-4LE2X engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x12V – 64 Ah)
- Starting motor (24 V- 3.2 kW), 30 A alternator
- Automatic engine shut-down for low engine oil pressure
- Engine oil pan drain valve
- Double element air cleaner
- iNDr

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

SWING SYSTEM & TRAVEL SYSTEM
- Swing rebound prevention system
- Two-speed travel with automatic shift down
- Sealed & lubricated track links
- Grease-type track adjusters
- Automatic swing brake
- Dozer blade

MIRRORS & LIGHTS
- Four rear view mirrors
- Two front working lights (Boom, Guard)

CAB & CONTROL
- ROPS cab
- Two control levers, pilot-operated
- Horn, electric
- Integrated left-right slide-type control box
- Cab light (interior)
- Coat hook
- Large cup holder
- Detachable two-piece floor mat
- 7-way adjustable suspension seat
- Retractable seatbelt
- Headrest
- Arm rest
- Handrails
- Intermittent windshield wiper with double-spray washer
- Tinted safety glass
- Pull-type front window and removable lower front window
- Easy-to-read multi-display monitor
- Automatic air conditioner
- Emergency escape hammer
- 24V outlet

OPTIONAL EQUIPMENT

- Wide range of bucket
- 2.13 m long arm
- 600 mm shoes
- Boom & arm safety valve
- Additional counterweight (+300 kg)
- Add-on type counterweight (+400 kg)
- Cab light
- 2 way piping (Nibbler & Breaker)
- Step extension
- Additional center track guide
- Lower under cover
- Top Guard (FOPS level 2)
- Front guard
- Rear view camera & monitor
- Travel alarm

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.

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