THE POWER TO ACHIEVE. GUARANTEED

You get the best of Volvo with the EC27C Compact Excavator. The new generation engine, increased bucket power and advanced hydraulic control system are just a few of the winning solutions we've built in to guarantee this model's great performance and lasting value.

**Proven efficiency**
The EC27C's diesel engine delivers top performance and fuel efficiency. Direct injection ensures efficient mixing within the cylinder to meet Tier4i / stage 3A standards for lower emissions, less noise on site and reduced fuel consumption. And the large fuel filler makes it quick and easy to fill from a container or pump. All of which adds up to reduced whole life operating costs.

**Twin track speeds**
The twin speed travel motors not only maximizes fuel savings. To boost productivity. It automatically shifts from high to low speed according to the load when working on slopes, levelling or backfilling with the blade. So whatever the job in hand, the EC27C will get it done fast and smoothly for you.

**In your hands**
Volvo's Advanced hydraulic system matches engine power to hydraulic output, giving the joystick its smooth, intuitive feel when handling any series of movements. Ideal for simultaneous slew and offset, the power-assisted controls put exactly the right balance of power, precision and speed within your grasp, with no compromise on safety.

**A win-win solution**
The EC27C is ideal for ground levelling, backfilling, grading and contouring. On the one hand, its solid tractive force boosts your power to get the job done sooner. On the other, its float blade enables precision finishing with minimal effort. Pushing forward on the blade lever engages the blade cylinder to exert a minimal yet consistent down force to complete the task faster.

**Fast, safe change outs**
The hydraulic quick coupler allow to change of accessories without leaving the cab. A wide range of Volvo genuine trenching and ditching buckets ensure the optimum versatility for any task you choose. The enhanced quick coupler delivers the maximum breakout force, like a dedicated quick coupler, enabling buckets to be used in face-mode position.
- Exceptional breakout and tear-out forces.
- Automatic twin speed.
- Slew and offset are efficiently combined.
TACKLE ANY TASK. COMFORTABLY

While you may need a compact excavator for the obvious reasons – reliability, power and performance – there are lots of other reasons to choose an EC27C. To begin with, try the cab. It’s among the most spacious in its category and has safety features that put this model in a class of its own.

Everything under control
A roller on the right joystick gives precise fingertip control of the accessory circuit and boom offset. Electroproportional control enables the amount and direction of flow to be adjusted at a touch. Or for the most demanding applications you can fine-tune the auxiliary hydraulic flow with a twist of the dial on the optional potentiometer.

Inside the cab
Ready for a full day’s work? Check out all the space there is for you and storage inside the Volvo cab. The high-backed seat is sprung and secured by a seat belt that retracts when not in use. A visual alarm on the new, easy to see instrument panel warns if it is not fully engaged.

Staying alert
Hot, dusty conditions are tough to stay alert in. So the cab’s ventilated with cool, filtered air to fight fatigue. Or the heating system can be turned up to warm to beat the chill and keep windows free of ice, frost and mist in cold weather. Optional air conditioning keeps you cool when working in hot, humid or dusty conditions.

All round visibility
The contoured cab is glazed-in on all four sides, which makes its easier to avoid obstacles and position the machine quickly. Narrow pillars and a new design featuring only one rear pillar improve the view without compromising safety, ensuring all-around visibility on site.

For uninterrupted ventilation and conversation with colleagues on the ground, the windscreen, lower and upper front windows all open wide and slide away easily.

Safety at work
The Volvo EC27C cab and canopy exceed FOPS 1, ROPS and TOPS standards to provide all-round protection against falling objects and the risks of roll-over or tipping. The battery disconnect switch on the outside can cut off the power for safety. And the turntable is held still by an automatic braking system on the slewing motor, even when heavily loaded, while working on slopes or banks.

Built-in reliability
The machine is equipped with ORFS (O-ring face seal) hydraulic fittings. To eliminate short-circuits when the machine is being washed, the EC27C is fitted with waterproof electrical connections throughout and a dust- and damp-proof box under the seat protects all of its fuses.

• Fingertip control, precise performance.
• Built-in air conditioning.
• Keep it together with Bucket Transport.
- Built-in air conditioning.
- Fingertip control, precise performance.
- Keep it together with Bucket Transport.
- Opening windows with fold-up screen.
- Potentiometer to adjust auxiliary flow.
- More room to work in the spacious cab.
YOU CAN RELY ON VOLVO

We make the world's most durable, most productive construction equipment. So your cab is more comfortable. Your engine does more on less fuel. There's more uptime between maintenance – and servicing is made easier too.

**Staying power**
When the going gets tough, Volvo's EC27C simply soaks up the shock and vibration. Even the most punishing day's work is easier to take because the cabin seat and consoles are mounted on the same independent suspension system. This means the operator is fully isolated from vibration.

**Fuel economy**
The EC27C engine automatically reverts to idling after 5 seconds, when no controls are operated, which saves fuel and causes less nuisance on site. Then it picks up rpm almost instantly to revert to the pre-selected speed as soon as the operator operates any control. To protect against theft and vandalism, the access panel concealing the fuel filler and toolbox can be locked with the ignition key.

**Reduced wear and tear**
Sweeping the spacious cabin interior clean is no problem because there's no offset pedal to clutter the floor, and the mat has no ribs for the dust, dirt or gravel to collect in. Likewise the sloping side members of the undercarriage, prohibits the build-up of earth to save cleaning and maintenance time. All of which makes maintaining the machine, and its market value, a little easier every day.

**Built-in reliability**
Components are bolted together by threaded screws and nuts to ensure they stay fixed rather than shaking apart, and for faster, reliable removal when refitting. The sturdy undercarriage is a welded structure; x-shaped like these on larger excavators; to make it more rigid and better distribute the load on the side members. All pivot points (pins, bushings, borings) are designed and manufactured to Volvo's exacting quality standards for reliability with minimal slip or play throughout the machine's lifetime.

**Easier upkeep**
To save time and reduce maintenance costs the engine is located on the side for easier access. The large cover lifts wide open to facilitate the checking and cleaning of engine oil levels, fuel circuits, air filters; coolants, radiator water and the throttle cable. Hydraulic maintenance is equally quick and simple. By undoing just three screws the back cover can be removed for direct access to control valve; hydraulic oil filter; solenoid valves; servo circuit's pressure accumulator (sphere) and pressure test ports.
- Resilient X-shaped undercarriage.
- Volvo quality for lasting value.
- Fuel efficiency cuts running costs.
**SPECIFICATIONS**

**Engine**
Low emission, water-cooled, direct injection Volvo 3-cylinder diesel engine, meeting EPA Tier 4i / EU Stage IIIA environmental regulations and equipped with automatic return to idling system.

<table>
<thead>
<tr>
<th>Model</th>
<th>D1.6DCAE4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross power, rated (ISO 9249)</td>
<td>20.4 kW +/- 3% @ 2200 rpm</td>
</tr>
<tr>
<td>Power, installed (ISO 9249)</td>
<td>19.7 kW +/- 3% @ 2200 rpm</td>
</tr>
<tr>
<td>Displacement, total</td>
<td>1640 cc</td>
</tr>
<tr>
<td>Maximum torque</td>
<td>103.2 Nm +/- 5% @ 1320 +/- 100 rpm</td>
</tr>
<tr>
<td>Bore x stroke</td>
<td>88 mm x 90 mm</td>
</tr>
<tr>
<td>Gas emission (g/kwh)</td>
<td>CO 5.5 / Nox + HC 7.5 / P.M. 0.3</td>
</tr>
</tbody>
</table>

**Undercarriage**
The undercarriage is made up of an “X” box centre part for more rigidity and of sloping side members for a better clearance of materials. The rollers and the tensioning wheels are lubricated for life.

| Bottom/top rollers per side | 3/1 |
| Track width | 300 mm |
| Track tension | by grease piston |
| Blade (width x height) | 1550 x 335 mm |

**Drivetrain**
Each track is driven by an axial piston hydraulic motor equipped with two speeds and an epicyclic reduction gear.

| Max. speed (low speed/ high speed) | 2.6 km/h - 4.9 km/h |
| Max. tractive force | 2550 daN |

The travel control is automatically locked when the operator raises the left console.

**Service fill capacities**

| Fuel tank | 59 l |
| Hydraulic system, total | 47 l |
| Hydraulic tank | 20 l |
| Engine oil | 6.7 l |
| Cooling system | 5 l |

**Weight and ground pressure**
Operating weight according to ISO 6016 (according to most usual configuration and including 75kg operator)

| Operating weight | (kg) 2790 |
| Ground pressure cab | kg/cm²/kpa 0.29 (283) |
| Ground pressure canopy | kg/cm²/kpa 0.28 (275) |

Transport weight:
- (Heated cab, 300mm rubber tracks, short arm, 500mm direct-fit bucket, full fuel tank) (kg) 2715
- With canopy (kg) -130
- With long arm (kg) +14

**Sound Level**

| Interior sound level according to ISO 6396 (LpA) | dB(A) 78 |
| External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009 (LwA) | dB(A) 94 |
Canopy

9

Lifting capacity
These capacities are given for a machine without a bucket or quick-release coupling and fitted with rubber tracks for a 360° total rotation lifted load.
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 equipped with a safety valve on the boom ram and an overload indicator (available as options) to carry out handling operations.

Dipper | A | B | C* | C | D | E | F | Y
---|---|---|---|---|---|---|---|---
1200 mm | 4362 | 3165 | 2798 | 2510 | 2072 | 4422 | 4553 | 2945
1500 mm | 4550 | 3343 | 3096 | 2810 | 2366 | 4717 | 4838 | 3011

* Maximum dig depth

G | H | I | J | K | L | M | N | O
---|---|---|---|---|---|---|---|---
430 | 498 | 1440 | 1890 | 1509 | 1550 | 4406 | 1549 | 296

P | Q | R | S | T* | U | V* | W | X
---|---|---|---|---|---|---|---|---
335 | 300 | 563 | 1805 | 1422 | 2457 | 2425 | 1482 | 1245

* hydraulic limit
**STANDARD EQUIPMENT**

**Engine**

**Electrical system**
Water-resistant electrical connectors (IP67). Two working lights on cab version. Working light on the canopy frame. Easy access inside of the cab to fuse box. 12V power socket.

**Hydraulic system**

**Seat**
High resistant fabric or vinyl seat.

**Cab (cab version)**
Cab mounted on rubber mountings. In cab heating and ventilation adjustment. Front window with opening system powered-assisted by a gas ram. Right hand side sliding window. Provision for a radio (location for a radio and two speakers, aerial and electric wiring already fitted).

**Lighting**
Anti-corrosion protection of the cab by electrophoresis. Windscreen wiper and washer (front). 2 foot rests incorporated to the floor mat. Easy to clean floor mat. Low noise cab.

**Instrumentation and monitoring**
Warning lights for hydraulic filter and air filter restriction. Gauges : water temperature, fuel level. Hour meter. Warning lights, coupled to an audible signal, in the event of overheating or drop in oil pressure.

**Earthwork equipment**
2000 mm long monobloc boom. 1200 mm dipper. Float blade.

**Safety**
Cab and canopy versions are:
- Level 1 FOPS (Falling Objects Protective Structure).
- TOPS (Tip-Over Protective Structure).
- ROPS I (Roll-Over Protective Structure).

All-around visibility. Device for locking the earthwork equipment’s controls and the travel levers when the left console is raised to gain access to the driver’s cab. Engine starting safety device: the left console must be raised to operate the starter. Pressure accumulator in order to be able to put the equipment on the ground if the engine is switched off. Seat belt with visible indicator. Vibration level limitation. Rear view mirror right.

**OPTIONAL EQUIPMENT**

**Handling and earthwork equipment**
Long dipper (1500 mm). The long arm is recommended only for special applications with long reach and low density materials. Safety valve piloted by the power assistance circuit on the boom & dipper rams with overload indicator. Single-acting or double-acting hydraulic circuit for quick coupler. Breaker & clamshell option. Hammer line extension to arm end.

**Hydraulic circuits for attachments**
Hydraulic circuit for operating a clam-shell bucket (opening/closing and rotation). Proportional 2nd accessory circuit (X3) to arm end with max flow adjustment. 1st accessory circuit (X1) with maximum flow adjustment. Drain kit-Direct return to hydraulic tank. 2 or 4 Flat Face hydraulic quick couplings.

**Lighting**
Additional working light protected under the boom. Additional rear working light & rotating beacon.

**Environmental protection**

**Comfort**

**Safety**
Left side view mirror. Anti-theft system. Safety valve certification.

**SERVICE AND MAINTENANCE**

**Tool kit.**
Dual stage air-filter.

**Miscellaneous**
Special customised paint (RAL specifications).

**ATTACHMENT OFFER**

Hydraulic Breaker and dedicated tools

**Mechanical Volvo pin grabber quick coupler**

**Mechanical Lehnhoff quick coupler**

**Complete range of Volvo genuine trenching and ditching buckets (pin-on, LOC)**

**Official approval**
Machine conforming to European directive 2006/42/EC
Noise emissions in the environment conforming to directive 2000/14/EC
Hand Arm Vibrations - Whole Body Vibrations compliant with directive 2002/44/EC
Electromagnetic compatibility (EMC) concerning to European directive 2004/108/EC and its amendments.
Object handling device conforming to EN 474-1 and EN 474-5 standards.
ROPS conforming to ISO 3471-1 and SAE J1040 standards.
TOPS conforming to ISO 12117 and EN 13531 standards.
OPG 1 conforming to ISO 10262 standard.

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**Complete range of Volvo genuine trenching and ditching buckets (pin-on, LOC)**
Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 180 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we’re proud of what makes Volvo different.

Not all products are available in all markets. 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.