

SAMSUNG

HEAVY INDUSTRIES



SE450LC-2

Samsung Crawler Excavator

Flywheel Horsepower:	221 kw	296 hp
Operating Weight:	43,740 kg	96,428 lb
Bucket Capacity (SAE):	1.85 - 2.83 m³	2.4 - 3.68 yd³

Samsung Excavators Provide Outstanding Power and Precision



Crawler Excavators from Samsung provide more power performance and durability than ever before. We've made refinements in the hydraulic system to provide more power and speed, making fine control easier.

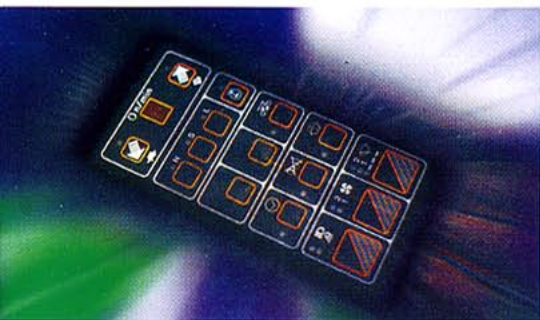
At the same time, we've reinforced the steel in the boom, the track frames and the undercarriage to provide longer life in the toughest of applications.

Your operators will also appreciate the comfort and safety features offered in our unique hi-visibility cab. All in all, this machine offers you the best value on the market today.



HEAVY INDUSTRIES

Modern Technology



By utilising the latest electro-mechanical technology, Samsung can provide the optimum balance, precision and power whilst offering the highest degree of efficiency and economy.

- **Mode Selection System** - Samsung's three mode system makes it possible to select the speed and power to fit job conditions. This feature results in higher productivity and reduced fuel consumption.

H Mode (Heavy Duty) - This high capacity mode provides the hydraulic pumps with 100% of engine power when working hard ground, rock or other difficult applications.

S Mode (Medium Duty) - A standard mode that balances engine power and fuel costs for general excavating and loading work.

L Mode (Light Duty) - An economical mode requiring less engine power for use in light loading, standby or precision work.

Maximum Productivity

Samsung's Crawler Excavators match engine power with hydraulic output to provide the right combination of speed and power in any application.

- **High Capacity Cummins Engine** - The Cummins engines are renowned worldwide for their capacity and durability. Its excellent combustion efficiency results in an economical, powerful engine that proves itself in severe weather conditions. Fuel costs are minimal and parts and service support are readily available.

- **"Exceptional" Working Range** - The reach, dig depth and dump height capabilities of Samsung Excavators are among the highest in their size class. You can handle more work with less manoeuvring.

- **Lower Frame Durability** - The high stress areas of the Lower Frame are reinforced to handle the harshest ground conditions.

- **Outstanding Digging Performance** - High breakout forces provide more than enough power to handle even the toughest job conditions with ease. Samsung Excavators can also be fitted with a wide range of buckets to increase productivity.

- **Smooth Simultaneous Operation** - Samsung's unique hydraulic system is designed to provide flexible operation in all five functions; travel, swing, bucket, boom and arm, while operating simultaneously. All operations remain smooth and fast throughout any work cycle.

- **Excellent Start-up in Cold Weather Conditions** - An electric air heater and fuel warmer are available as optional equipment. Heating the fuel prior to start-up prevents filter blockage for easier cold weather starts.

- **Working Stability** - A heavy counterweight provides excellent balance and stability with various work attachments such as hammers, speciality buckets and forestry fronts.



- **Increased Boom Durability** - The Boom has been reinforced to specifically handle tough job applications such as hydraulic breakers, crushers, grapples, shears, etc.

Operator Comfort



Operator comfort is important in maintaining maximum productivity. That's why we've designed our cab with the operator in mind. Our ultramodern design is very comfortable and spacious and offers the additional benefits of conveniently located controls and reduced noise levels.

- **Removable Front Bottom Window** - Improved low angle visibility can be achieved by quick removal of the front bottom window.

- **Stereo/Cassette** - A high quality car stereo cassette provides excellent sound reproduction.

- **Overload Warning Device (Optional)** - The overload warning device is factory adjusted to reflect the 'over-the-side' lifting capacity of the Boom and Arm configuration of the machine.

- **Manual Control of Engine Speed** - Repositioning the lever mounted inside the cab allows easy transition to manual control.

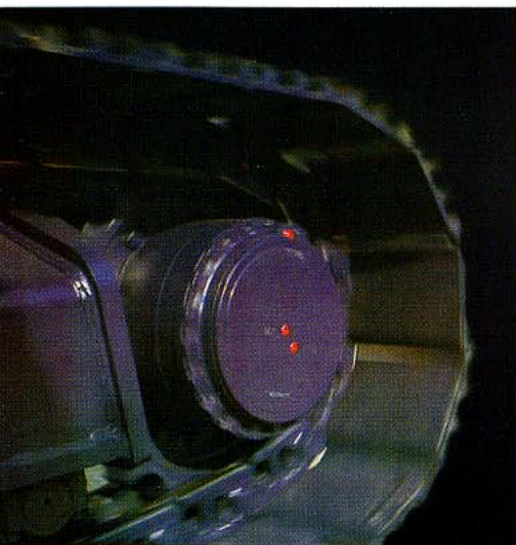
- **Cab Noise Control** - To improve the operator's environment the cab is insulated with sound attenuating material. Successfully lowering intruding noise levels enhances operator performance, reduces fatigue and stress, paying greater dividends in safety.

- **Highest Visibility In The Industry** - The large curved front window offers remarkably increased visibility in the upper line of sight and is easily opened by sliding upward, to the overhead storage position.

- **Deluxe KAB Seat** - A deluxe KAB seat is installed as standard equipment, providing full adjustment for each operator's weight and size, resulting in the ultimate in operator comfort.

- **Interior Climate Control** - The conveniently placed keypad control panel for the integrated air conditioning/heating unit, allows the operator to optimise the cab temperature. With ease the comfort zone is maintained, utilising the multivent distribution system for comfort and visibility regardless of weather conditions.

Advanced Design Concept



Samsung's Crawler Excavators have been computer-designed to provide greater structural integrity, stability and durability which will extend the service life of all major structural components.

- **Strong Undercarriage Components** - By increasing the hardness of the pins and bushings and improving the material composition of the links, rollers, idlers, and sprockets, we've added more usable life to our undercarriage.
- **Heavy Duty Track Guards** - Heavy duty track guards protect the lower rollers and prevent track disengagement on rough terrain.
- **Anti-slip Step** - Provides the operator with sure footing when entering or exiting the cab.
- **Two Speed Travel** - This feature allows the operator to travel in low gear when working in rough terrain or when slow movement is required and high gear for travel between job areas.

- **Hydraulic Safety Lock** - Raising the left side arm when leaving the cab immobilizes all controls levers, and helps to ensure operator safety.

- **Automatic Swing Brake** - The swing brake is automatically applied when the swing movement stops, preventing drift of the upper structure during slope operations.

- **Large Boom Lights** - Apart from the body head lights, separate large boom lights are installed to enhance the working conditions at night.

- **Reinforced Frames** - Both the upper and lower frames have been substantially reinforced for longer life.

Easy Maintenance

The spacious engine room and lift-up side covers make access to the engine compartment fast and easy.

- **Engine Hood Locks** - Locks are installed on the engine hood and side doors to protect against vandalism.
- **Auto Fuel Pump (Option)** - Allows easier re-fueling when required.
- **Centralized Grease Injection Points** - Easier lubrication of the swing ring and attachments.
- **Cooling Water Auxiliary Tank** - Enables easy monitoring and replenishment of coolant by opening the side door.
- **Easy Bucket Adjustment** - The flange can be disassembled to adjust the bucket fit for extended life and less noise.
- **Pre-cleaner (Option)** - Extends the air filter replacement period.

- **Simplified Hydraulics** - Samsung's Excavators utilise fewer hydraulic lines and hoses. As a result, maintenance is minimised and fewer parts are required.

- **Large Capacity Radiator** - The large capacity radiator provides excellent engine cooling and protects against overheating.

- **Self-Diagnosing Monitor System** - This system monitors 6 vital machine functions. If trouble occurs in one of these functions, the monitor will identify the problem eliminating the need for further troubleshooting procedures.

- **Easy Replacement of Bucket Teeth** - Samsung's bucket teeth are connected with a single side pin for quick and easy replacement.

- **Engine Cooling Fan** - The engine cooling fan is made of a tough plastic material to reduce noise while maintaining excellent air flow efficiency.



HEAVY INDUSTRIES



- **Easy Access Oil Filter** - The engine oil filter is conveniently located for easy access to inspect or change.

SPECIFICATIONS (General)

- **Operating Weight** 43,740kg
- **Bucket Capacity** 1.85-2.83m³ 2.4-3.68yd³ (SAE)
- **Engine**
 - Model Cummins LTA 10-C
 - Type Water Cooled 6 Cylinder
 - Flywheel Horsepower 221kw at 2000rpm
 - Max. Torque 135kg.m at 1300rpm
 - Fuel Tank Capacity 650ℓ (144 UK gallons)
- **Hydraulics**
 - Type 2 Variable Axial Piston Pumps
 - System Pressure 320kg/cm²
 - Max. Flowrate 2 x 330 ℓ/min
(2 x 73 UK gallons/min)
- **Performance**
 - Swing Speed 0 to 8.0rpm
 - Travel Speed 2.8 to 4.3km/h
 - Tractive Effort (1sp/2sp) 33,100/21,000kg
 - Ground Pressure 0.77kg/cm² with 600mm shoe
0.60kg/cm² with 800mm shoe

BACKHOE ATTACHMENTS

Characteristics

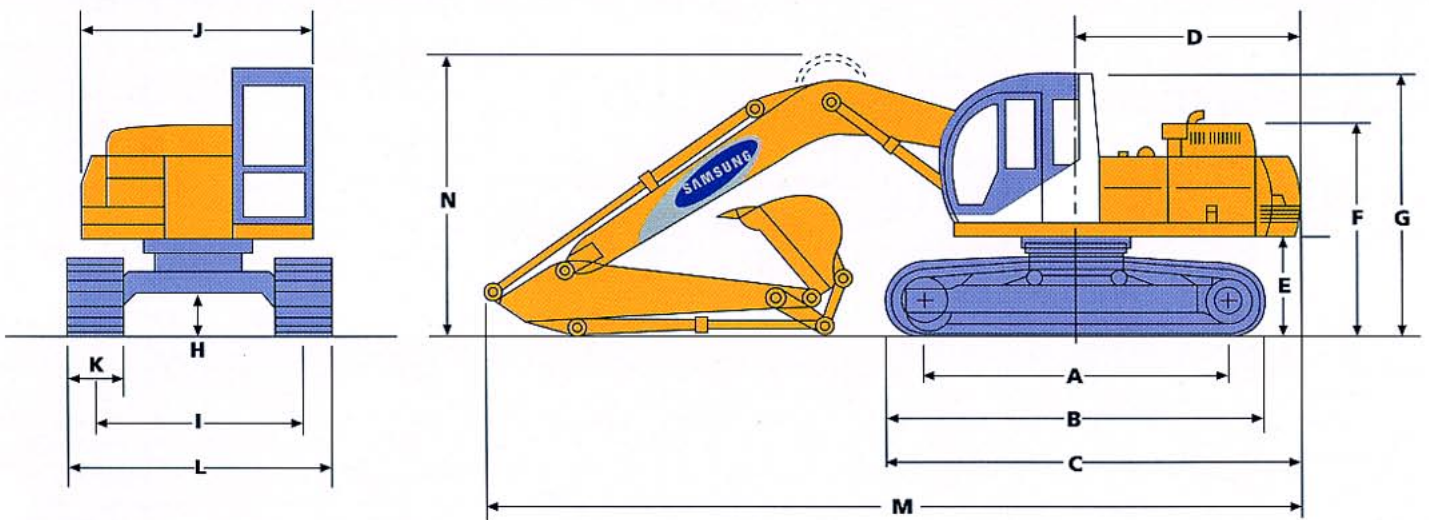
The Boom and Arm are box type structures made of high tensile steel plates. All bushings are sealed against dust and dirt for increased lubrication intervals. High tensile strength, wear-resistance and welded steel buckets are used.

- Special heat treatment connections
- Two-point support-type boom cylinder
- Flanged bushing and O-ring at arm plus bucket connection.

Bucket and Arm Digging Forces

Arm length	3,350mm	2,550mm
Bucket force	22,280kg	22,280kg
Arm force	19,110kg	23,260kg

MACHINE DIMENSIONS (Based on Standard Machine)



A. Distance Between Tumblers	4,370 mm	I. Track Gauge	2,870 mm
B. Undercarriage Length	5,380 mm	J. Upper Frame Width	2,870 mm
C. Length of Base Machine	6,440 mm	K. Track Shoe Width	600 mm
D. Tail Swing Radius	3,800 mm	L. Overall Width	3,470 mm
E. Counterweight Clearance	995 mm	M. Overall Length	11,950 mm
F. Height Without Cab	2,800 mm		(12,130) mm
G. Overall Height of Cab	3,250 mm	N. Overall Height of Boom	3,390 mm
H. Min. Ground Clearance	550 mm		(3,980) mm

* Specifications may vary according to regional availability

STANDARD AND OPTIONAL EQUIPMENT

STANDARD EQUIPMENT

Cabin

- Sun Visor
- Sliding Side Window
- Seat
- Glove Box
- Coat Hook

- Lockable Door
- Sliding Front Window
- Hydraulic Safety Lock
- Control Box
- Removable Bottom Window

Instrument Panel

- Engine Coolant Temp. Gauge
- Fuel Gauge
- Digital Clock
- Indicator Lights

- Hyd. Oil Temp. Gauge
- Hour Meter
- Warning Lights

Miscellaneous

- Car Stereo
- Ashtray
- Swing Lock
- Water Replenishment Tank
- Starting Aid System

- Cigarette Lighter
- Horn
- Magazine Box
- Engine Auto Deceleration

OPTIONAL EQUIPMENT

Cabin

- FOPS

Miscellaneous

- Anti Drop Valves
- Air Conditioner
- Grease Gun
- Breaker Control System
- Tilting Bucket System

- Heater
- Tool Kit
- Under Plate
- Travel Alarm
- Overload Warning Device

LIFTING

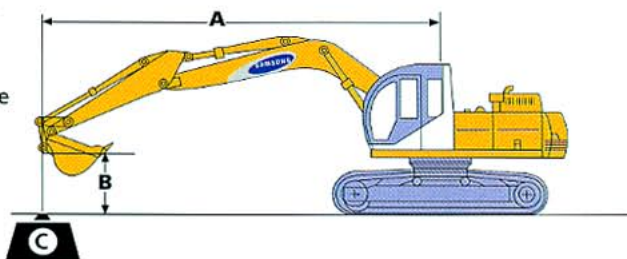
CAPACITIES



















A: Reach from swing centre

B: Bucket hook height

 Rating over front

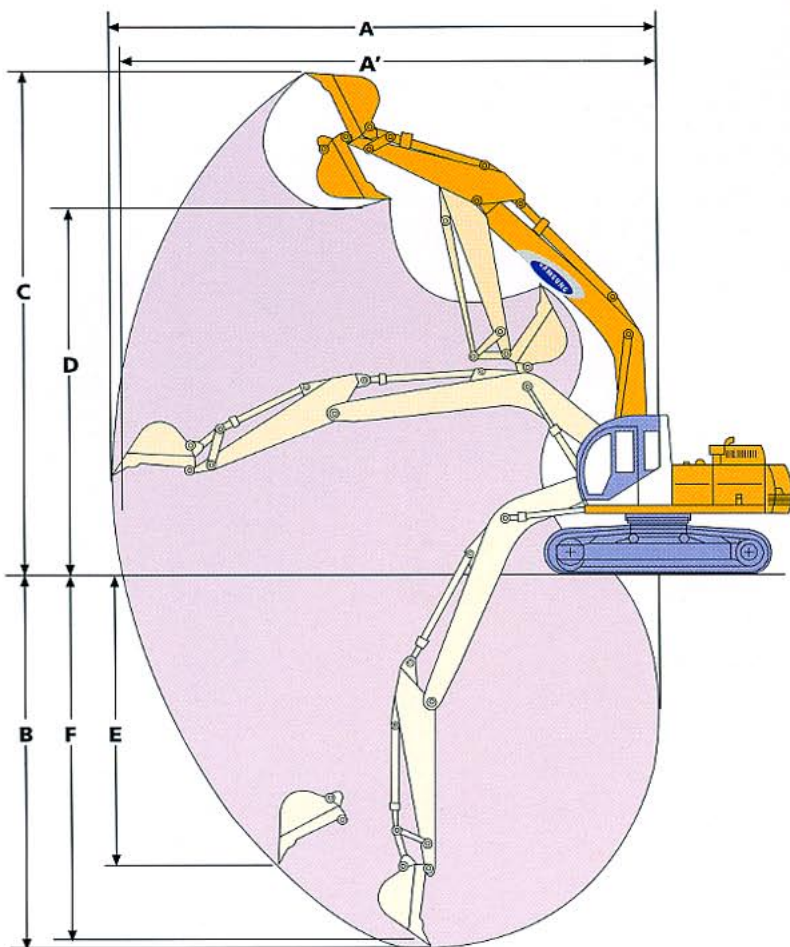
 Rating over side



Boom and Arm Length	A \ B	1.5m		3.0m		4.5m		6.0m		7.5m		9.5m		Max	
															
Shoe 600mm Boom 7.0m +  Arm 3.35m  Bucket 1.85m ³ 2,000kg (Std.)	9.0m	-	-	-	-	-	-	-	-	*7,094	*7,094	-	-	*6,484	*6,484
	7.5m	-	-	-	-	-	-	-	-	*7,440	*7,440	-	-	*6,081	*6,081
	6.0m	-	-	-	-	-	-	-	-	*8,015	*8,015	*7,587	6,600	*5,982	5,954
	4.5m	-	-	-	-	*14,417	*14,417	*10,767	*10,767	*8,987	8,907	*8,022	6,473	*6,087	5,345
	3.0m	-	-	-	-	*18,569	*18,569	*12,797	*12,088	*10,112	8,522	*8,629	6,287	*6,381	5,036
	1.5m	-	-	-	-	*16,954	*16,954	*14,459	*11,485	*11,131	8,183	*9,215	6,109	*6,900	4,961
	0m	-	-	-	-	*19,790	17,452	*15,408	11,154	*11,825	7,959	9,531	5,989	*7,710	5,133
	-1.5m	-	-	*15,152	*15,152	*21,187	17,527	*15,584	11,066	*12,031	7,878	9,507	5,967	8,828	5,546
	-3.0m	-	-	*23,196	*23,196	*19,869	17,804	*14,945	*11,175	*11,540	7,951	-	-	*9,248	6,415
	-4.5m	-	-	*23,452	*23,452	*17,371	*17,371	*13,171	11,486	*9,681	8,257	-	-	*9,457	8,170
Shoe 600mm Boom 7.0m +  Arm 2.55m  Bucket 1.85m ³ 2,000kg (Opt.1)	9.0m	-	-	-	-	-	-	-	-	-	-	-	-	*9,285	*9,285
	7.5m	-	-	-	-	-	-	-	-	*8,764	8,764	-	-	*8,823	*8,680
	6.0m	-	-	-	-	-	-	*10,026	*10,026	*8,945	8,945	-	-	*8,710	*7,068
	4.5m	-	-	-	-	-	-	*11,561	*11,561	9,632	8,527	*8,799	6,345	*8,763	6,202
	3.0m	-	-	-	-	-	-	*13,233	*11,091	10,483	8,048	*9,103	6,122	*8,919	5,759
	1.5m	-	-	-	-	-	-	*14,444	*10,529	11,220	7,686	*9,443	5,941	8,973	5,629
	0m	-	-	-	-	-	-	*14,905	*10,327	11,617	7,508	9,430	5,884	9,279	5,799
	-1.5m	-	-	-	-	*19,099	16,599	*14,622	*10,384	11,480	7,533	-	-	*9,682	6,350
	-3.0m	-	-	*21,468	*21,468	*17,285	16,980	*13,483	*10,672	10,397	7,830	-	-	*9,848	7,545
	-4.5m	-	-	-	-	*14,034	*14,034	*10,743	*10,743	-	-	-	-	*9,585	*9,585

Note: 1. Ratings are based on SAE J1097, ISO 10567.
 2. Indicated loads do not exceed 75% of tipping, machine situated on firm level, uniform supporting surface or 87% of full hydraulic capacity.
 3. Ratings marked "*" are limited by hydraulic capacity rather than tipping load.

WORKING RANGES AND BUCKET COMBINATIONS



	Units	Std.	Opt. 1	Opt. 2	Opt. 3
Boom	m	7.0	7.0	7.0	7.0
Arm	m	3.35	2.55	3.9	4.8
A. Max. digging reach	mm	12,040	11,520	12,560	13,220
A'. Max. reach at ground level	mm	11,820	11,290	12,350	13,030
B. Max. digging depth	mm	7,740	6,940	8,290	9,190
C. Max. digging height	mm	10,980	11,580	11,220	10,980
D. Max. dumping clearance	mm	7,610	7,950	7,850	7,740
E. Vertical digging depth	mm	6,980	6,220	7,460	8,700
F. Digging depth at 8' - flat floor	mm	7,590	6,770	8,160	9,080
Bucket capacity (SAE heaped)	1.85m ³	●	●	●	■
	2.10m ³	●	●	■	▲
	2.61m ³	▲	▲	▲	-
	2.83m ³	▲	▲	▲	-
	2.61m ³	▲	▲	▲	-

- Suitable for materials with density of 2000kg/m³ or less
- Suitable for materials with density of 1600kg/m³ or less
- ▲ Suitable for materials with density of 1100kg/m³ or less

BUCKET SPECIFICATIONS

Bucket capacity (SAE heaped)	Width with side cutters	Width without side cutters	Weight
1.85m ³	1,350mm	1,225mm	2,000kg
2.10m ³	1,500mm	1,375mm	2,200kg
2.61m ³	1,800mm	1,675mm	2,450kg
2.83m ³	1,950mm	1,825mm	2,700kg
2.61m ³	1,800mm	1,675mm	2,450kg

UNDERCARRIAGE FEATURES

Tracks - Tractor type undercarriage, heavy duty track frame, all welded structure, high tensile strength steel used for toughness. Side frames are welded securely and rigidly to track frame. Lifetime lubricated track rollers, idlers and sprocket. Track shoes of rolled and heat-treated alloy steel with triple grousers. Specially heat-treated track pins, hydraulic track adjusters with shock-absorbing recoil springs.

	Units	600mm Shoe	700mm Shoe	750mm Shoe	800mm Shoe	No. of Rollers and Shoes
Operating Weight	kg	43,740	44,220	44,480	44,720	-
Ground Pressure	kg/cm ²	0.77	0.67	0.63	0.60	-
	psi	10.95	9.53	8.96	8.54	-
Upper Rollers	Each	-	-	-	-	2 x 2
Lower Rollers	Each	-	-	-	-	10 x 2
Track Shoes std.	Each	-	-	-	-	-
Track Shoes LC	Each	-	-	-	-	52 x 2



HEAVY INDUSTRIES

THE NETHERLANDS

HEAD OFFICE – EUROPE

LUIDSPREKERSTRAAT 1

1322AW ALMERE

THE NETHERLANDS

TEL: (+31) (0) 36 536 77 70

FAX: (+31) (0) 36 536 09 70

FRANCE

PARIS NORD II

305 RUE DE LA BELLE ETOILE

BP50279

95958 ROISSY CDG CEDEX

FRANCE

TEL: (+33) (0) 148 630691

FAX: (+33) (0) 148 630698

GERMANY

AM KRONBERGER HANG 6

65824 SCHWALBACH / TS.

GERMANY

TEL: (+49) (0) 6196 667640

FAX: (+49) (0) 6196 667633

UK OFFICE

TELFORD WAY

KETTERING

NN16 8UX

UNITED KINGDOM

