

# SK85MSR

- Bucket Capacity:  
**0.11 - 0.35 m<sup>3</sup> ISO heaped**
- Engine Power:  
**42 kW /2,000 min<sup>-1</sup>**  
(ISO14396)
- Operating Weight:  
**8,270 kg**



*Complies with the latest exhaust emission regulations*



US  
Tier IV



EU (NRMM)  
Stage IIIB



Latest Japanese  
Regulations

# *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. 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 SK85MSR 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 SK85MSR 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 31%.

### H-mode (vs previous SK80MSR in H-mode)

Fuel consumption (L/h)

**5 % decrease**

Work volume per liter of fuel (m<sup>3</sup>/L)

**11 % increase**

### S-mode (vs previous SK80MSR in H-mode)

Fuel consumption (L/h)

**11 % decrease**

Work volume per liter of fuel (m<sup>3</sup>/L)

**17 % increase**

### ECO-mode (vs previous SK80MSR in S-mode)

Great leap forward in energy-saving performance

Fuel consumption (L/h)

**31 % decrease**

Work volume per liter of fuel (m<sup>3</sup>/L)

**38 % 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<sup>3</sup>/L) compared 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.



**E**

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

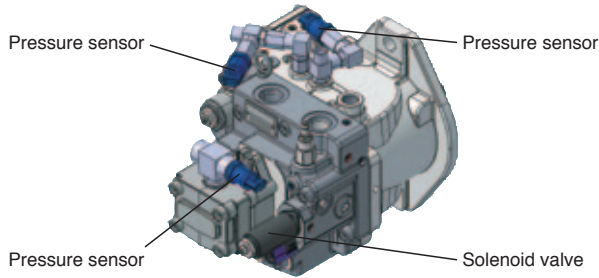
**S-mode:** For normal operations with lower fuel consumption.

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



**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.



**NEXT-3E Technology  
Next-Generation Electronic Engine Control**

The new electronic-control common-rail engine features high-pressure fuel injection and multiple injection with improved precision. It is fitted with an EGR cooler, and DOC which deliver high output from optimized combustion and greatly reduce PM and NOx emissions.

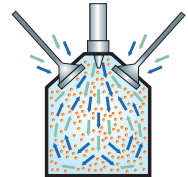


**Tier 4-compliant engine**

**PM emissions cut:** Limits creation of particulate matter (which results from incomplete combustion of fuel)

■ **Common rail system**

High-pressure injection atomizes the fuel, and injection timing is more precise, improving combustion efficiency.



■ **DOC (Diesel Oxidation Catalyst)**

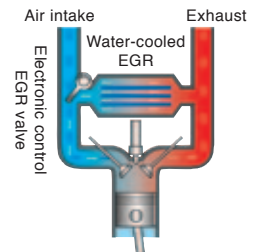
Carbon builds up as soot on the diesel particulate filter and is burned off at high temperature. At low engine speeds the exhaust temperature is too low, and the common rail multiple injection system is then used to raise the temperature sufficiently to burn off the soot.



**NOx emissions cut:** Reduces nitrous oxides (created by reaction with oxygen at high temperature)

■ **EGR cooler**

While ensuring sufficient oxygen for combustion, cooled emission gases are mixed with the air intake and re-circulated into the engine. The lowered oxygen temperature lowers the combustion temperature and increases combustion efficiency.



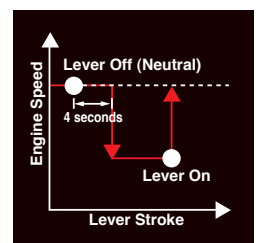
**NEXT-3E Technology  
Total Tuning Through Advanced ITCS Control**

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

**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: **35.2 kN {3.5 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.

### Dozer Raising/Lowering Margin Increased

Dozer can be raised higher and powered more to make dozer work more productive.

**500 mm** (25 mm more than SK80MSR)



**405 mm** (100 mm more than SK80MSR)

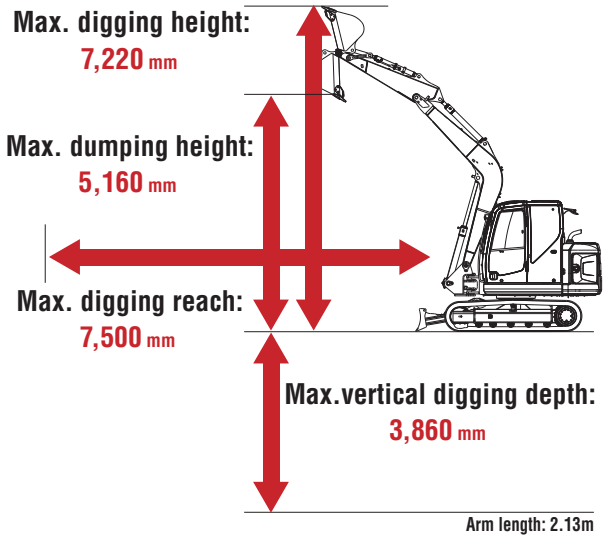
### Boom Swing Mechanism

The boom can swing up to 62° to the left and 67° to the right, making it possible to perform side-digging parallel to the crawlers without moving the machine.



### Excellent Working Ranges

Working ranges further extended, with significant increases in maximum working radius and maximum digging depth.



### Great Swing Power, Short Cycle Times

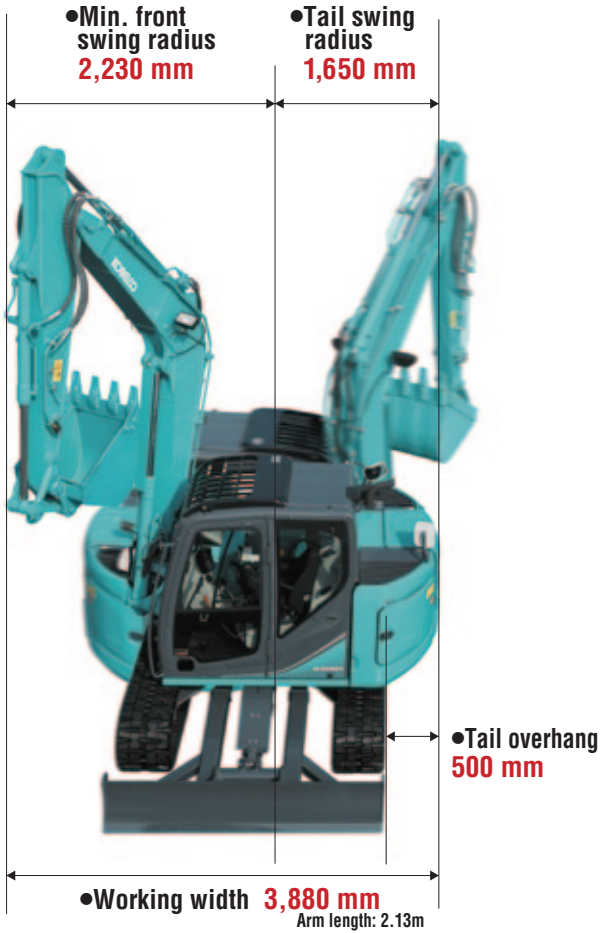
Powerful swing power and top-class swing speed.

Swing Torque: **19.1 kN · m**

Swing speed: **11.5 min<sup>-1</sup>**

### Requires 4.0 m of Working Space

With a 180° working radius of just 3,890 mm, SK85MSR only needs of space to dig, swing, and load continuously.



Working width 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. Also, the hydraulic pumps have been redesigned to produce a more pleasant sound during pressure relief.

### 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

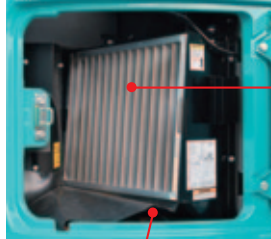
## Comfortable “On the Ground” Maintenance

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

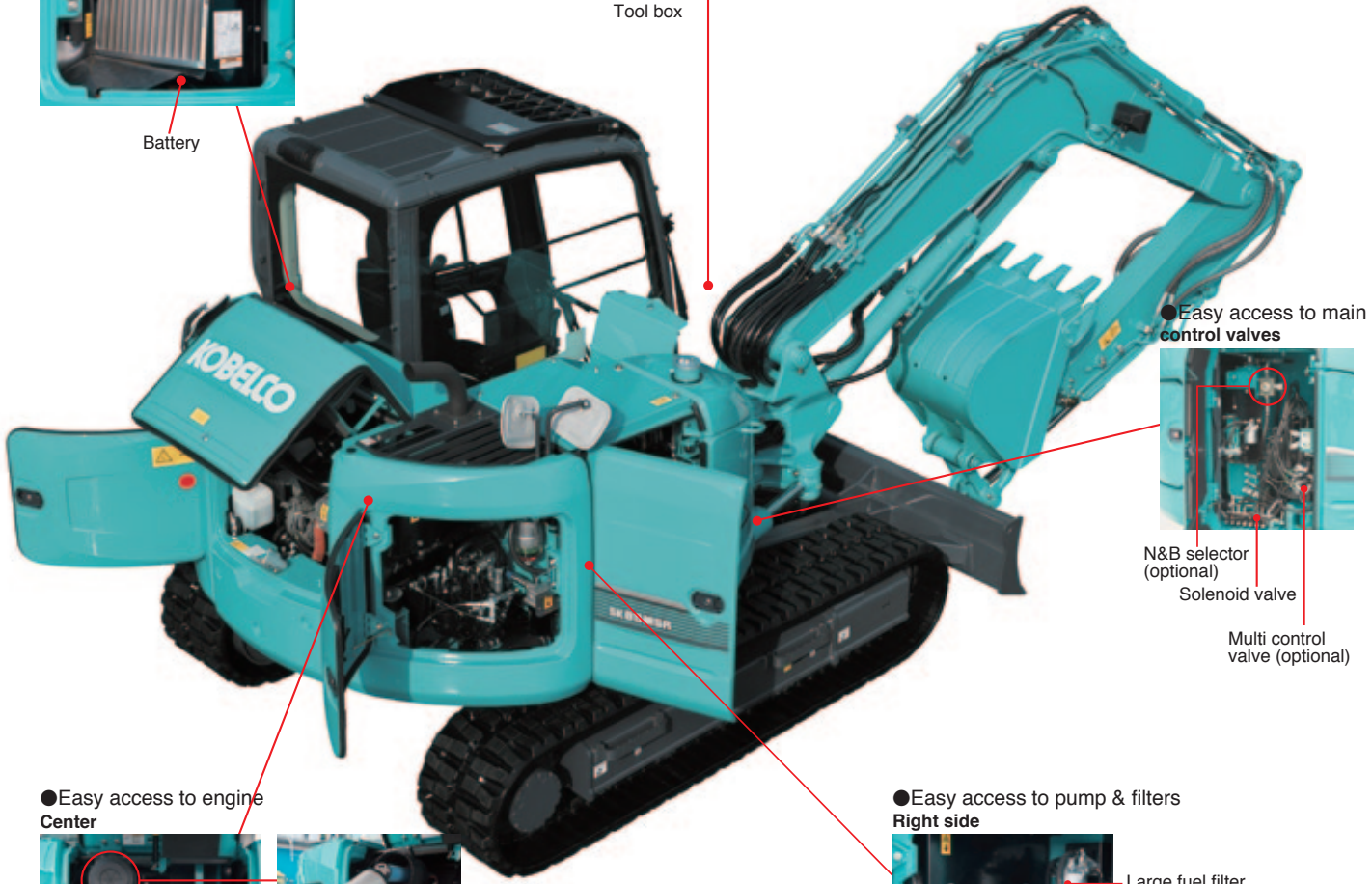


Radiator

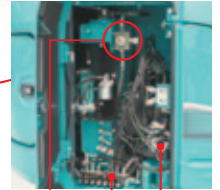
Battery



Tool box



● Easy access to main control valves



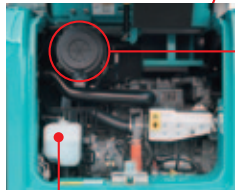
N&B selector (optional)

Solenoid valve

Multi control valve (optional)

● Easy access to engine

Center



Radiator reservoir tank



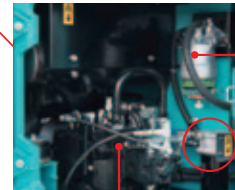
Double element air cleaner

● Easy access to pump & filters

Right side



Refueling pump



Hydraulic oil pump

Large fuel filter (with built-in waterseparator)

Engine oil filter

## Fast Maintenance



Fuel tank equipped with bottom flange and large drain valve



Hour meter can be checked while standing on the ground



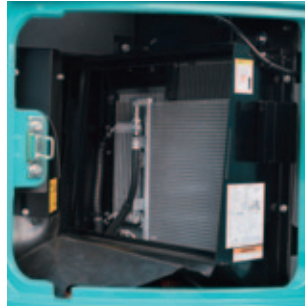
Easy-access fuse box. More finely differentiated fuses make it easier to locate malfunctions.



## 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.



### 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 inter-cooler, 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.



### Highly Reliable Construction

The boom arm, and swing bracket all have large cross-section areas that provide added strength to the attachment.



Boom:

- Guard plate for boom cylinder

Swing bracket

- Large, thick cast-iron swing bracket

### 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.



### 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



### 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.

### 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 Conce

### 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



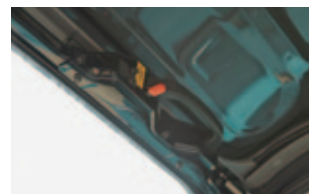
● Reclining seat



● Powerful automatic air conditioner



● Two-speaker FM/AM radio with station select



● One-touch lock release simplifies opening and closing front window



● Travel speed select switch

# Contribute on the Job at Hand!



## 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.

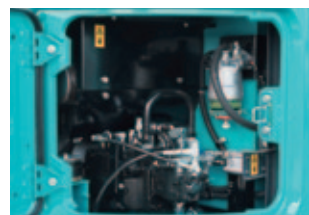


● To fit vandalism guards, please contact your KOBELCO dealer. (Mounting brackets for vandalism guards)



● FOPS guard

## Safety Features That Take Various Scenarios into Consideration



● Firewall separates the pump compartment from the engine



● Retractable seatbelt requires no manual adjustment



● Hand rails meet European standards

● Thermal guard prevents contact with hot components during engine inspections

● Travel alarm

● Hammer for emergency exit



● Spacious luggage tray



● Large cup holder

## Always Easy to Read! New Information Display

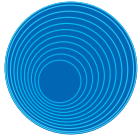


Large gauges with large numbers and letters and glare-reducing visors are always easy to read regard less of working conditions.

# 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 SK85MSR is 5 dB quieter than the value designated by the Japanese governments requirement for ultra-low-noise machinery.



“Ultimate”-Low Noise Level of  
**93dB(A)**



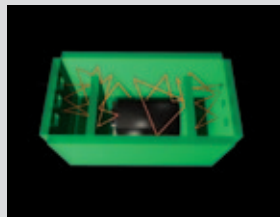
Image illustrates iNDr system

## The iNDr revolution



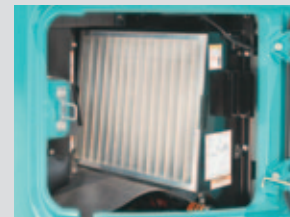
**•Concept**

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 AP-4LE2X
Type:	Direct injection, water-cooled, 4-cycle diesel engine With turbocharger, intercooler (Complies with EU stage IIIB and US TIER IV)
No. of cylinders:	4
Bore and stroke:	85 mm × 96 mm
Displacement:	2.179 L
Rated power output:	42 kW /2,000 min <sup>-1</sup> (ISO14396: Without fan)
Max. torque:	211 N·m/1,800 min <sup>-1</sup> (ISO14396: Without fan)



## Hydraulic System

Pump	
Type:	Two variable displacement pumps + one gear pump
Max. discharge flow:	2 × 66 L/min, 1 × 46 L/min
Relief valve setting	
Boom, arm and bucket:	29.4 MPa {300 kgf/cm <sup>2</sup> }
Travel circuit:	29.4 MPa {300 kgf/cm <sup>2</sup> }
Dozer blade circuit:	22.1 MPa {225 kgf/cm <sup>2</sup> }
Swing circuit:	24.5 MPa {250 kgf/cm <sup>2</sup> }
Control circuit:	5.0 MPa {50 kgf/cm <sup>2</sup> }
Pilot control pump:	Gear type
Main control valves:	13-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 <sup>-1</sup> {rpm}
Tail swing radius:	1,650 mm
Min. front swing radius:	2,780 mm



## Travel System

Travel motors:	2x 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°}



## Attachments

Backhoe bucket and arm combination

Use	Backhoe bucket							
	ISO heaped	Struck	Standard	Narrow			Wide	
Bucket capacity				m <sup>3</sup>	m <sup>3</sup>	0.28		0.11
			0.25	0.09	0.12	0.14	0.18	0.26
Opening width or X-section	With side cutters	mm	750	—	480	550	650	850
	Without side cutters	mm	680	400	410	480	580	780
No. of bucket teeth			4	3	3	3	4	4
Bucket weight		kg	210	190	160	170	190	—
Combinations	1.87 m arm		◎	○	○	○	○	△
	2.13 m arm		△	○	○	○	◎	—

◎Standard ○Recommended △Loading only



## Cab & Control

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



## Boom, Arm and Bucket

Boom cylinder:	110 mm × 916 mm
Arm cylinder:	95 mm × 839 mm
Bucket cylinder:	80 mm × 762 mm



## Boom Swing Mechanism

Control:	Foot pedal
Boom swing angle:	62° to the left, 67° to the right
Swing cylinder:	105 mm × 586 mm



## Dozer Blade

Dozer cylinder:	145 mm × 165 mm
Dimension:	2,300 mm (width) × 455 mm (height)
Working range:	500 mm (up) × 405 mm (down)



## Refilling Capacities & Lubrications

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



## Working Ranges

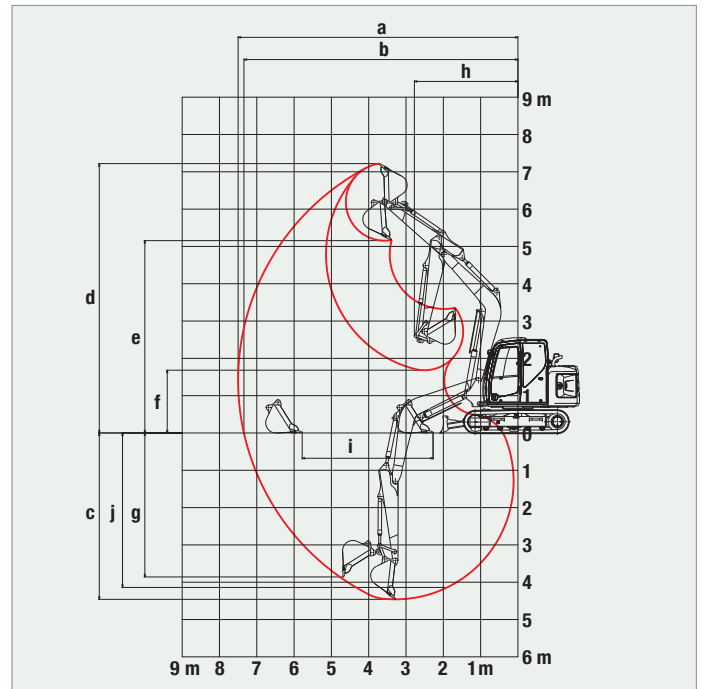
Unit: m

Range	Boom	
	1.87 m	3.50 m
a - Max. digging reach	7.24	7.50
b - Max. digging reach at ground level	7.07	7.34
c - Max. digging depth	4.20	4.46
d - Max. digging height	7.00	7.22
e - Max. dumping clearance	4.94	5.16
f - Min. dumping clearance	1.93	1.68
g - Max. vertical wall digging depth	3.50	3.86
h - Min. swing radius	2.70	2.78
i - Horizontal digging stroke at ground level	3.11	3.51
j - Digging depth for 2.4 m (8') flat bottom	3.84	4.14
Bucket capacity ISO heaped m <sup>3</sup>	0.28	0.22

### Digging Force (ISO 6015)

Unit: kN (kgf)

Arm length	1.87 m	2.13 m
Bucket digging force	52.7 {5,370}	52.7 {5,370}
Arm crowding force	37.1 {3,790}	35.2 {3,450}



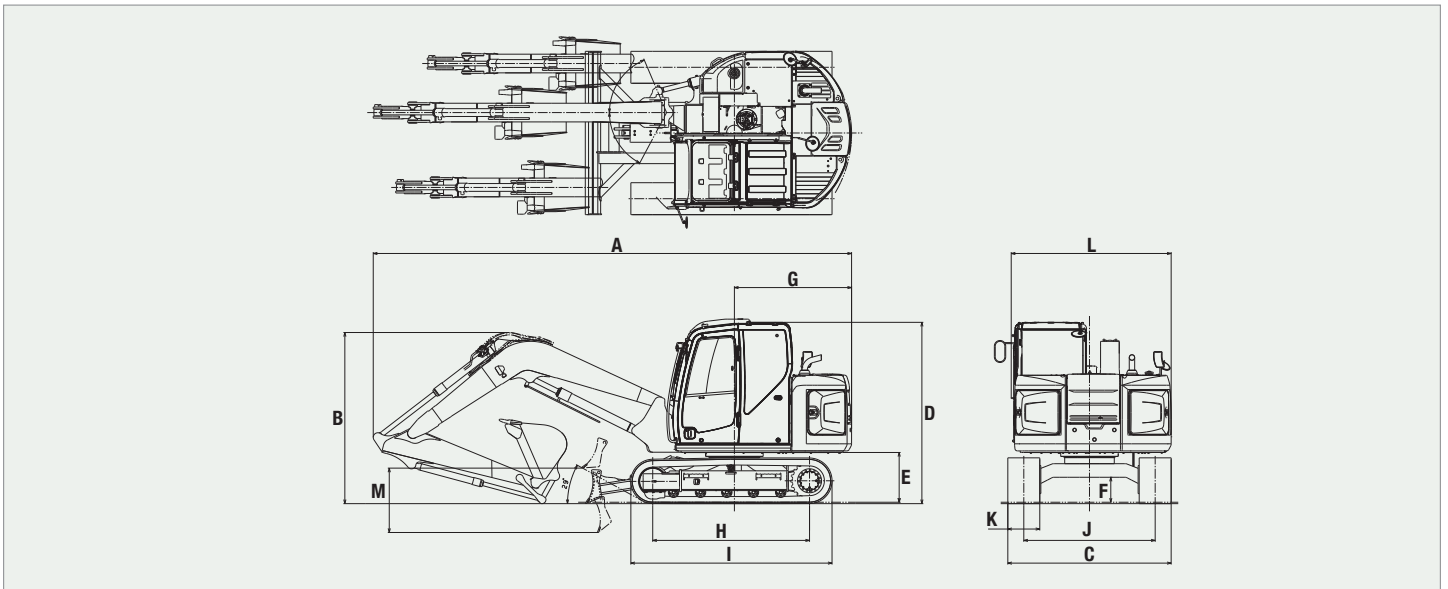
## Dimensions

Arm length	1.71 m	2.13 m
A Overall length	6,740	6,760
B Overall height (to top of boom)		2,410
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

Unit: mm

G Tail swing radius	1,650
H Tumbler distance	2,210
I Overall 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)	500 (29°)/405

\* Without including height of shoe lug

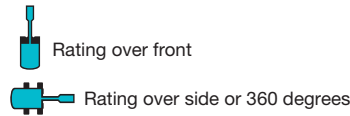
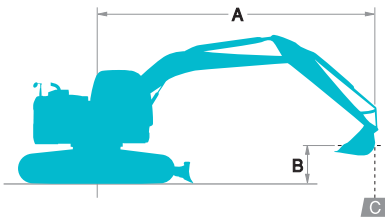


## Operating Weight & Ground Pressure

In standard trim, with standard boom, 2.13 m arm, and 0.22 m<sup>3</sup> ISO bucket

Shaped		Triple grouser shoes (even height)	
Shoe width	mm	450	600
Overall width of crawler	mm	2,300	2,450
Ground pressure	kPa	37.1	28.6
Operating weight	kg	8,270	8,500

# Lifting Capacities



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/cm<sup>2</sup>}

SK85MSR		Arm: 1.87 m, Bucket: 0.28 m <sup>3</sup> ISO heaped 210 kg Shoe: 450 mm										
B \ A		1.5 m		3.0 m		4.5 m		6.0 m		At Max. Reach		Radius
4.5 m	kg					*1,700	1,520			*1,050	*1,050	5.26 m
3.0 m	kg					1,670	1,450	990	860	990	850	6.02 m
1.5 m	kg			2,930	2,420	1,530	1,310	950	810	880	750	6.26 m
G.L.	kg			2,720	2,240	1,420	1,210	910	770	890	760	6.06 m
-1.5 m	kg	*3,710	*3,710	2,730	2,240	1,400	1,180			1,070	910	5.36 m
-3.0 m	kg			*2,790	2,350					1,910	1,610	3.80 m

SK85MSR		Arm: 1.87 m, Bucket: 0.28 m <sup>3</sup> ISO heaped 210 kg Shoe: 450 mm Add. Counterweight: 300 kg										
B \ A		1.5 m		3.0 m		4.5 m		6.0 m		At Max. Reach		Radius
4.5 m	kg					*1,700	1,680			*1,050	*1,050	5.26 m
3.0 m	kg					1,850	1,600	1,190	1,030	*1,060	960	6.02 m
1.5 m	kg			3,630	2,980	1,820	1,570	1,130	980	990	860	6.26 m
G.L.	kg			3,430	2,810	1,710	1,460	1,030	880	1,010	870	6.06 m
-1.5 m	kg	*3,710	*3,710	3,240	2,660	1,690	1,430			1,210	1,040	5.36 m
-3.0 m	kg			*2,990	2,950					*2,060	1,810	3.80 m

SK85MSR		Arm: 2.13 m, Bucket: 0.22 m <sup>3</sup> ISO heaped 190 kg Shoe: 450 mm										
B \ A		1.5 m		3.0 m		4.5 m		6.0 m		At Max. Reach		Radius
6.0 m	kg									*1,070	*1,070	4.09 m
4.5 m	kg					*1,570	1,570			*890	*890	5.60 m
3.0 m	kg					1,720	1,500	1,030	900	*880	810	6.31 m
1.5 m	kg			3,050	2,540	1,590	1,360	980	850	840	730	6.54 m
G.L.	kg	*1,800	*1,800	2,790	2,300	1,470	1,250	940	800	850	730	6.35 m
-1.5 m	kg	*3,260	*3,260	2,770	2,280	1,430	1,210			1,000	860	5.70 m
-3.0 m	kg	*4,830	*4,830	2,860	2,360	1,470	1,260			1,580	1,350	4.30 m

SK85MSR		Arm: 2.13 m, Bucket: 0.22 m <sup>3</sup> ISO heaped 190 kg Shoe: 450 mm Add. Counterweight: 400 kg										
B \ A		1.5 m		3.0 m		4.5 m		6.0 m		At Max. Reach		Radius
6.0 m	kg									*1,070	*1,070	4.09 m
4.5 m	kg					*1,570	*1,570			*890	*890	5.60 m
3.0 m	kg					*1,960	1,770	1,280	1,120	*880	*880	6.31 m
1.5 m	kg			3,930	3,250	1,830	1,580	1,220	1,060	*980	870	6.54 m
G.L.	kg	*1,800	*1,800	3,430	2,830	1,840	1,570	1,170	1,010	1,010	880	6.35 m
-1.5 m	kg	*3,260	*3,260	3,640	2,990	1,790	1,530			1,180	1,020	5.70 m
-3.0 m	kg	*4,760	*4,760	*3,450	2,900	1,850	1,580			1,840	1,580	4.30 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.
- Bucket lift hook is defined as lift point.
- 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.
- 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 machines as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.

## STANDARD EQUIPMENT

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### ENGINE

- Engine, ISUZU AP-4LE2X engine with turbocharger and intercooler
- Automatic engine deceleration
- Batteries (2 x12V – 64 Ah)
- Starting motor (24 V- 3.2 kW), 50 A alternator
- Automatic engine shut-down for low engine oil pressure
- Double element air cleaner

### 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
- Three front working lights (boom, guard)

### CAB & CONTROL

- 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
- Mechanical suspension seat
- Retractable seatbelt
- Headrest
- Arm rest
- Handrails
- Heater and defroster
- 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
- Radio, AM/FM Stereo with speaker
- Refueling pump

## OPTIONAL EQUIPMENT

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- Wide range of bucket
- Various optional arms
- Wide range of shoes
- Boom safety valve
- Front-guard protective structure (may interfere with bucket action)
- Object Handling Kit (boom safety valve + hook)
- Additional hydraulic circuit
- Additional counterweight (+300 kg)

- Add-on type counterweight (+400 kg)
- Cab additional light
- Control pattern charger (2 way, 4 way)
- N&B piping, N&B selector
- Step extension
- Belly pan guard
- Skylight
- Air suspension seat

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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