Engine

Model	KOMATSU SAA6D140E-5
Type	Direct injection, water-cooled, 4-cycle electrically-controlled common rail system type diesel engine with turbocharger, intercooler
No. of cylinders	6
Bore and stroke	140 mm X 165 mm
Displacement	15.24 L
Rated power output	370 kW {503 PS} SAE NET at 1,800 min-1{rpm} (ISO14396: 2002)
Max. torque	2,197 N·m at 1,350 min^{-1}{rpm}
Electrical system	D.C. 24V
Starter	24 V, 11 kW
Alternator	60 AMP
Batteries	2 X12 V – 160Ah

Hydraulic System

Pump	
Type	Two variable displacement pumps + 1 gear pump
Max. discharge flow	2 X504 L/min, 1 X30 L/min
Relief valve setting	
Boom, arm and bucket	33.0 MPa {337 kgf/cm^2}
Travel circuit	33.0 MPa {337 kgf/cm^2}
Swing circuit	30.0 MPa {306 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

Boom, Arm & Bucket

Boom cylinders	210 mm X 1,800 mm
Arm cylinder	220 mm X 2,175 mm
Bucket cylinder	200 mm X 1,570 mm

Travel System

Travel motors	2 X axial-piston motor, two-step motors
Travel brakes	Hydraulic disc brake
Parking brakes	Oil disc brake per motor
Travel shoes	51 each side
Travel speed	4.2/2.7 km/h
Drawber pulling force	637 kN {65,000 kgf} (J1309)
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

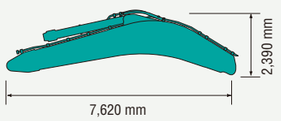
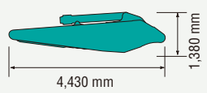
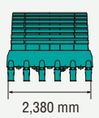
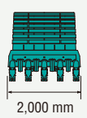
Two hand levers and two foot pedals for travel
Two hand levers for excavating and swing
Electric rotary-type engine throttle

Swing System

Swing motor	Axial-piston motor
Brake	Hydraulic; locking automatically when the swing control lever is in the neutral position
Parking	Hydraulic disc brake
Swing speed	8.4 min^{-1}{rpm}
Swing torque	268 kN·m

Refilling Capacities & Lubrications

Fuel tank	960 L
Cooling system	76 L
Engine oil	58 L
Travel reduction gear	2 X22 L
Swing reduction gear	2 X21.5 L
Hydraulic oil tank	473 L tank oil level
	851 L hydraulic system

7.25 m Short Boom	2.9 m Short Arm	5.1 m^3 Bucket	4.3 m^3 Bucket
Weight: 10,040 kg	Weight: 4,130 kg	Weight: 5,090 kg	Weight: 4,060 kg
			

Application			Mass Excavator	
Bucket capacity	**ISO heaped**	**m^3**	5.1	4.3
Opening width	**With side cutter**	**mm**	2,380	2,000
No. of bucket teeth			6	5
Weight		**kg**	5,090	4,060
Combinations	**2.9 m short arm**		○	○

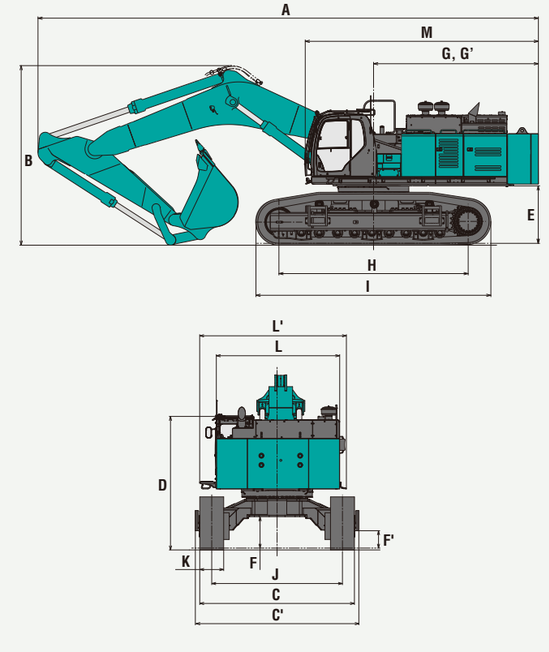
○ Recommend

Dimensions

Unit: mm

Application				Mass Excavator
Arm length				**2.9 m**
Boom length				**7.25 m**
A	**Overall length**			13,590
B	**Overall height (to top of boom)**			4,880
C	**Overall width**	**with 650 mm shoe**	**Extended**	4,200
			Retracted	3,400
		with 750 mm shoe	**Extended**	4,300
			Retracted	3,500
C'	**Overall width**		**Extended**	4,440
			Retracted	3,640
D	**Overall height (to top of cab)**			3,700
E	**Ground clearance of rear end***			1,560
F	**Ground clearance***			850
F'	**Ground clearance***			520
G	**Tail swing radius**			4,600
G'	**Distance from center of swing to rear end**			4,480
H	**Tumbler distance**			5,140
I	**Overall length of crawler**			6,380
J	**Track gauge**	**with 650/750 mm shoe**	**Extended**	3,550
			Retracted	2,750
K	**Shoe width**			650/750
L	**Overall width of upperstructure**			3,350
L'	**Overall width of upperstructure**			3,980
M	**Overall length of upperstructure**			6,360

*Without including height of shoe lug.



Operating Weight & Ground Pressure

Mass Excavator Application (With 7.25 m short boom, 2.9 m short arm, and 5.1 m^3 bucket)

		Triple grouser shoe (even height)	
Shoe width	**mm**	650	750
Overall width of lower structure	**mm**	4,440	4,440
Operating weight	**kg**	80,500	81,100
Operating weight with full truck guide	**kg**	81,000	81,700
Ground pressure	**kPa**	109	95
Ground pressure with full truck guide	**kPa**	110	96

Working Ranges

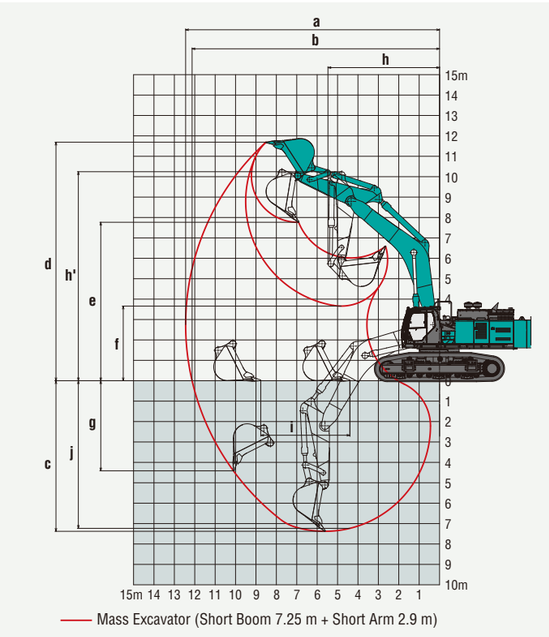
Unit: m

Application	Mass Excavator
a - Max. digging reach	12.45
b - Max. digging reach at ground level	12.13
c - Max. digging depth	7.38
d - Max. digging height	11.69
e - Max. dumping clearance	7.77
f - Min. dumping clearance	3.66
g - Max. vertical wall digging depth	4.42
h - Min. swing radius	5.47
h'- Height at min. swing radius	10.24
i - Horizontal digging stroke at ground level	4.37
j - Digging depth for 2.4 m (8') flat bottom	7.23
Bucket capacity ISO heaped m^3	5.1

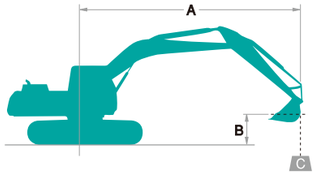
Digging Force (ISO 6015)

Unit: kN (kgf)

Bucket digging force	432
Arm crowding force	351



Lifting Capacities



Rating over front

Rating over side or 360 degrees

A - Reach from swing centerline to bucket hook
B - Bucket hook height above/below ground
C - Lifting capacities in kilograms
• Relief valve setting: 33.0 MPa (337 kgf/cm²)

Mass Excavator Application

SK850LC		Boom: 7.25 m, Arm: 2.9 m Bucket: 5.1 m³ ISO heaped 5,090 kg Shoe: 650 mm														
A / B		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		At Max. Reach		Radius
9.0 m	kg													*10,400	*10,400	8.99 m
7.5 m	kg									*12,040	*12,040			*10,180	*10,180	9.89 m
6.0 m	kg							*14,280	*14,280	*12,760	*12,760			*10,320	*10,320	10.49 m
4.5 m	kg			*28,660	*28,660	*20,380	*20,380	*16,260	*16,260	*13,860	13,770	*12,370	10,040	*10,800	9,330	10.85 m
3.0 m	kg					*24,010	*24,010	*18,320	18,100	*15,040	13,080	*12,960	9,680	*11,640	8,800	10.98 m
1.5 m	kg					*26,640	24,680	*20,000	17,070	*16,060	12,460	*13,440	9,350	*12,850	8,670	10.90 m
G.L.	kg			*26,290	*26,290	*27,830	23,720	*20,970	16,390	*16,630	12,030	*13,530	9,130	*13,320	8,950	10.61 m
-1.5 m	kg	*20,030	*20,030	*35,220	*35,220	*27,580	23,380	*20,990	16,070	*16,490	11,830			*13,820	9,760	10.08 m
-3.0 m	kg	*30,610	*30,610	*34,680	*34,680	*25,860	23,520	*19,790	16,120	*15,120	11,950			*14,290	11,400	9.27 m
-4.5 m	kg	*40,040	*40,040	*29,400	*29,400	*22,250	*22,250	*16,680	16,600					*14,520	*14,520	8.09 m
-6.0 m	kg			*20,640	*20,640	*15,120	*15,120							*13,760	*13,760	6.34 m

SK850LC		Boom: 7.25 m, Arm: 2.9 m Bucket: 5.1 m³ ISO heaped 5,090 kg Shoe: 750 mm														
A / B		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		At Max. Reach		Radius
9.0 m	kg													*10,400	*10,400	8.99 m
7.5 m	kg									*12,040	*12,040			*10,180	*10,180	9.89 m
6.0 m	kg							*14,280	*14,280	*12,760	*12,760			*10,320	*10,320	10.49 m
4.5 m	kg			*28,660	*28,660	*20,380	*20,380	*16,260	*16,260	*13,860	*13,860	*12,370	10,160	*10,800	9,440	10.85 m
3.0 m	kg					*24,010	*24,010	*18,320	18,270	*15,040	13,210	*12,960	9,800	*11,640	8,900	10.98 m
1.5 m	kg					*26,640	24,910	*20,000	17,250	*16,060	12,600	*13,440	9,460	*12,850	8,780	10.90 m
G.L.	kg			*26,290	*26,290	*27,830	23,960	*20,970	16,560	*16,630	12,170	*13,530	9,250	*13,320	9,070	10.61 m
-1.5 m	kg	*20,030	*20,030	*35,220	*35,220	*27,580	23,620	*20,990	16,240	*16,490	11,970			*13,820	9,880	10.08 m
-3.0 m	kg	*30,610	*30,610	*34,680	*34,680	*25,860	23,760	*19,790	16,290	*15,120	12,090			*14,290	11,530	9.27 m
-4.5 m	kg	*40,040	*40,040	*29,400	*29,400	*22,250	*22,250	*16,680	*16,680					*14,520	*14,520	8.09 m
-6.0 m	kg			*20,640	*20,640	*15,120	*15,120							*13,760	*13,760	6.34 m

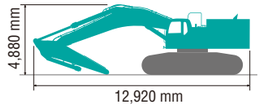
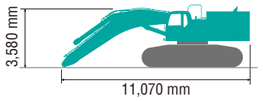
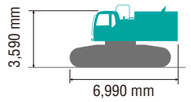
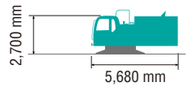
SK850LC		Boom: 7.25 m, Arm: 2.9 m Bucket: 4.3 m³ ISO heaped 4.060 kg Shoe: 650 mm														
A / B		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		At Max. Reach		Radius
9.0 m	kg													*11,120	*11,120	8.99 m
7.5 m	kg									*12,870	*12,870			*10,910	*10,910	9.89 m
6.0 m	kg							*15,160	*15,160	*13,620	*13,620			*11,080	11,050	10.49 m
4.5 m	kg			*29,680	*29,680	*21,330	*21,330	*17,170	*17,170	*14,740	14,520	*13,230	10,780	*11,570	10,050	10.85 m
3.0 m	kg					*24,990	*24,990	*19,250	18,910	*15,940	13,850	*13,830	10,430	*12,430	9,530	10.98 m
1.5 m	kg					*27,650	25,580	*20,950	17,910	*16,970	13,250	*14,320	10,100	*13,720	9,420	10.90 m
G.L.	kg			*26,940	*26,940	*28,840	24,630	*21,930	17,230	*17,550	12,820	*14420	9,890	*14,200	9,710	10.61 m
-1.5 m	kg	*20,730	*20,730	*35,860	*35,860	*28,600	24,290	*21,950	16,910	*17,410	12,630			*14,710	10,530	10.08 m
-3.0 m	kg	*31,290	*31,290	*35,770	*35,770	*26,870	24,430	*20,750	16,960	*16,040	12,740			*15,190	12,180	9.27 m
-4.5 m	kg	*41,230	*41,230	*30,470	*30,470	*23,250	*23,250	*17,620	17,420					*15,450	*15,450	8.09 m
-6.0 m	kg			*21,690	*21,690	*16,100	*16,100							*14,720	*14,720	6.34 m

SK850LC		Boom: 7.25 m, Arm: 2.9 m Bucket: 4.3 m³ ISO heaped 4.060 kg Shoe: 750 mm														
A / B		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		At Max. Reach		Radius
9.0 m	kg													*11,120	*11,120	8.99 m
7.5 m	kg									*12,870	*12,870			*10,910	*10,910	9.89 m
6.0 m	kg							*15,160	*15,160	*13,620	*13,620			*11,080	*11,080	10.49 m
4.5 m	kg			*29,680	*29,680	*21,330	*21,330	*17,170	*17,170	*14,740	14,660	*13,230	10,890	*11,570	10,160	10.85 m
3.0 m	kg					*24,990	*24,990	*19,250	19,090	*15,940	13,990	*13,830	10,540	*12,430	9,640	10.98 m
1.5 m	kg					*27,650	25,820	*20,950	18,080	*16,970	13,390	*14,320	10,220	*13,720	9,520	10.90 m
G.L.	kg			*26,940	*26,940	*28,840	24,870	*21,930	17,400	*17,550	12,960	*14420	10,000	*14,200	9,820	10.61 m
-1.5 m	kg	*20,730	*20,730	*35,860	*35,860	*28,600	24,530	*21,950	17,090	*17,410	12,770			*14,710	10,650	10.08 m
-3.0 m	kg	*31,290	*31,290	*35,770	*35,770	*26,870	24,670	*20,750	17,130	*16,040	12,880			*15,190	12,310	9.27 m
-4.5 m	kg	*41,230	*41,230	*30,470	*30,470	*23,250	*23,250	*17,620	17,600					*15,450	*15,450	8.09 m
-6.0 m	kg			*21,690	*21,690	*16,100	*16,100							*14,720	*14,720	6.34 m

Notes:

1. Do not attempt to lift or hold any load that is greater than these lift capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lift capacities.
2. Lift capacities are based on machine standing on level, firm, and uniform ground. User mus tmake 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 defined as lift point.
4. 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.
5. Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine. Rules for safe operation of equipment should be adhered to at all times.
6. Lift capacities apply to only machine as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.

Transportation Plan

Configuration	Description	Total weight
Plan 1  Transportation width: 3,400 mm	Base machine without counterweight and bucket, with lower structure, 7.25 m Short Boom and 2.9 m short arm.	60,250 kg
Plan 2  Transportation width: 3,400 mm	Base machine without counterweight, bucket and arm, with lower structure and 7.25 m Short Boom.	56,020 kg
Plan 3  Transportation width: 3,400 mm	Base machine with lower structure, without counterweight, bucket, arm and boom.	45,980 kg
Plan 4  Transportation width: 3,350 mm	Base machine with carbody, without counterweight, bucket, arm,boom and lower structure.	21,040 kg

*Counterweight: 13,400 kg