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

Slewingsystem
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

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 ............................... 93 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

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 nº 86/662 and its amendments.
Technical characteristics

### Buckets

<table>
<thead>
<tr>
<th>Width</th>
<th>Weight</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>350 mm</td>
<td>85 kg</td>
<td>70 l</td>
</tr>
<tr>
<td>450 mm</td>
<td>97 kg</td>
<td>98 l</td>
</tr>
<tr>
<td>600 mm</td>
<td>118 kg</td>
<td>142 l</td>
</tr>
<tr>
<td>750 mm</td>
<td>138 kg</td>
<td>187 l</td>
</tr>
<tr>
<td>900 mm</td>
<td>163 kg</td>
<td>231 l</td>
</tr>
<tr>
<td>1500 mm</td>
<td>185 kg</td>
<td>265 l</td>
</tr>
</tbody>
</table>

### Backhoe bucket

<table>
<thead>
<tr>
<th>Dipper</th>
<th>A</th>
<th>B</th>
<th>C*</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1540 mm</td>
<td>5770</td>
<td>4090</td>
<td>3820</td>
<td>2620</td>
<td>5980</td>
<td>6110</td>
<td></td>
</tr>
<tr>
<td>1900 mm</td>
<td>6010</td>
<td>4320</td>
<td>4180</td>
<td>2990</td>
<td>6320</td>
<td>6450</td>
<td></td>
</tr>
</tbody>
</table>

* Dig depth with the blade down.

### Ditch bucket

<table>
<thead>
<tr>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>350</td>
<td>450</td>
<td>1950</td>
<td>2500</td>
<td>1610</td>
<td>1920</td>
<td>5900</td>
<td>1600</td>
<td>380</td>
</tr>
</tbody>
</table>

### In mm

<table>
<thead>
<tr>
<th>P</th>
<th>Q</th>
<th>R</th>
<th>S</th>
<th>T</th>
<th>U</th>
<th>V</th>
<th>W</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>360</td>
<td>400</td>
<td>690</td>
<td>2360</td>
<td>2330</td>
<td>2560</td>
<td>4470</td>
<td>1840</td>
<td>1650</td>
</tr>
</tbody>
</table>

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 handing operations.

### Horizontal Range

#### 1540 mm

<table>
<thead>
<tr>
<th>Horizontal Range</th>
<th>2.00 m</th>
<th>3.00 m</th>
<th>4.00 m</th>
<th>max 5.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z2</td>
<td>1590*</td>
<td>1280*</td>
<td>1220*</td>
<td></td>
</tr>
<tr>
<td>Z1</td>
<td>3080*</td>
<td>2480*</td>
<td>1670*</td>
<td>1230*</td>
</tr>
<tr>
<td>Z3</td>
<td>3180*</td>
<td>2090*</td>
<td>1420*</td>
<td>1220*</td>
</tr>
</tbody>
</table>

* Hydraulic limit

#### 1600 mm

<table>
<thead>
<tr>
<th>Horizontal Range</th>
<th>2.50 m</th>
<th>3.00 m</th>
<th>4.00 m</th>
<th>max 5.8 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z2</td>
<td>1150*</td>
<td>1110*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z1</td>
<td>2680*</td>
<td>2440*</td>
<td>1640*</td>
<td>1120*</td>
</tr>
<tr>
<td>Z3</td>
<td>3510*</td>
<td>2220*</td>
<td>1520*</td>
<td>1130*</td>
</tr>
</tbody>
</table>

* front turning circle with max. offset

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.
- 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.
- 130º 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](http://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.*