

SAMSUNG

SE210LC-3

CRAWLER EXCAVATOR SERIES-3



Flywheel Horsepower; **145 ps** **107 kW**

Bucket Capacity; SAE **0.92 m³** **1.20 yd³**

CECE **0.8 m³** **1.05 yd³**

Operating Weight; **20500 kg** **45190 lb**

SE210LC-3

Advanced engineering

State-of-the-art technology

Cutting edge ergonomics

World class quality

Outstanding productivity

Unbeatable performance

Advanced Technology

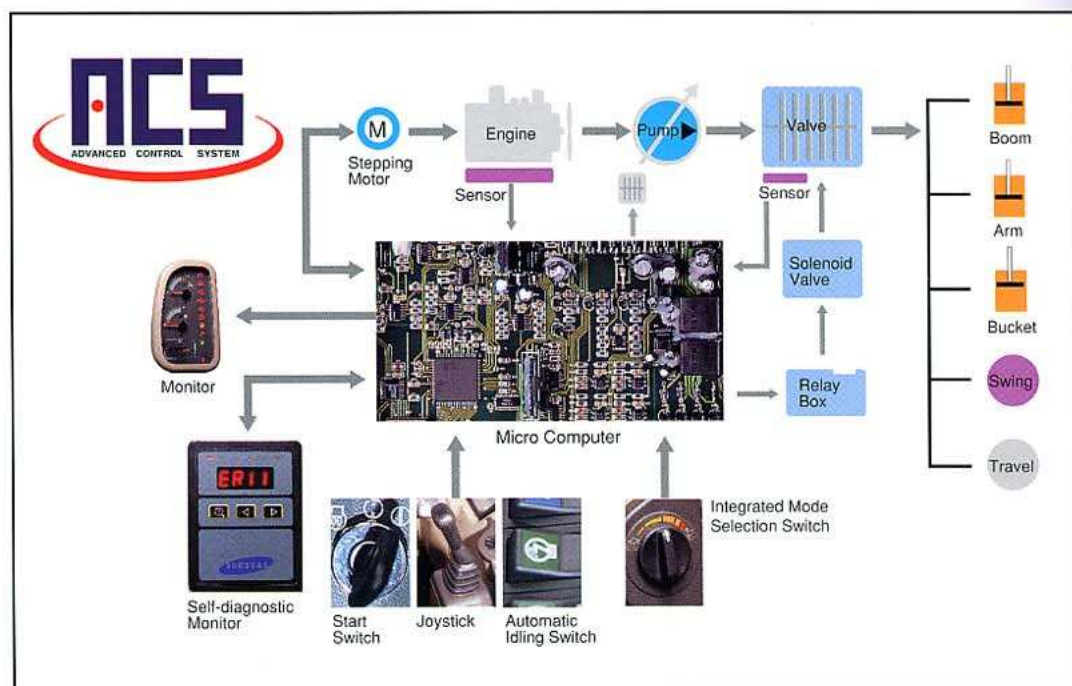




Advanced Technology

ACS (Advanced Control System)

Balances engine power with hydraulic pump output over a wide range of working conditions to provide maximum production with minimal fuel consumption. The integrated mode selection switch automatically sets the engine power and work mode for optimum machine performance. The ACS self-diagnostic mode analyzes information from vital sub-systems and identifies the source of a problem to facilitate troubleshooting.



Boom and Arm Regeneration System

Boom and arm regeneration system improves operating smoothness, speed and also eliminates wear caused by cavitation.

Boom and Arm Holding Valves

A new standard boom and arm holding valves prevent drift when lifting or waiting for a truck to load.

Fine and Precise Control

The F-mode setting control engine output while the hydraulics work at maximum lifting power and precise control for applications like laying pipe and fine grading. In the F-mode, system pressure is always at maximum or "Power Boost" pressure.

Self-diagnostic Monitor System

This system monitors 7 vital sub-systems and displays an error code to aid in troubleshooting.

One Touch Power Boost

The power boost switch, located on the top of the right hand joystick, increases system pressure up to 10% for 9 seconds in H, G1-G3 modes.

Integrated Mode Selection Switch

Includes four different work modes with nine different engine settings, to allow maximum efficiency for various job site needs.



Operator Environment



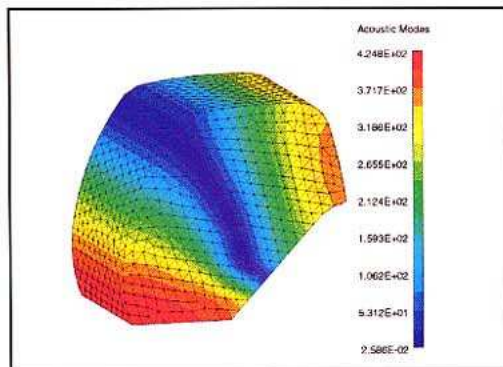
Deluxe KAB Seat



The deluxe KAB Seat (standard equipment) has 8 individual adjustments. The seat and console can be adjusted together or independently to ensure a high degree of operator comfort and to meet job site conditions.

Acoustic Control

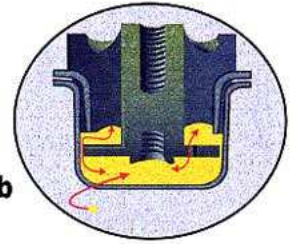
High performance sound absorbing material in the cab and engine/pump compartments have achieved significant reduction in noise level. Cab sound level is 69dB(A) which corresponds to that of passenger car. With an external sound level of 70dB(A), this is an environment friendly machine particularly suited to urban job sites and night work.



Monitor System and Switch



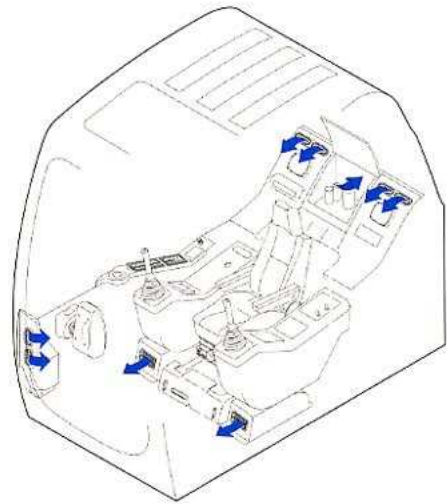
Hydraulic Dampening Cab Mounts



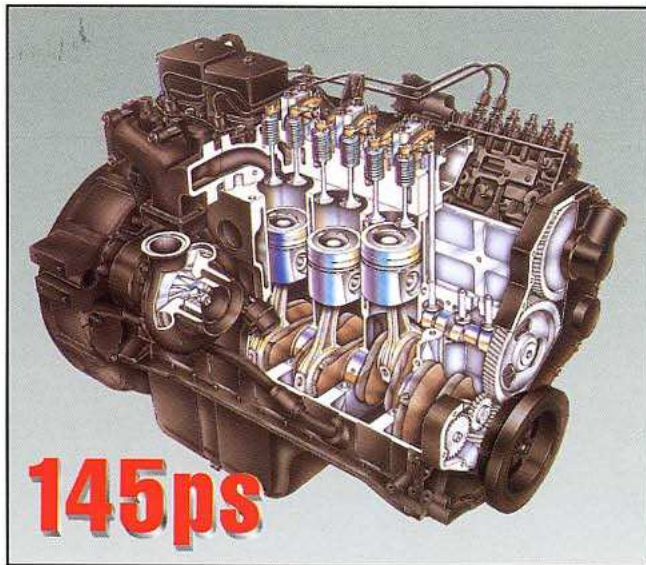
Strategically positioned 5 silicon oil and rubber viscous dampening mounts significantly reduce shock, vibration and noise transmitted to the cab. Dampening the noise and vibration levels lowers operator stress and fatigue.

Integrated Air Conditioning / Heating System (Option)

The deluxe cab features an integrated air conditioning / heating system and is pressurized to provide a dust free, climate controlled operator environment. The multi vent dust system delivers balanced airflow for cooling, heating and ventilating to maintain comfort and visibility, regardless of weather conditions.



Performance



Cummins Engine

Cummins engines have been acknowledged throughout the world for reliability and serviceability. The SE210LC-3 is powered by the Cummins B5.9-C diesel engine. The engine is rated at 145 net horsepower. A redesigned fuel delivery system creates greater combustion efficiency producing more power, torque and improved fuel economy while meeting the toughest emission standards. The global distribution network provides unequalled parts availability and service support.

Swing Control

Improved swing hydraulics incorporate an anti-rebound valve for greater accuracy, minimal drift and smoother stops with virtually no rebound motion.

Powerful Tractive Effort

A powerful tractive effort of 18.7 tons enables the machine to move up to 35 degrees.

Automatic Travel Speed Selection

Travel performance is significantly enhanced by the automatic speed selection function which changes the travel speed according to the load acting on the travel motor.

The operator can switch to the 1st speed position to fix the system in the lower speed. This is advantageous in hard soil condition or for safety when smooth low speed travel is required.

Summation System

The hydraulic circuit adopts a summation system. This system provides two pump flows, one to boom and the other to arm. The flows are also tied together. If one is not being used, the other has full use of the flow available.

Boom and Arm Priority

Boom and arm priority valves are designed within the hydraulic circuit to allow oil to flow to the function where it is needed the most. When the joysticks are neutral position, both priority valves are open.

Boom priority valve allows fast boom up for applications such as loading trucks and coming out of a deep excavation.

Arm priority valve allows fast arm in and out for applications such as digging and leveling.

The boom and arm priority valves are working automatically.

As the operator strokes the joysticks, the hydraulic system directs oil flow that will most efficiently get the job done.

Cold Weather Start-up Aids

Optional start-up aids include : A block heater, electric air intake heater, fuel warmer, and an oil pan heater, to ensure trouble free start-up under extreme cold weather conditions.



Durability

Increased Lower Frame Durability

For the toughest job site conditions, the lower frame durability has been improved by utilizing high tensile strength steel in critical stress locations.

Improved Hydraulic Cylinders

Adopting anti-contamination piston seals, both internally and externally provides improved sealing characteristics minimizing internal leakage and enhancing reliability.

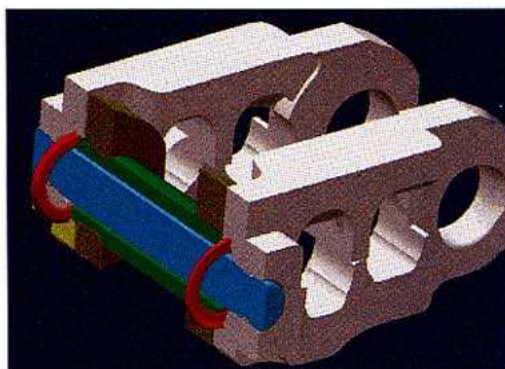


Reinforced Attachments

Computer aided design and stress analysis of the boom and arm have resulted in larger reinforced structures with the best combination of strength, weight and performance.

Extended Undercarriage Durability

Sealed and greased lubricated tracks, combined with the use of alloy steel idlers and rollers and a fabricated center mount track guard, provide greater undercarriage durability.



Maintenance



Fuel Tank Filling

To reduce the risk of contamination, the tank filler neck has been enlarged to accept a standard fueling nozzle and the optional filler pump is pumped directly to the tank.

Radiator & Oil Cooler Maintenance

The hydraulic oil cooler can be tilted away from the radiator for easy cleaning.

Electrical Harness

Double lock harness plugs are waterproof to ensure secure connections and prevent corrosion.



Relay & Solenoid Cover

The relays and solenoid valves are shielded to prevent accidental damage or terminal contact.



Swing Motor Access

Redesigned swivel joint mounting provides easier access to the swing motor, swivel joint and main control valve.



Battery Protection

A composite material cover protects the battery and prevents accidental contact with the cable terminal.

Easy Access

Compartment doors open wide to provide easy access for maintenance and daily maintenance checks.

Hydraulic Tank Sight Gauge

A conveniently located sight gauge permits a quick check of the hydraulic oil level.

Improved O-ring Sealed Joints

The use of superior quality O-ring seals throughout the hydraulic system eliminates leaking joint, reduces machine maintenance, and protects the environment.



Battery Master Switch

A keyed master switch disconnects battery power to protect the electrical system during down periods and to deter machine theft.

Storage Compartment

Storage space has been increased for operator tools, etc.



Excaliever

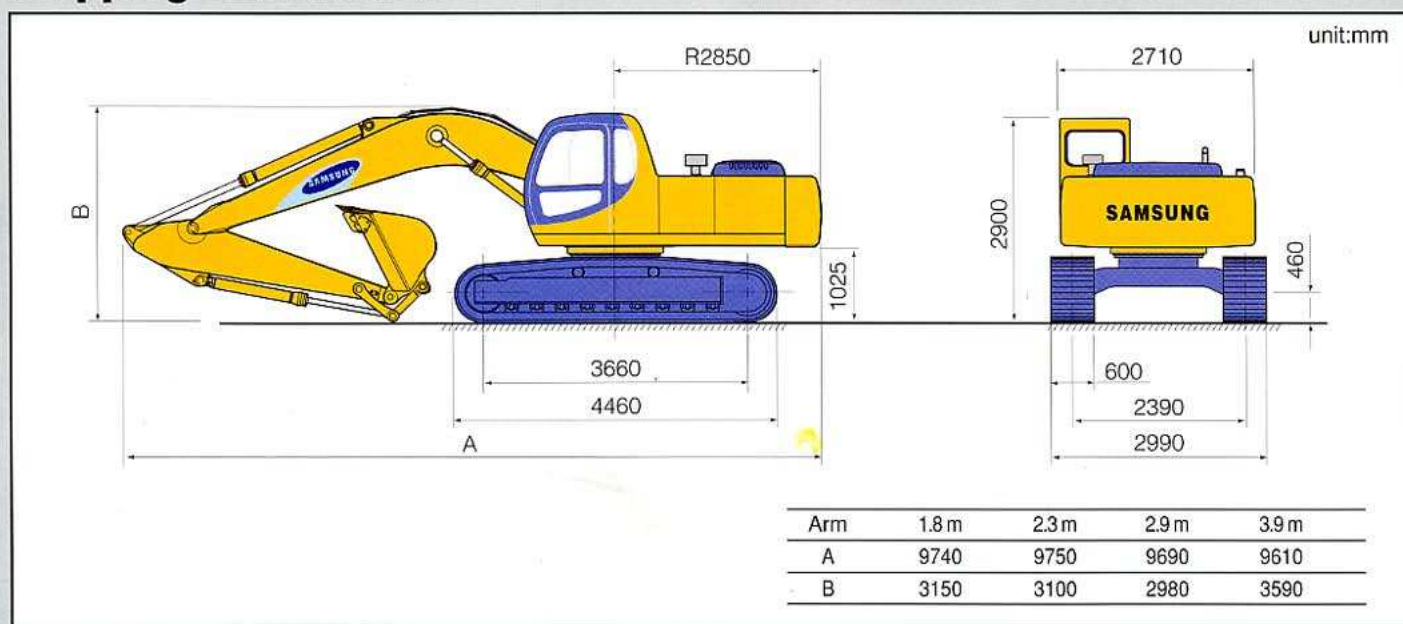
The Excaliever providing a quick-check of the machine status and troubles always keeps the machine with its most optimum conditions.

The Excaliever connected to the diagnosis-purposed port shows the machine conditions such as controllers and electronic, hydraulic system with graphics or letters on the screen, resulting in a quick and relevant troubleshooting.



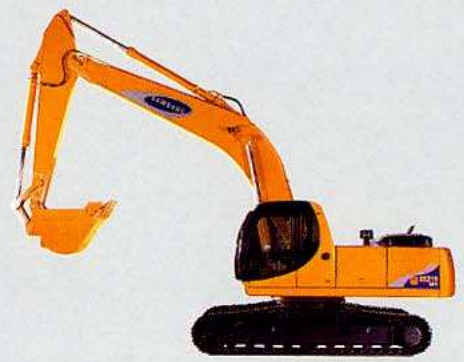
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Shipping Dimensions

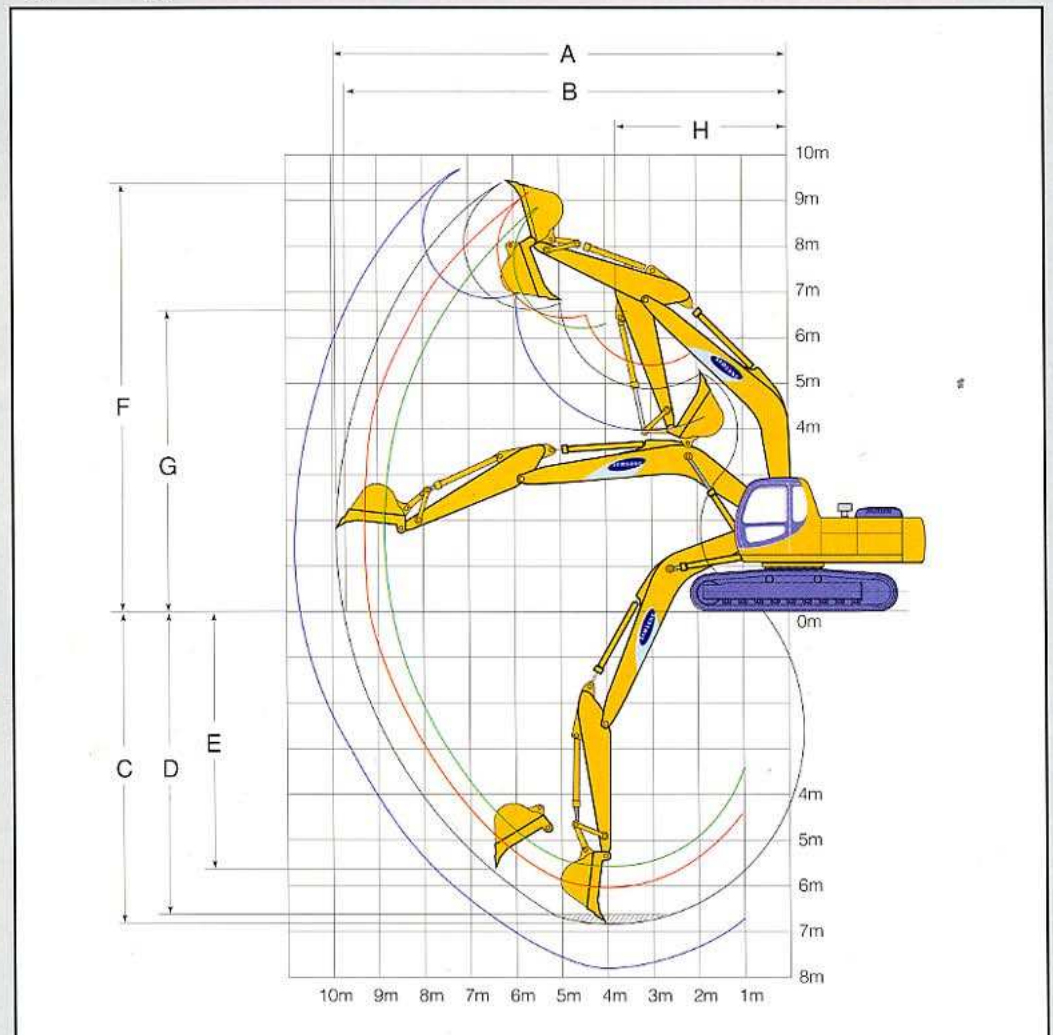


Specifications

Operating Weight		kg	20500
Bucket Capacity (SAE / CECE)		m ³	0.92 / 0.8
Engine			
Model		Cummins B5.9-C	
Type		Water Cooled 6 Cylinders	
Flywheel Horsepower		ps(kW) / rpm	145 (107) / 1900
Max. Torque		kg · m / rpm	63 / 1500
Fuel Tank Capacity		l	350
Hydraulic System			
Type		Variable Displacement Axial Piston Pump × 2, Gear Pump × 1	
System Pressure		kg / cm ²	320 / 350
Max. Flow Rate		l / min	2 × 200
Performance			
Swing Speed		rpm	11.6
Travel Speed		km / h	3.2 / 5.5
Gradeability		deg	35
Max. Tractive Effort		kg	18730
Max. Bucket Digging Force (Normal / Power up)		kg	12060 / 13190
Max. Arm Digging Force (Normal / Power up)		kg	9550 / 10445
Ground Pressure		kg / cm ²	0.43

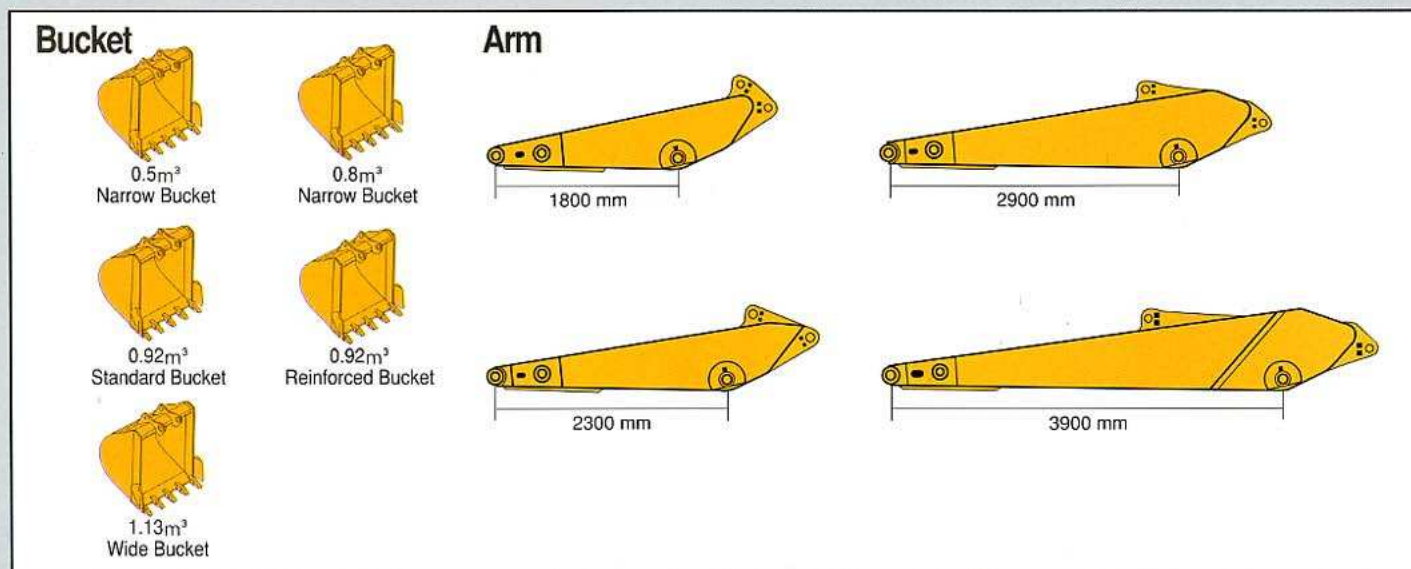


Working Ranges



Digging Applications	Unit	Extra Short Arm(1.8m)	Short Arm (2.3m)	Standard / HD Arm(2.9m)	Long Arm (3.9m)
A. Max. Digging Reach	mm	8930	9410	9940	10760
B. Max. Digging Reach on Ground	mm	8740	9230	9750	10610
C. Max. Digging Depth	mm	5680	6130	6730	7780
D. Max. Digging Depth (8' Level)	mm	5320	5910	6510	7620
E. Max. Vertical Wall Digging Depth	mm	4250	5420	6050	6630
F. Max. Digging Height	mm	8830	9230	9450	9590
G. Max. Dumping Height	mm	6110	6410	6650	6830
H. Min. Front Swing Radius	mm	3920	3640	3650	3645
Max. Bucket Digging Force (Normal / Power up)	kg	14700/16080	12060/13190	12060/13190	12060/13190
Max. Arm Digging Force (Normal / Power up)	kg	14800/16190	11640/12730	9550/10450	7990/ 8740

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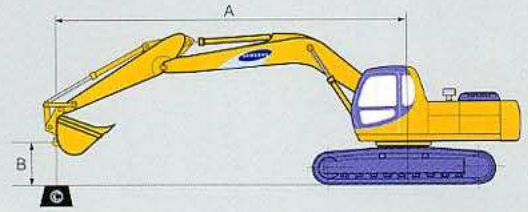
Bucket & Arm Combination

			Narrow Bucket	Narrow Bucket	Standard Bucket	Reinforced Bucket	Wide Bucket
Bucket Capacity (SAE / CECE)		m³	0.5/0.45	0.8/0.7	0.92/0.8	0.92/0.8	1.13/1.0
Bucket Width (with / without Side Cutter)		mm	805/695	1110/1000	1235/1125	1235/1125	1510/1400
No. of Teeth			3(★)	5(★)	5(★)	5(★)	6(★)
Application			Trenching	Trenching	General Purpose	Extreme Service	Loading Service
Arm Options	Extra Short Arm	1.8m	○	○	○	○	○
	Short Arm	2.3m	○	○	○	○	○
	Standard Arm	2.9m	○	○	○	○	□
	Long Arm	3.9m	○	□	□	X	X
Remark					Standard		

- ★ : Horizontal and vertical pin type are available.
 ○ : Applicable for general purpose up to 2000kg/m³
 □ : Applicable for light duty up to 1600kg/m³
 X : Not usable.

Undercarriage

Tripple Grouser Shoe	Shoe Width	mm	600	700	800	900
	Overall Width	mm	2990	3090	3190	3290
	Operating Weight	kg	20500	20780	21060	21340
	Ground Pressure	kg/cm²	0.43	0.38	0.33	0.30
Swamp Shoe	Shoe Width	mm	910			
	Overall Width	mm	3300			
	Operating Weight	kg	21420			
	Ground Pressure	kg/cm²	0.30			
Rubber Pad	Shoe Width	mm	600(Rubber Pad)			
	Overall Width	mm	2990			
	Operating Weight	kg	21190			
	Ground Pressure	kg/cm²	0.44			



Lifting Capacities

(Shoe 600mm+Bucket 0.92m³, Counterweight 3500kg)

unit : kg

		A	0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	Max.Reach	
Boom 5.7m + Arm 3.9m	B													
	7m	Front Side											*2410 *2410	7884 mm
	6m	Front Side									*2860 2860		*2370 *2370	8474 mm
	5m	Front Side								*2900 *2900	*2960 2810		*2380 2240	8911 mm
	4m	Front Side								*3210 *3210	*3150 2740	*2890 2150	*2420 2040	9218 mm
	3m	Front Side							*3830 *3830	*3590 3400	*3410 2650	*3300 2100	*2520 1910	9406 mm
	2m	Front Side				*8840 *8840	*6370 *6370	*5160 *5160	*4450 4290	*4000 3280	*3700 2550	3420 2040	*2650 1830	9484 mm
	1m	Front Side				*8470 *8470	*7990 7850	*6140 5500	*5080 4090	*4420 3150	*3980 2480	3350 1970	*2850 1790	9453 mm
	0m	Front Side			*4180 *4180	*6060 *6060	*9270 7390	*6990 5220	*5670 3920	*4820 3040	4040 2400	3290 1920	3110 1800	9314 mm
	-1m	Front Side	*4170 *4170	*4140 *4140	*5290 *5290	*6600 *6600	*10080 7110	*7630 5020	*6130 3770	4950 2940	3970 2340	3250 1880	3210 1860	9061 mm
	-2m	Front Side	*5300 *5300	*4030 *4030	*5130 *5130	*8100 *8100	*10470 6960	*8010 4890	6270 3680	4870 2870	3920 2290		3430 1990	8683 mm
	-3m	Front Side	*6170 *6170	*5830 *5830	*7130 *7130	*10220 *10220	*10500 6910	*8140 4830	6210 3630	4840 2840	3910 2280		3780 2210	8163 mm
	-4m	Front Side		*7810 *7810	*9470 *9470	*13040 11550	*10200 6940	*7990 4830	6210 3620	4840 2840			4370 2570	7471 mm
	-5m	Front Side		*10120 *10120	*12340 *12340	*12580 *12580	*9520 7040	*7510 4900	*6030 3680				*5340 3210	6551 mm
	-6m	Front Side			*15320 *15320	*10850 *10850	*8290 7230	*6500 5030					*6060 4620	5280 mm
Boom 5.7m + Arm 2.9m	7m	Front Side											*3160 *3160	6828 mm
	6m	Front Side								*3540 *3540			*3080 *3080	7504 mm
	5m	Front Side							*3760 *3760	*3680 3530			*3080 2730	7996 mm
	4m	Front Side						*4550 *4550	*4200 *4200	*3950 3430	*3810 2680		*3150 2470	8337 mm
	3m	Front Side				*8990 *8990	*6540 *6540	*5370 *5370	*4700 4340	*4290 3310	*4010 2610		*3280 2300	8545 mm
	2m	Front Side				*4980 *4980	*8150 7970	*6280 5610	*5260 4180	*4640 3220	4170 2530		*3480 2210	8631 mm
	1m	Front Side				*5090 *5090	*9510 7500	*7130 5340	*5810 4020	*5000 3120	4100 2470		3640 2170	8597 mm
	0m	Front Side				*5160 *5160	*10330 7210	*7780 5140	6270 3890	5050 3040	4050 2420		3700 2200	8443 mm
	-1m	Front Side			*5800 *5800	*5170 *5170	*10660 7090	*8170 5010	6380 3790	4980 2980	4010 2390		3880 2310	8162 mm
	-2m	Front Side		*7040 *7040	*5200 *5200	*8130 *8130	*10630 7060	*8290 4960	6330 3740	4940 2940			4220 2510	7740 mm
	-3m	Front Side		*5900 *5900	*8360 *8360	*11660 *11660	*10290 7100	*8130 4960	6320 3740	4950 2950			4790 2860	7150 mm
	-4m	Front Side			*11920 *11920	*12370 11980	*9590 7200	*7640 5020	*6160 3790				*5690 3480	6346 mm
	-5m	Front Side				*10710 *10710	*8390 7370	*6630 5150					*6280 4820	5224 mm

- Notes : 1. The above loads are in compliance with SAE and ISO Hydraulic Excavator Lift Capacity Standards.
 2. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
 3. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

SE210LC-3

Lifting Capacities

(Shoe 600mm+Bucket 0.92m³, Counterweight 3500kg)

unit : kg

	A		0m	1m	2m	3m	4m	5m	6m	7m	8m	9m	Max.Reach	
	B													
Boom 5.7m + Arm 2.3m	7m	Front Side							*4020 *4020				*4050 *4050	6139 mm
	6m	Front Side							*4030 *4030				*4070 3620	6885 mm
	5m	Front Side							*4290 *4290	*4150 3480			*4140 3120	7418 mm
	4m	Front Side				*7250 *7250	*6070 *6070	*5210 *5210	*4710 4410	*4370 3390			*4240 2800	7785 mm
	3m	Front Side					*7580 *7580	*6010 5770	*5180 4280	*4680 3290	4240 2600		4230 2600	8008 mm
	2m	Front Side					*5290 *5290	*6880 5500	*5690 4140	*4990 3200	4180 2540		4090 2490	8099 mm
	1m	Front Side					*5010 *5010	*7620 5270	*6180 3990	5130 3120	4120 2490		4060 2460	8064 mm
	0m	Front Side					*4970 *4970	*8120 5110	6480 3890	5060 3050			4160 2500	7899 mm
	-1m	Front Side				*5420 *5420	*10710 7100	*8340 5030	6400 3820	5010 3010			4400 2640	7598 mm
	-2m	Front Side			*6200 *6200	*7930 *7930	*10440 7130	*8290 5010	6380 3800	5000 3000			4850 2910	7141 mm
	-3m	Front Side			*9430 *9430	*12430 12000	*9890 7210	*7940 5050	6410 3820				5660 3400	6496 mm
	-4m	Front Side			*4990 *4990	*11170 *11170	*8950 7350	*7190 5150					*6270 4340	5594 mm
	-5m	Front Side					*7310 *7310						*6840 6820	4271 mm
Boom 5.7m + Arm 1.8m	7m	Front Side											*4410 *4410	5643 mm
	6m	Front Side							*4390 *4390				*4400 4020	6448 mm
	5m	Front Side						*4980 *4980	*4610 4510	*4450 3420			*4450 3400	7016 mm
	4m	Front Side					*6810 *6810	*5670 *5670	*5010 4360	*4620 3350			*4540 3030	7403 mm
	3m	Front Side						*6460 5630	*5490 4190	*4900 3260			4560 2800	7638 mm
	2m	Front Side						*7270 5370	*5960 4050	5170 3160			4400 2680	7734 mm
	1m	Front Side						*7910 5160	*6380 3930	5080 3070			4370 2650	7696 mm
	0m	Front Side					*8130 6940	*8260 5040	6430 3840	5020 3020			4490 2700	7524 mm
	-1m	Front Side					*8210 6950	*8330 5000	6380 3800	5000 3000			4780 2870	7206 mm
	-2m	Front Side			*9810 *9810	*8160 *8160	*10030 7150	*8130 5010	6380 3800				5340 3210	6722 mm
	-3m	Front Side			*8300 *8300	*11190 *11190	*9340 7270	*7620 5080	*6110 3860				*6070 3830	6031 mm
	-4m	Front Side				*9890 *9890	*8180 7450	*6550 5230					*6470 5160	5044 mm

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 2. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.
 3. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.



Standard Equipment

- Air Cleaner
- Adjustable Monitor
- Alternator(50A)
- Automatic Travel System
- Automatic Idling System
- Automatic Deaeration System
- Auxiliary Hydraulic Valve
- Batteries
- Battery Sealing Cover
- Boom/Arm Holding Valve
- Bucket Cylinder Cushion
- Dampening Cab Mounts
- Engine Restart Prevention Circuit
- Hydraulic Track Adjusters
- Integrated Mode Selection System
- Joysticks, Pilot-operated
- Cab, All-weather Sound Suppressed, Includes :
 - Ashtray
 - Cigar Lighter
 - Door Locks
 - Floor Mat
 - Horn
 - Hot & Cool Box
 - Pull-up Type Front Window
 - Removable Lower Windshield
 - Seat
 - Seat Belt
 - Safety Glasses
 - Windshield Wiper with Intermittent Feature
- Lights :
 - Frame Mounted, Two
 - Boom Mounted, Two
- Low Emission Engine
- Master Switch
- Mirrors
- One Touch Power Boost
- Safe Engine Start/Stop Function
- Self-diagnostic System
- Sealed & Greased Track
- Starting Motor(24 volt, 7.46kW)
- Straight Travel Circuit
- Tiltable Oil Cooler
- Tool Box, Locking
- Track Guards
- Water Separator, Fuel line

Optional Equipment

- Anti-drop Valve : Boom, Arm
- Air Conditioner
- Air Heater
- Automatic Greasing System
- Block Heater : 120V, 240V
- Cab Guard
- Falling Object Guard (FOG)
- Fuel Filler Pump
- Fuel Warmer
- Heater
- Overload Warning Device
- Precleaner
- Purifier
- Rubber Pads Mounted on Track Shoes
- Spare Parts
- Stereo Cassette Radio (AM/FM)
- Tool Kit
- Travel Alarm
- Vandalism Kit

* Specifications may vary by the region without notice.

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* Materials and specifications are subject to change without notice.

*Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice.
The illustrations do not necessarily show the standard version of the machine.*

VOLVO

**Volvo Construction
Equipment Group**

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