

VOLVO COMPACT EXCAVATOR

EC15



- **Gross Power :**
ISO 9249 : 14 kW / 19 ch
- **Net Power :**
ISO 9249 : 11.3 kW / 15.5 ch
- **Operating Weight :**
1435 - 1565 kg
- **Bucket Capacities :**
16 - 60 l.
- **Maximum Digging Depth :**
2200 - 2520 mm

- **Simultaneous digging movements and high speed operations** for faster cycle times and increased productivity.
- **ROPS, TOPS and FOPS cab** and for a better operator safety.

- **Compact dimensions.** **Wrap-around** counterweight protects the rear compartment against all impacts.
- **Excellent serviceability** thanks to easy access to the engine and hydraulics compartments.

VOLVO

Solid as a rock

COMPACT EXCAVATOR EC15

Even more efficient !

Like all Volvo machines, the EC15 develops an impressive level of performances. The bucket forces and digging depth are amongst the best on the market to give you improved productivity on all your sites.



The boom offset for working alongside a wall

The hydraulic offset of the boom makes it possible to reduce the overall dimensions of the excavator and to work alongside a wall.



quick coupling

The exclusive quick coupling enables an accessory or a bucket to be hooked quickly without leaving the operator's cab. Unlocking can be either mechanical or hydraulic.



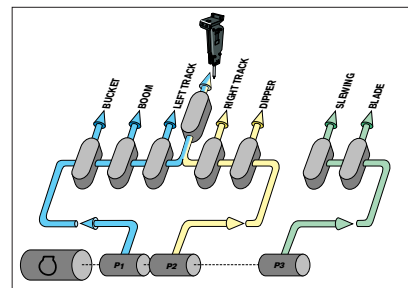
Compact rear impact protection

The very compact dimensions of the Volvo machines enable them to work safely on the narrowest sites. The wrap-around shape of the counterweight provides the machine with excellent protection against all impacts.



A sturdy top chassis

The double-yoke pivot multiplies the bearing surface on the chassis by two and enables a long pin to be fitted for a better distribution of stress and therefore less wear and less slackening.



Hydraulics at the forefront of technology

Three pumps each supply a separate hydraulic circuit in order to ensure total independence of each movement. For example, superstructure slewing or blade lifting are completely independent of all the equipment or travel movements. The attachment circuit has the benefit of combined delivery of the two main pumps so as to increase the oil flow available for a hydraulic attachment such as breaker.





Highly advanced engine

The very quiet and clean diesel engine has plenty of power in reserve to match all working conditions.



Smooth and very precise controls

The smoothness and precision of the power-assisted controls enable the most delicate work to be done quickly and well.



Direct slewing crown wheel drive

This hydraulic motor drives the crown wheel directly, without a reduction gear. No wear and no play in the crown wheel drive, therefore reducing maintenance costs.

A very high level of comfort and safety

COMPACT EXCAVATOR EC15



Safe access to the operator's cab

To facilitate access to the operator's cab, the cab door offers a wide opening, and the console swings up out of the way. The cab floor and step are non-slip.



Large floor area

The flat floor provides considerable area for the operator's feet. The hydraulic accessory control pedal is positioned to the right so as not to hinder access. It folds away when not in use to provide use of floor space.



Excellent visibility

Thanks to the cab's very large glazed surface area, visibility all round the excavator is excellent. This is an important safety element for the property and people in the vicinity of the machine when it is in use, particularly on narrow or congested sites. The rounded contour and very compact shape of the engine cover also provides good visibility to the rear.



Operator information

Placed within the operator's line of sight, the instrument panel groups together all the useful machine control information. An anti-theft keypad, available as an option, enables machine starting and the main hydraulic functions to be locked.



A spacious and comfortable cab

The EC15's cab offers incomparable comfort and operating quietness. Even tall operators immediately feel at ease in this generously sized cab.



FOPS 1, ROPS and TOPS protection

The EC15's cab and canopy have a very high level of safety, guaranteed by the FOPS 1 (Falling Object Protection Structure), ROPS and TOPS (Roll and Tip Over Protection Structure) certifications. The seatbelt is part of the standard equipment.

Tilting counterweight

This innovation provides optimum protection of the rear area thanks to its wraparound shape, while at the same time providing, when it is tilted, total access to the engine compartment. The hydraulic oil cooler is mounted on a sliding support allowing good access for cleaning cooler fins. The fuel supply circuit has a transparent pre-filter which is very easy to monitor and features a self-priming electric pump.



Ergonomically-designed armrests

The short responsive manipulators avoid excessive operating movements and reduce fatigue. The position of the forearms resting on the ergonomically designed armrests permits very precise control of the manipulators.



Loose fitting hoses at the base of the boom

All of the hoses which supply the boom are fitted loose, without going into the pivot, and are connected on the outside of the machine. They are thus subject to neither rubbing nor wear, and can easily be replaced if necessary.



Access from both sides

Very useful for working in confined areas: the two consoles on the canopy version can be lifted to permit access from the right or from the left.



Solid as a rock

The boom and dipper structures incorporate cast steel parts on all the heavily stressed areas. All the hydraulic connectors are protected by sturdy steel plates.



ENGINE

Water-cooled low emissions Mitsubishi L3E diesel engine.

Displacement, total 952 cc
Gross power, rated (ISO 9249) 14.0 kW (19.0 hp) at 2800 r/min
Power, installed (ISO 9249) 11.3 kW (15.5 hp) at 2200 r/min
Maximum torque (ISO 9249) 54 Nm at 1850 rpm
Bore x stroke 76 mm x 70 mm



ELECTRICAL SYSTEM

Rated voltage 12 V
Battery capacity 12 V - 45 Ah
Alternator rating 12 V - 40 A
Starter motor output 12 V - 1.6 kW



HYDRAULIC SYSTEM

Hydraulic circuit with 3 gear pumps for total independence of each movement.

Control power-assisted hydraulic controls

Two gear double pump for the equipment (boom, dipper and bucket) and travel circuits :

Maximum flow 2 x 16 l/min
Maximum operating pressure 17 MPa (170 bar)

One gear pump for the slewing, offset and blade circuits :

Maximum flow 11 l/min
Maximum operating pressure 16.5 MPa (165 bar)

Double-acting hydraulic circuit for accessories :

Maximum flow 32 l/min
Maximum operating pressure 17 MPa (170 bar)



BUCKET PERFORMANCE

Breakout force 1510 daN
Tearout force 960 daN



SLEWING SYSTEM

Turntable slewing is provided by an Ortitrol hydraulic motor which drives directly (without a reduction gear) a ball internal crown wheel with remote lubrication :

Slewing speed 9 r/min



UNDERCARRIAGE

Overall widths 980 mm*
Track width 250 mm
Track tension by grease piston
Blade height 240 mm
Track blade width 980 mm

* A 1200 mm wide chassis is available as an option.



DRIVETRAIN

Each track is driven by an Orbitrol hydraulic motor.

Max. speed 2.0 km/h
Max. tractive force 1260 daN



SERVICE FILL CAPACITIES

Fuel tank 21 l
Hydraulic system, total 23 l
Engine oil 3.6 l
Cooling system 4.5 l



WEIGHT

Operating mass and ground pressure	Rubber Tracks
Canopy version	1435 kg 0.28 kg/cm ²
Cab version	1565 kg 0.31 kg/cm ²

Transport mass (according to standard ISO 6016)	Rubber Tracks
Canopy version	1328 kg
Cab version	1458 kg



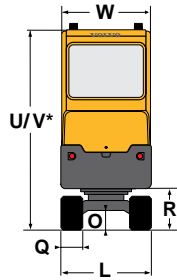
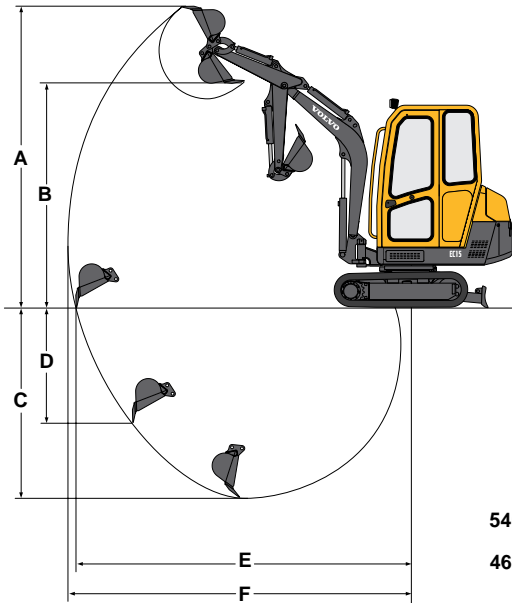
NOISE LEVELS

Results of dynamic measurements :

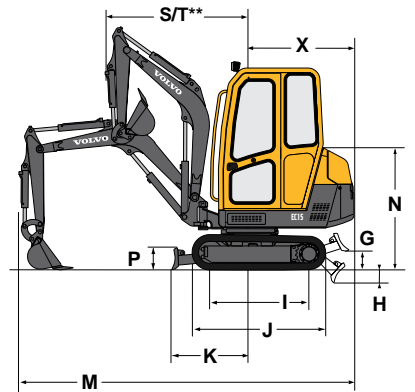
Noise level exterior (LwA) 95 dB(A)
Noise level in the cab (LpA) 81 dB(A)
Noise level under the canopy (LpA) 81 dB(A)

The noise levels conform to directive n° 86/662 EEC and its amendments.

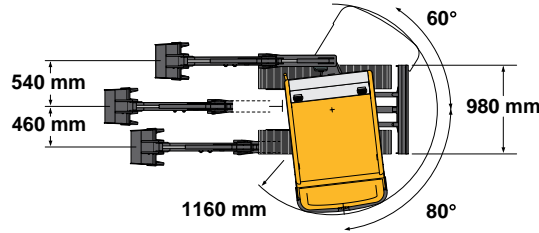
DIMENSIONS











* Canopy



** Front turning circle with max. offset



Buckets	 Width	 Weight	 Capacity
	250 mm	25 kg	19 l
	300 mm	28 kg	24 l
	350 mm	30 kg	28 l
	400 mm	32 kg	33 l
	450 mm	35 kg	38 l
	500 mm	37 kg	43 l
	600 mm	40 kg	53 l
	850 mm	43 kg	52 l
	1000 mm	47 kg	60 l

Dipper	A	B	C*	C	D	E	F
 900 mm	3410	2480	2200	2050	1500	3610	3710
 1150 mm	3550	2620	2450	2300	1740	3850	3940
 Telescopic dipper	3740	2710	2520	2380	1950	3980	4070

* Dig depth with blade down.

G	H	I	J	K	L	M	N	O
210	150	1045	1415	790	980*	3650	1325	210

* Option : 1200 mm

P	Q	R	S	T	U	V	W	X
240	230	450	1520	1230	2250	2190	980	1120

(mm)

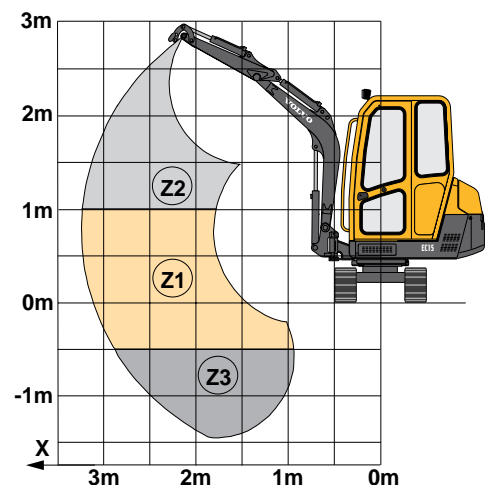
TOTAL ROTATION LOAD CAPACITIES (CAB VERSIONS)

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.

Outreach		1.00 m	1.50m	2.00 m	2.50 m	3.00 m	max : 3.40 m
 900 mm	Z2			325 *	240	185	
	Z1	745 *	440	295	220	175	
	Z3	745 *	440	300	225		
 1150 mm	Z2			320	190 *	180	
	Z1	610 *	435	295	220	175	150
	Z3	610 *	440	295	220	175	

* Hydraulic limit

(kg)



STANDARD EQUIPMENT

Engine

Dry-type air filter.
Electric pre-heating device.
Transparent diesel oil filter, pre-filter and sediment bowl.
Oil sump sheet metal guard.
Hand throttle.

Electrical system

12 V - 45 Ah maintenance-free battery.
Horn.
12 V power socket for inspection lamp.

Undercarriage

230 mm wide rubber tracks.
Dozer blade.
Towing and anchoring points.
Remote lubrication of the slewing crown ring.

Hydraulic system

Additional double-acting hydraulic control valve for an attachment circuit with folding control pedal and circuit for direct return of oil to the hydraulic tank.
Attachment circuit piping (double-acting + return) as far as the bottom of the boom.
Power-assisted control of the hydraulic offset of the boom by the left control lever.
Control of forward movement by two levers.
Hydraulic oil cooler.

Cab (cab version)

Level 1 FOPS (Falling Objects Protective Structure).
TOPS (Tip-Over Protective Structure).
ROPS (Roll-Over Protective Structure).
Vinyl-covered multi-adjustable sprung seat.
Non-slip floor and grab handles for access to the driver's cab.
Seatbelt.
Cab mounted on rubber mountings.
Two working lights.
Two-speed heating and ventilation.
Cab heat adjustment.
Front window with opening system power-assisted by two gas rams.
Sliding window (right).
Door stops.
Provision for a radio (location for a radio and two speakers, aerial and electric wiring already fitted).
Interior lighting.
Anti-corrosion protection of the cab.
Windscreen wiper and washer (front).
Emergency exit via the rear window.

Canopy (Canopy version)

Level 1 FOPS (Falling Objects Protective Structure).
TOPS (Tip-Over Protective Structure).
ROPS (Roll-Over Protective Structure).
Vinyl-covered all weather multi-adjustable sprung seat.
Non-slip floor and grab handle for access to the driver's cab.
Seat belt.
Working light on the canopy frame.

Instrumentation and monitoring

Monitoring and warning light for : pre-heating, engine oil pressure, water temperature, battery charging, air filter restriction.
Fuel gauge.
Hour meter.
Shut down for automatic switching off engine in the event of overheating or drop in oil pressure.

Working equipment

1750 mm long monobloc boom.
900 mm dipper.
140° hydraulic boom offset.
Cushion on the boom ram.
Handling equipment : lifting hook on the bucket with load chart displayed in the driver's cab.
Remote lubrication of the bottom of the offset ram.

Safety

Engine safety start device : the left console must be raised to operate the starter.
Nitrogen 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).
Key-lockable toolbox.

Official approval

Machine conforming to directive n° 98/37 EEC and its amendments.
Soundproofing conforming to directive n° 86/662 EEC and its amendments.
Handling device conforming to EN standard 474-5.
FOPS 1 conforming to ISO standard 3449.
TOPS conforming to ISO standard 12117.
Electromagnetic compatibility (EMC) conforming to directive n° 89/336 EEC and its amendments.

OPTIONAL EQUIPMENT

Working equipment

Long dipper (1150 mm).
Telescopic dipper 900-1225 mm.
Mechanically-controlled quick-release attachment bracket.

Hydraulic circuits for attachments

Circuit for hydraulic breaker with direct return to the tank.
Hydraulic circuit for double-acting attachments (Auger ...)

Hydraulic circuit for operating a clam-shell bucket (opening/closing and rotation of the bucket).

Undercarriage

Wide chassis (width : 1200 mm).

Lighting

Additional working light on the boom.
Additional rear working light.
Rotating beacon

Environmental protection

Bio-degradable hydraulic oil.
Catalytic exhaust.

Comfort and safety

Radio (cab).
Anti-theft system (2 programmable codes).
Rear wind-deflector on canopy.
Battery isolator switch.

Service and maintenance

Tool kit.

Miscellaneous

Special customised paint (RAL specifications).

*Under our policy of continuous product 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

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