SK135SR

SK135SRLC

STANDARD EQUIPMENT

ENGINE

- Engine, MITSUBISHI D04EG-TAA
- Diesel engine with turbocharger and intercooler
- Automatic engine deceleration
- Auto Idle Stop (AIS)
- Batteries (2 x 12V 80Ah)
- Starter motor (24V 5 kW), 50 amp alternator
- Automatic engine shut-down for low engine oil pressure
- Engine oil pan drain valve
- Double element air cleaner
- CONTROL
- ■Working mode selector (H-mode, S-mode and ECO-mode)
- SWING SYSTEM & TRAVEL SYSTEM
- Swing rebound prevention system
- Straight propel system
- Sealed & lubricated track links
- Greased track adjusters
- Automatic swing brake
- MIRRORS & LIGHTS
- Three rearview mirrors
- Two front working lights

CAB & CONTROL

- Two control levers, pilot-operated
- Tow eyes
- Horn, electric
- Integrated left-right slide-type control box
- Cab light (interior)
- Coat hook
- Luggage tray
- Large cup holder
- Detachable two-piece floor mat7-way adjustable susupension seat
- Retractable seatbelt
- Headrest
- 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 speakers
- Travel alarm
- Heightlizer for control box
- Gear pump
- Level indicator

OPTIONAL EQUIPMENT

- Dozer blade
- Wide range of buckets
- Various optional armsWide range of shoes
- Boom safety valve
- Arm safety valve

- Front-guard protective structures May interfere with bucket action
- Additional hydraulic circuit
- Add-on counterweight
- Cab light
- Control pattern changer 2 way, 4way
- FOPS Level I guard

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.

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ENDLESS EVOLUTION

Kobelco gave the world its first heavy machinery shovel with an ultra-short rear swing.

The SL135SR/SK135SR LC is versatile in every sense of the word, encapsulating all the technology Kobelco has developed and refined for greater friendliness to people and the urban environment. It sets a new standard for urban construction sites.

Take Kobelco's proprietary iNDr, for example. It delivers incredibly quiet operation. And AIS cuts fuel consumption and exhaust emissions to the bare minimum. So the new Kobelco SK135SR/SK135SR LC clears today's stricter environmental standards without compromising profitability.

To offer true value, construction machinery has to meet the needs of the times, quickly and effectively. And that means continually searching for the most fuel-efficient technologies, and

delivering value you can't find anywhere else. No one does

that better than Kobelco.

Rec Co

Noise & Dust
Reduction
Cooling System

Fuel Consumption

(ECO mode, compared with S mode on previous models)

Δhout

KOBELCO

21% reduction

The new ECO mode reduces fuel consumption by up to 21%.

PM Reduction

(Compared with previous models)

About

92% reduction

New engine reduces PM emissions by about 92%, and NOx emissions by about 18%. **Working Volume per Fuel Unit**

(ECO mode, compared with

About

19% increase

Do more work with less fuel – About 10% more with H mode, 19% more with S mode.



 High productivity resulting from lower fuel costs

GEOSPEC

conomy

•New ECO mode greatly reduces

•Low-maintenance design reduces operating costs

High structural durability and reliability boost machine resale value

engine and energy-efficient

nvironment

hydraulic circuit improve fuel efficiency

•iNDr technology reduces operational noise

SK135SR SK135SR_{LC}

The machine in the photo includes optional equipment.



Kobelco engineers are constantly seeking to improve fuel efficiency. To that end, they've combined new engine technology that reduces exhaust emissions, with Kobelco's proprietary energy-efficient system. The result is a machine that opens new frontiers in environmentally responsible operation, combining higher fuel

Reducing fuel consumption &

Earth-friendly performance

Energy-efficient

System

Fuel Consumption (ECO mode, compared with S mode on previous models) The new ECO mode reduces fuel consumption by up to 21%.

PM Reduction

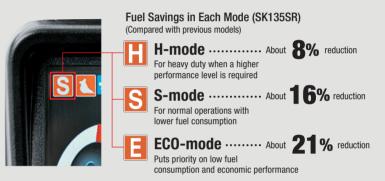
(Compared with previous models)

New engine reduces PM emissions by about 92%, and NOx emissions by about 18%.

Energy-efficient System

ECO-mode: engineered for economy

Kobelco's ECO-mode maximizes the operating efficiency of the engine and other components to achieve much greater fuel efficiency. Just flip a switch to choose the operation mode best suited to the task at hand and the working conditions.



Auto Idle Stop (AIS) reduces unnecessary fuel consumption

If the safety lock lever is engaged, AIS will stop the engine. This eliminates wasteful idling when no work is going on, and of course, cuts overall CO2



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 guickly returns to full speed when the lever is moved out of

New, Environmentally Friendly Engine

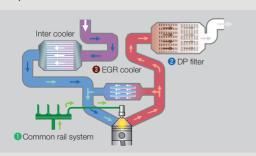
efficiency with improved environmental performance.

A newly developed engine raises the bar for construction machinery

New Environmentally

Friendly Engine

The latest Kobelco construction machinery uses a Mitsubishi engine renowned for high fuel efficiency and environmental performance, and has been tuned specifically for use in Kobelco machines. This new, environmentally friendly engine changes conventional wisdom on balancing powerful performance with eco-friendliness.





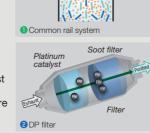
Particulate matter (PM) is mostly soot resulting from incomplete combustion, Improved combustion efficiency reduces PM emissions. DP filter further reduces PM emissions.

Common rail system

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

2 DP filter

Carbon builds up as soot in 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 raises the temperature sufficiently to burn off the soot.



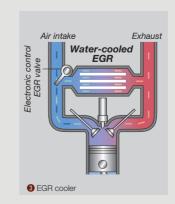
 Normally, recirculation occurs automatically, Under certain circumstances, howe it must be done manually using a switch.

NOx missions cut:

At high temperatures, nitrogen and oxygen combine to produce nitrous oxides (NOx). Reducing the amount of oxygen and lowering the combustion temperature results in much less NOx.

8 EGR cooler

While ensuring sufficient oxygen for combustion, cooled emission gases are mixed with the intake air and recirculated into the engine. This reduces oxygen content and lowers combustion temperature



Hydraulic system engineered to reduce energy loss

Kobelco's proprietary hydraulic systems offer hydraulic line positioning that reduces friction resistance and valves designed for higher efficiency, minimizing energy loss throughout the system.







Multi-Display Color Monitor for Easy Checking An LCD multi-display color monitor is fitted as standard. Operations data as well as the full range of machine-status data can readily be checked.

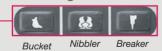
Analog gauge provides an intuitive reading of fuel level and engine water temperature

Green indicator light shows low fuel consumption during operation

- Fuel consumption/Switch indicator for rear camera images

Digging mode switch

One-tough attachment mode switch



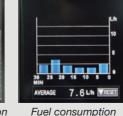
A simple flick of a switch converts the hydraulic circuit and flow amount to match attachment changes. Icons help the operator to confirm the proper configuration at a glance.

Monitor display switch

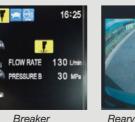
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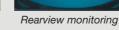
AVERAGE 7.6 L/h TRESET











Ideal for Urban Work Sites Provides a Broad Working Range, Even in Close Quarters

Minimal rear turning radius improves efficiency

The tail of the upper body extends very little past the back end of the crawlers, so the operator can concentrate on the job at hand. This also reduces the risk of collision damage.

Easy workability in less than 3.5m of space

The compact design allows continuous 180° dig, swing, and load operations within a working space of just 3.5m.

Seamless feeling, smooth combined operations

The machines have inherited the various systems that make inching and combined operations easy and accurate. Leveling and other combined operations can be carried out with graceful ease.

Smooth rotation operation cuts cycle times

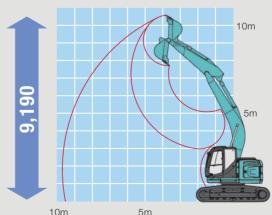
11.0-minute⁻¹ speedy cycle times. Dig, swing, load operations—continuous operation makes any task faster.

Strong driving torque produces powerful travel capabilities

The tough undercarriage handles slopes and rough roads with ease while ensuring smooth changes in direction.

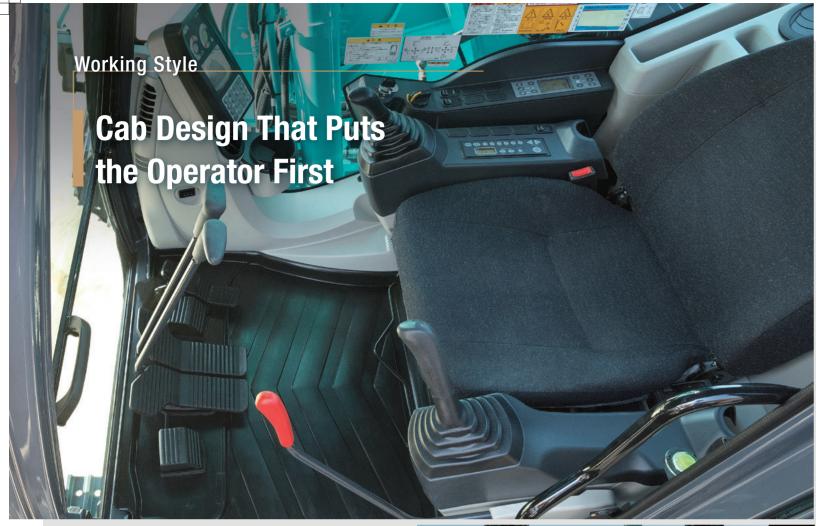
Long reach broadens working area

Maximum digging depth: 9,190mm





 $_{6}$



Wide and open, the cab's interior overflows with features that streamline operation

Comfort

Big roomy cab

The cube design makes the most of straight lines, so the cab interior is 4% more spacious than before. Operating space literally spreads out before the operator. And the 50Pa airtightness keeps dust outside.

Wide open field of view

On the right side, the large single window has no center pillar, and the whole cab is designed for a wide field of view, giving the operator a direct view ahead and to the left and right. Mirrors in three positions make it easy for the operator to make sure things are safe all around.

Wide doors and ample head clearance mean smooth entry and exit

The control box and safety lock lever tilt up at a larger angle, and the door handle height is positioned for easy cab entry and exit.

Equipment designed for comfort and convenience

The cab interior offers a host of operator comforts. The seat guarantees comfort whether on the job or at rest, and everything is ergonomically planned and laid out for smooth, stress-free operation.







third mirror at lower right optimize visibility



The double slide seat can be adjusted to the comfort of



Large cup holder



Powerful automatic air conditioner

Filled with New Equipment Even More Safety Features

Safety

Rearview camera and cab monitor let the operator confirm safe rearward operating space **NEW**

The rearview camera comes as standard equipment. It helps confirm safe operating space to the rear, and conforms to ISO safety standards. The rearward view is shown on the color multi-display monitor in the cab.





Safe cab meets ROPS standards

Four strengthened pillars help the protective cab meet Roll-Over-Protective Structure (ROPS) standards. In the unlikely event of a rollover, this structure protects the cab's interior. Further, cab structural strength is equivalent to Level 1 falling object protective structure (FOPS), and conforms to the Ordinance on Industrial Safety and Health head guard standards as well.



Safety features that anticipate all kinds of danger













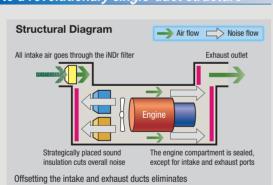
Large handrail

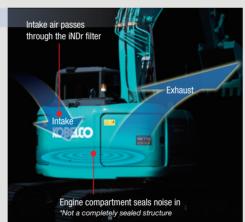


A new design approach leads to a revolutionary single-duct structure

iNDr engine cooling system Structural Diagram draws on Kobelco's proprietary technology

The engine and the cooling components are positioned in a single duct connecting the air intake to the exhaust outlet. This proprietary structure delivers a range of benefits. such as reducing noise to the surrounding environment, maintaining machine performance, simplifying maintenance, and more.





The results are exceptional. The big merits:

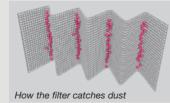
"Ultimate Low Noise" is achieved by minimizing sound leakage during operation

Noise from the engine and cooling fan is absorbed by the duct, so the machine far surpasses legal requirements. Kobelco calls this system, which exceeds all noise standards. "Ultimate Low Noise." and it reduces noise to 65.8dB at just 1.5m from the machine.

Eliminating dust maintains cooling system performance

The high-density 60-mesh filter* blocks out dust in the intake air. This prevents clogging of the cooling system and the air cleaner, which maintains peak performance.

The waveform filter allows air through the tops of the waves while collecting dust at the bottom. ensuring a smooth airflow.



in every square inch of filte

Easy filter maintenance system simplifies cleaning

Daily inspection consists of a visual check of the iNDr filter only. If it looks dirty, it can be removed and washed without special tools.



GEOSCAN

Excavator Remote Monitoring System

Remote Monitoring for Peace of Mind

GEOSCAN is the remote monitoring system for Acera Geospec series excavators. When a hydraulic excavator is fitted with this system, data on the machine's operation, such as operating hours, location, fuel consumption, and maintenance status can be obtained remotely.

Direct access to operational status

ne location data can be obtained even from sites where communications are difficult.





Location records

Work data

Graph of work content

divided among different operating

categories, including digging, idling, traveling and optional operations (N&B).

•The graph shows how working hours are

Operating hours

- •A comparison of operating times of machines at multiple locations shows
- 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





Idle hours

Fuel consumption graph

Work status

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.



Warning alerts

•This system triggers an alert if an

anomaly is sensed, preventing damage

that could result in machine downtime

Status check possible from cell phones

the Internet, using a computer or cell



Daily/monthly reports

Operational data downloaded onto a

computer helps in formulating daily and

•Data can be obtained by e-mail through



Daily reports

Security system

Engine start alarm

•The system can be set to sound an alarm if the machine is operated outside



Engine start alarm outside prescribed

Area alarm

•It can also trigger an alarm if the machine is moved out of its designated area to another location.



Alarm for outside of reset area

Quality that Keeps on Shining. Valuable Assets Take Your Business to the Next Level.

Structural strength and proven reliability mean these machines can deal with heavy work loads and perform in rigorous site environments. From the lifecycle viewpoint, these machines maintain their value throughout their service lives.



Attachments and main body engineered for superior strength

The arm and boom attachment parts that take the most punishment are made of forged steel. Elements beneath the upper frame, the side deck, and so on, are also engineered for superior strength.

500-hour lubrication cycle for attachments

Attachment pins feature self-lubricating bushings, and bucket pins are protected by

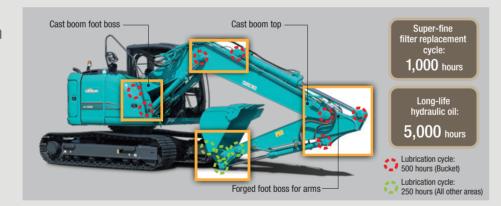
bushings known for superior anti-friction properties. The lubrication cycle is 250 hours for bucket-related areas, and 500 hours for other areas.



Superior dust-collection capabilities, plus fuel filter and water separators to keep water out

High-grade filters offer higher capabilities. Dust and other impurities in the fuel are extracted, and a water separator is installed to keep the fuel line free of moisture.





Durable quality looks 5-to-10 years into the future

High-quality urethane paints keep the body looking good year after year. Fold-up handrails on the cab are easy to repair, and the seat upholstery in the cab delivers superior durability.

High-capacity double-element air cleaners

These air cleaners are not only large, they are also very durable, and help maintain peak engine performance in dusty environments.





Maintenance

Proper Maintenance Ensures Peak Efficiency

Kobelco machines are designed for quick, simple inspection and maintenance.



Monitor display with essential information for accurate maintenance checks

- Display only the maintenance information you need, when you need it.
- Self-diagnostic function provides early-warning detection and display of electrical system malfunctions.
- Service diagnosis function makes it easy to check the machine's condition.
- Record function keeps track of previous breakdowns including irregular and transient malfunctions

Maintenance information display

Convenient "On the Ground" maintenance procedures



Fuel filter



Hydraulic pump



iNDR filter/radiator reservoir tank/air cleaner



Control valve/water separator

Fast maintenance requires only a few procedures



Hour meter can be checked while standing on the ground.



Washer fluid tank is located under the cab floor mat.



Engine quick-drain valve can be turned without tools.

Easy cleaning saves time



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



Special crawler frame design makes it easy to clean off mud.



Fuel tank features bottom flange and large drain valve.

11 12







Engine

Model	MITSUBISHI D04EG-TAA
Туре	Water-cooled, 4 cycle 4 cylinder direct injection type diesel engine with intercooler turbo-charger
No. of cylinders	4
Bore and stroke	94 mm x 120 mm
Displacement	3,331 mL
Datad navyar autaut	74 kW/2,000 min ⁻¹ (ISO 14396)
Rated power output	69.2 kW/2,000 min ⁻¹ (ISO 9249)
Max. torque	Net 375 N-m/1,600 min ⁻¹ (ISO14396: Without Fan)
iviax. torque	359 N•m/1,600 min ⁻¹ (ISO 9249)



Hydraulic System

Pump	
Туре	Tandem variable displacement piston pumps
Max. flow at rated engine speed	2 x 130 L/min, 1 x 20 L/min
Relief valve setting	
Boom, arm and bucket	37.8 MPa {390 kgf/cm ² }
Travel circuit	34.3 MPa {350 kgf/cm ² }
Swing circuit	28.0MPa {285 kgf/cm²}
Pilot control circuit	5.0 MPa {50 kgf/cm ² }
Pilot control pump	Gear type
Main control valve	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
Swing brake	Hydraulic brake
Swing speed	11.0 min ⁻¹ {rpm}
Tail swing radius	1,490 mm
Min. front swing radius	2.000 mm



Travel System

[] = Long Crawler

Travel motors	2 x axial-piston, two-step motors
Travel brakes	Hydraulic brake per motor
Parking brakes	Oil disc brake per motor
Travel shoes	44[46] each side
Travel speed	5.6/3.4 km/h
Draw bar pull	138 kN (14,100 kgf) (IS07464)
Gradeability	
(Gradeability is limited by engine	70% (35 deg)
lubrication requirements.)	



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 cylinder	95 mm x 903 mm



Refilling Capacities & Lubrications

Fuel tank	200 L
Cooling system	13 L
Engine oil	11.5 L
Travel reduction gear	2 x 2.1 L
Swing reduction gear	1.65 L
Hydraulic oil tank	85.2 L tank oil level



Attachments

Backnoe ducket and arm combination								
		Backhoe bucket						
		Normal digging						
	Use	A 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		A				
Bucket capacity	ISO heaped m ³	0.38	0.45	0.50				
Ducket capacity	Struck m ³	0.28	0.35	0.38				
Opening width	With side cutter mm	800	910	1,000				
opening width	Without side cutter mm	700	820	900				
No. of bucket teeth		4	4	5				
Bucket weight kg		320 360		390				
Combinations	2.38 m Standard arm	0	0	0				
COMBINATIONS	2.84 m Long arm	0	Δ	_				

Operating Weight & Ground Pressure

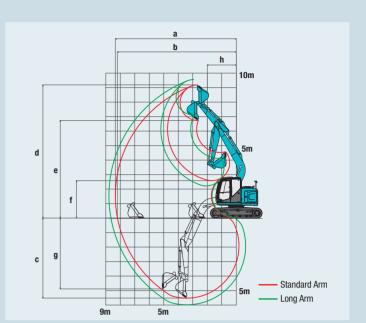
in standard trim, with standard boom, 2.38 m arm, and 0.5 m³ iso neaped bucket [] = Long Crawier						
Shaped			Triple grouser shoes (even height)			
Shoe width mm 500 600 700						
Overall width of crawler	mm	2,490 2,590 2,690				
Ground pressure	kPa {kgf/cm²}	4.3 {0.44} [41 {0.42}] 36 {0.37} [35 {0.36}] 32 {0.33} [31 {0.37} [35 {0.36}] 32 {0.38} [31 [31 {0.38} [31 [31 [31 [31 [31 [31 [31 [31 [31 [31				
Operating weight	kg	kg 13,600 [13,800] 13,900 [14,100] 14,100 [14,300]				
Dozov (antional)	Weight	14,400 [15,000] kg	14,700 [15,300] kg	14,900 [15,500] kg		
Dozer (optional)	Ground proceuro	//5 [//7] kPa	28 [VU] ND	23 [35] kPa		



Working Ranges

		OIIIL III			
Boom	4.68 m				
Range	Standard 2.38 m	Long 2.84 m			
a-Max. digging reach	8.34	8.78			
b-Max. digging reach at ground level	8.19	8.64			
c- Max. digging depth	5.52	5.98			
d-Max. digging height	9.19	9.56			
e- Max. dumping clearance	6.74	7.11			
f- Min. dumping clearance	2.58	2.22			
g-Max. vertical wall digging depth	4.89	5.44			
h-Min. swing radius	2.00	2.40			
i- Horizontal digging stroke at ground level	4.21	4.70			
j- Digging depth for 2.4 m (8') flat bottom	5.29	5.79			
Bucket capacity ISO heaped m ³	0.50	0.36			

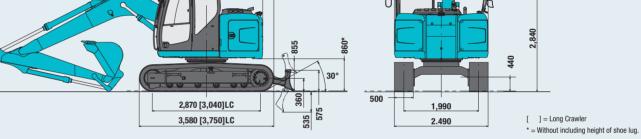
Digging Force (ISO 6015)	Unit: kN (tf)
Arm length	Standard 2.38 m
Bucket digging force	90.1 {9,190}
Arms arranding fares	CA A (C F70)





Dimensions

7,410 [7,490]LC





Lifting Capacity





UKTOOOII		outlinate with. 2.50 in bucket 0.5 in 100 incaped 0.50 kg onot. 500 inin										
		1.5	m	3.0	m	4.5	m	6.0	m	At ma	x. reach	
		i		<u></u>		<u></u>		<u></u>		<u> </u>		Radius
7.5 m	kg									*1,590	*1,590	3.91 m
6.0 m	kg					*2,990	*2,990			*1,280	*1,280	5.63 m
4.5 m	kg					*3,270	3,150	*2,660	1,860	*1,210	*1,210	6.58 m
3.0 m	kg			*5,750	5,720	*4,010	2,910	2,720	1,770	*1,250	*1,250	7.08 m
1.5 m	kg			*8,040	4,870	4,150	2,630	2,590	1,650	*1,370	1,180	7.23 m
G. L.	kg			*7,130	4,530	3,920	2,430	2,490	1,560	*1,610	1,190	7.06 m
-1.5 m	kg	*5,280	*5,280	7,910	4,500	3,830	2,350	2,440	1,520	*2,110	1,340	6.53 m
-3.0 m	kg	*8,130	*8,130	*6,580	4,610	3,880	2,390			2,800	1,760	5.55 m
-4.5 m	kg			*3,620	*3,620					*2,820	*2,820	3.74 m

SK135SR		Long Arm: 2.84	Long Arm: 2.84 m Bucket: 0.38 m³ ISO heaped 320 kg Shoe: 500 mm												
A B		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m		At max. reach			
		L	—	L	—	å		L	—	<u> </u>		<u> </u>		Radius	
7.5 m	kg					*1,870	*1,870					*1,510	*1,510	4.71 m	
6.0 m	kg					*2,580	*2,580	*1,700	*1,700			*1,260	*1,260	6.20 m	
4.5 m	kg					*2,870	*2,870	*2,750	1,890			*1,190	*1,190	7.07 m	
3.0 m	kg			*4,870	*4,870	*3,620	2,960	2,740	1,780	*1,350	1,140	*1,210	1,120	7.54 m	
1.5 m	kg			*7,350	4,990	4,170	2,640	2,580	1,640	1,760	1,080	*1,300	1,030	7.68 m	
G. L.	kg			*7,410	4,480	3,890	2,390	2,450	1,520	*1,600	1,030	*1,500	1,030	7.52 m	
-1.5 m	kg	*4,540	*4,540	7,760	4,360	3,760	2,280	2,380	1,460			1,870	1,140	7.03 m	
-3.0 m	kg	*7,040	*7,040	*7,090	4,430	3,770	2,290	2,410	1,480			2,340	1,440	6.13 m	
-4.5 m	ka			*4 720	4 670	*2.050	2.440					*2 060	2 200	4 57 m	

		Standard Arm: 2.38 m Bucket 0.5 m³ ISO heaped 390 kg Shoe: 500 mm											
			1.5 m		3.0 m		4.5 m		6.0 m		At max. reach		
		L	-		—		-			≟	—	Radius	
7.5 m	kg									*1,590	*1,590	3.91 m	
6.0 m	kg					*2,990	*2,990			*1,280	*1,280	5.63 m	
4.5 m	kg					*3,270	3,200	*2,660	1,900	*1,210	*1,210	6.58 m	
3.0 m	kg			*5,750	*5,750	*4,010	2,960	3,030	1,810	*1,250	*1,250	7.08 m	
1.5 m	kg			*8,040	4,960	4,640	2,680	2,890	1,690	*1,370	1,210	7.23 m	
G. L.	kg			*7,130	4,620	4,410	2,480	2,780	1,590	*1,610	1,220	7.06 m	
-1.5 m	kg	*5,280	*5,280	*8,010	4,580	4,320	2,400	2,740	1,550	*2,110	1,370	6.53 m	
-3.0 m	kg	*8,130	*8,130	*6,580	4,690	4,360	2,440			3,140	1,790	5.55 m	
-4.5 m	ka			*3 620	*3 620					*2 820	*2 820	3.74 m	