

VOLVO COMPACT EXCAVATOR
EC55B



VOLVO

The most comfortable way to approach any job

Sit behind the controls of the Volvo EC55B Compact Excavator and you'll find an incredibly comfortable way to work. The spacious cab and ergonomic design gives you the room you need, while the standard air conditioning and low noise levels make even the longest days endurable.

Room to move around

The model EC55B has a large, roomy cab to make even tall operators feel right at home. The flat floor is also wide and uncluttered, so you'll have plenty of room for your feet. The seat is fully adjustable so you can customize it to suit your own driving position.

Controls at your fingertips

The joystick controls are mounted close to the armrests for convenience. The controls are power-assisted as well for smooth, precise movements for delicate digging. There's also ergonomic forward and reverse travel pedals so you can reposition the machine while you're using the joysticks. In addition, the instrument panel can be angled so you can see the lights and gauges at a glance.

All-day comfort

The windscreen features a gas strut, making it easy to open and prop in place. It also has tinted windows and standard air conditioning with five vents for excellent cooling of the cab. There's a standard radio/cassette player with two speakers to make it more comfortable to run the machine. In addition, the noise level both in and out of the cab has been dramatically reduced

to reduce operator fatigue. The inside noise level is 78 dB and the outside noise level is 98 dB.



- Standard air conditioning and tinted windows.
- Single key for all locks and the ignition.
- Standard radio/cassette player and two speakers.
- Rubber mountings, high performance soundproof foam and new exhaust silencer reduce inside noise level to 78 dB and outside noise level to 98 dB.
- Large, spacious cab.
- Ergonomic forward and reverse travel pedals.
- Instrument panel can be angled.



Dig into the Model EC55B

Tough jobs demand a machine that can dig into the job in hand and keep coming back for more. The model EC55B has one of the highest breakout and tear-out forces in its class. And because it's easy to service, you'll be assured that it will always be ready to go to work.

Start your engines

The model EC55B features a new 16 valve, 37 kW engine that offers power, performance and low fuel consumption. And the machine is built to dig, offering impressive bucket dig forces.

Precise, smooth movement

The dipper motion is extremely fast for more productive cycle times. The optional long dipper arm provides even greater performance. In addition, the Total Power Control Hydraulic System provides total independence of movement for smooth, productive work cycles.

A versatile approach

There's a standard double-acting circuit for use with hydraulic equipment such as breakers and augers. The exclusive Volvo quick-release coupling makes it easy to change buckets or attachments without leaving the cab.

Made easy to service

Open the wide rear cover for total access to all critical checkpoints and you can change the oil quickly and easily.



- 16-valve, 3.0 litre, 37 kW (net) STEP 2 engine.
- Double-yoke pivot increases strength and reduces wear.
- Mechanical or hydraulic quick-release coupling.
- Standard cold start kit.
- Long service intervals to help minimize downtime.

- Efficient main hydraulic pump helps optimise fuel consumption and improve productivity.
- Standard 400 mm rubber crawlers allow you to run on uneven terrain while protecting the undercarriage. Optional 380 mm steel crawlers available in Europe.
- Optional 1900 mm long dipper.

- Two-stage air filtration system eliminates need for pre-air cleaner and helps increase engine life.
- Easy fuel filling of the large 90 litre capacity fuel tank because of the standard electric fuel fill pump that delivers 35 litres per minute.
- Slew crown wheel and offset cylinder pin feature remote greasing lubrication.



Safety is always the top priority



When it comes to your safety, Volvo never makes compromises. The model EC55B has exactly what you need to stay safe, so you can concentrate on getting the job done. And the EC55B is robustly built, even for the most punishing conditions.

Helping you work safely

You'll have safe and easy access to the seat because of the wide door and retractable console panel. The machine won't start unless the

console and safety lever are in position, and the controls lock out whenever either is raised to help prevent mishaps.

A sturdy, rigid design

The center of the undercarriage is X-shaped for better load distribution and to make the machine sturdier. The undercarriage is also very long for incredible stability, performance and comfort.

The blade cylinder and the connections are well protected against damage. The anti-vibration tracks provide smooth travel even at higher speeds. And the counterweight is rounded and wraps around the sides to protect the engine cover, which is set back from the counterweight to protect it even more.



- Wiper motor is on the cab pillar to improve visibility.
- ROPS/TOPS cab.

- Optional safety valves on the large section of the boom and dipper cylinders and overload warning light.

- Standard safety valve on blade cylinder prevents blade from rising, so it can be used as a stabilizer.





The EC55B excavator in detail

Engine

Low-emission, water-cooled, 4-cylinder, 16 valve, direct injection diesel engine meeting STEP 2 environmental regulations.

Type Yanmar 4TNV94L-XVC1
Cubic capacity 3.05 l
Max. power (SAE J 1349) 38 kW (52 hp)
Installed horsepower (ISO 9249/DIN 6271)
..... 37 kW (50 hp) at 2100 rpm
Maximum torque 201 Nm at 1400 rpm
Bore x stroke 94 mm x 110 mm

Electrical equipment

Voltage 12 V
Battery 12 V - 100 AH
Alternator 12 V - 55 A
Starter 12 V - 2.3 kW

Hydraulic system

Variable displacement Total Power Control hydraulic system. The system provides total independence of all movements and of travel. It incorporates in addition the following functions:

- Priority to the boom for faster raising
- Priority to the dipper for fast cycle times when doing levelling and earth work
- Boom anti-lowering device

Control power-assisted hydraulic controls

Variable displacement double pump for the equipment (boom, dipper and bucket) and travel circuits:

Maximum delivery 2 x 52.5 litres/min.
Maximum operating pressure 210 bar

Gear pump for the slewing, offset and blade circuits:

Maximum delivery 33.6 litres/min.
Maximum operating pressure 210 bar

Gear pump for the power assistance circuit:

Maximum delivery 9.5 litres/min.
Maximum operating pressure 33 bar

Double-acting hydraulic circuit for accessories:

Maximum delivery 52.5 litres/min.
Maximum operating pressure 210 bar

End-of-stroke cushions:

On boom cylinder at the end of the rod extension
On dipper cylinder on both sides
On offset cylinder on both sides

Slewing system

Turret slewing is provided by an axial piston hydraulic motor which drives a ball internal slew ring with remote lubrication.

Slewing speed 10 rpm
Turntable braking automatic brake

Bucket performances

Excavation force 4070 daN
Tear-out force 2730 daN

Undercarriage

The rollers and the tensioning wheels are lubricated for life.
Bottom/top rollers per side 5 / 1
Width of the standard tracks (rubber) 400 mm
Width of the optional tracks (steel) 380 mm
Track tension by grease piston
Blade (width x height) 1920 x 360 mm
Safety valve on the blade cylinder.

Travel system

Each track is driven by an axial piston hydraulic motor equipped with two gears and an epicyclic reduction gear. Braking is provided automatically by a multiple disc brake.
Max. speed (low speed/high speed) 2.6 - 4.3 kph
Max. tractive effort 4280 daN
Permitted slope 35° (70%)

Capacities

Fuel tank 90 litres
Hydraulic reservoir 90 litres
Total capacity of the hydraulic circuit 130 litres
Engine oil sump 10.1 litres
Coolant 12.1 litres

Weights

Operational weight and ground pressure:

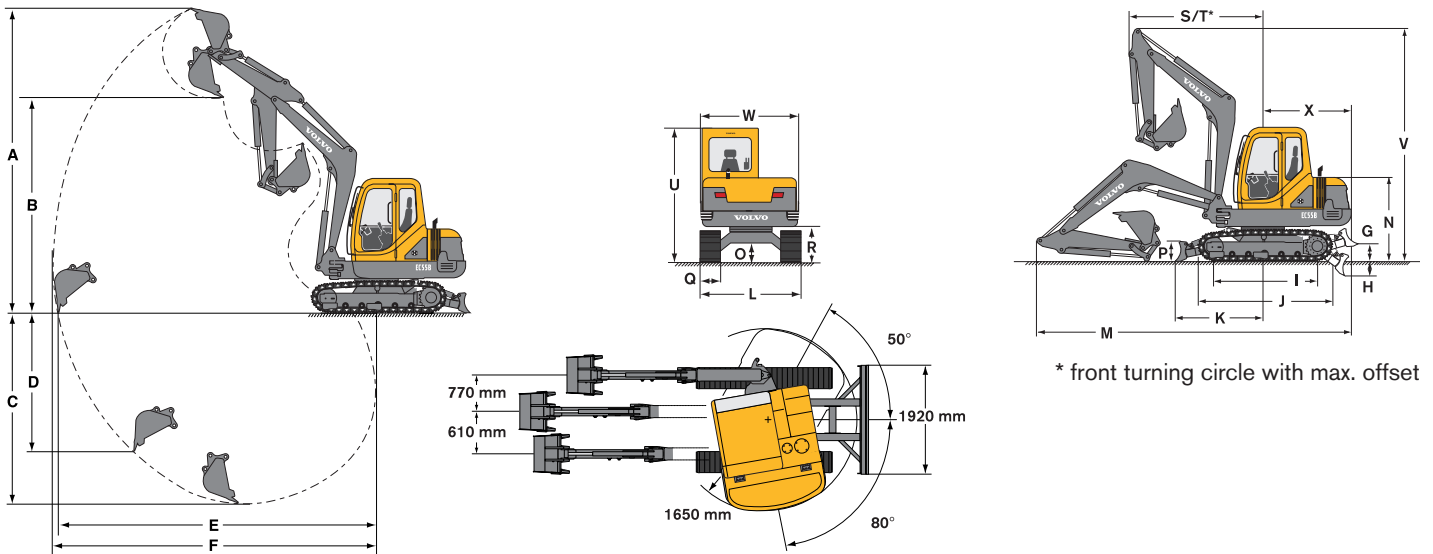
Rubber tracks 5200 kg - 0.33 kg/cm²
Steel tracks 5330 kg - 0.36 kg/cm²

Sound levels

Results of dynamic measurements:

Sound level exterior (LwA) 98 dB(A)
Sound level in the cab (LpA) 78 dB(A)
The sound levels conform to EC directive n° 86/662 and its amendments.

Technical characteristics



* front turning circle with max. offset

Buckets	Width	Weight	Volume
	350 mm	85 kg	70 l
	450 mm	97 kg	98 l
	600 mm	118 kg	142 l
	750 mm	138 kg	187 l
	900 mm	163 kg	231 l
	1500 mm	185 kg	265 l

Dipper	A	B	C*	C	D	E	F
1540 mm	5770	4090	4000	3820	2620	5980	6110
1900 mm	6010	4320	4360	4180	2990	6320	6450

* Dig depth with the blade down.

G	H	I	J	K	L	M	N	O
350	450	1950	2500	1610	1920	5900	1600	380

In mm

P	Q	R	S	T	U	V	W	X
360	400	690	2360	2330	2560	4470	1840	1650

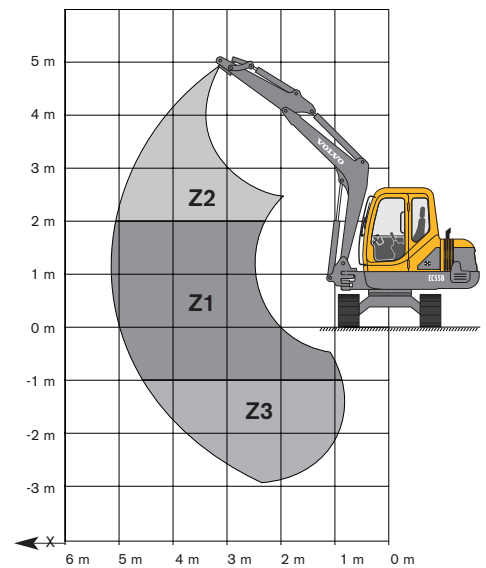
These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks. The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

Caution: In accordance with standard EN 474-5, the machine must be fitted with a safety valve on the boom ram and with an overload indicator for handling operations.

Horizontal Range		2.00 m	3.00 m	4.00 m	max 5.5 m	
		Z2	1590*	1280*	1220*	
		Z1	3080*	2480*	1670*	1230*
		Z3	3180*	2090*	1420*	1220*
		Z2	1340	850	580	
		Z1	2110*	1130	750	530
		Z3	1910*	1140	760	680
Horizontal Range		2.50 m	3.00 m	4.00 m	max 5.8 m	
		Z2		1150*	1110*	
		Z1	2680*	2440*	1640*	1120*
		Z3	3510*	2220*	1520*	1130*
		Z2		860	510	
		Z1	1380*	1090	720	470
		Z3	1650*	1010*	730	580

* hydraulic limit

in kg



Lifting capacity over the front with the blade resting on the ground.

Lifting capacity in total rotation over 360° with the blade raised.

STANDARD EQUIPMENT

Engine

Low-emission engine meeting step 2 environmental regulations.
Two-stage air filter with blinding indicators.
Electric heating device.
Diesel filter and sediment chamber.
Electric fuel tank filling pump (35 l/min).
Oil sump sheet metal.
Smooth sound dual case muffler.

Electrical system

Maintenance-free 12 V - 100 AH battery.
Starter motor 12V - 2.3 kW.
Halogen working lights (2 on the turret and 1 on the boom).
Horn.

Undercarriage

400 mm wide rubber tracks.
Dozer blade.
Remote lubrication of the slew ring.

Hydraulic system

Total Power Control system.
Power-assisted hydraulic controls.
Boom anti-lowering device.
Multiple filtration system (30 µm).
Double-acting hydraulic circuit for accessories fitted on the boom.
Power-assisted control of the hydraulic offset of the boom by the left manipulator.
Control of forward and backward movement by two levers coupled to pedals.

Cab

Heating and air conditioning.
Tinted windows.
ROPS (Roll-Over Protective Structure).
TOPS (Tilt-Over Protective Structure).
Fabric-covered multi-adjustable sprung seat.
Non-slip floor and grab handle for access to the driver's cab.
Seatbelt.
Adjustable control console.
Hinged front window.
Removable bottom front window.
Sliding right side window.
Rubber mounting.
Radio/cassette player with 2 speakers.
Flexible aerial.
Interior lighting.
Intermittent windscreen wiper and windscreen washer on the front window.
Ashtray.
Cigar lighter.

Instrumentation and monitoring

Monitoring and warning light for the following functions: pre-heating, engine oil pressure, water temperature, battery charge, air filter clogging.
Internal and external fuel gauges.
Hour meter.

Handling and earthwork equipment

3030 mm long monobloc boom.
1540 mm dipper arm.
130° hydraulic boom offset.
Remote lubrication of the offset and dipper arm cylinders.

Safety

Device for locking the controls when the left console is raised or safety lever is down to gain access to the driver's cab.
Safety valve on the blade cylinder.
Pressure accumulator on the power assistance circuit in order to be able to put the equipment on the ground if the engine is switched off.
Window-breaker hammer (cab).

Official approval

Machine conforming to EC directive n° 89/392 and its amendments.
Soundproofing conforming to EC directive n° 86/662 and its amendments.
Handling device conforming to EN standard 474-5 (Option).
ROPS conforming to ISO standard 3471/SAE J 1040.
TOPS conforming to ISO standard 12117.

OPTIONAL EQUIPMENT

Handling and earthwork equipment

1900 mm Dipper arm.
Safety valve piloted by the power assistance circuit on the boom arm cylinder with overload indicator.
Safety valve on the dipper arm cylinder.
Quick-release accessories coupling.

Undercarriage

Steel tracks (380 mm wide).

Lighting

Additional front and rear working light.
Turning beacon.

Environmental protection

Bio degradable hydraulic oil.

Safety

Antitheft device coded by digicode keypad (2 programmable codes).
FOPS1/FOG windscreen guard.

Miscellaneous

Special customised paint (RAL specifications).
Right and left rear sides view mirrors.



Technology on Human Terms

Volvo Construction Equipment is one of the world's leading manufacturers of construction machines, with a product range encompassing wheel loaders, excavators, articulated haulers, motor graders and more.

The tasks they face vary considerably, but they all share one vital feature: technology which helps man to perform better: safely, efficiently and with care of the environment. We refer to it as Technology on Human Terms.

The sheer width of the product range means it is always possible to choose exactly the right machine and attachment for the job. Each machine also comes with the quality, continuity and security which is represented by the Volvo name.

The strength of the service and parts organisation; the security of always having immediate access to leading-edge research and technical development are part of the Volvo name. A machine from Volvo meets the very highest demands in all kinds of jobs, under all conditions the world over.

Volvo Construction Equipment develops, manufactures and markets construction equipment. We are a Volvo company with production facilities on four continents and a market presence in over 100 countries.

For more information please visit our web site:
www.volvo.com

All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and designs without prior notice. The illustrations do not necessarily show the standard version of the machine.

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