

VOLVO COMPACT EXCAVATOR

EC14



- **Gross Power :**
ISO 9249 : 14 kW / 19 ch
- **Net Power :**
ISO 9249 : 11.3 kW / 15.5 ch
- **Operating Weight :**
1400 - 1530 kg
- **Bucket Capacities :**
16 - 60 l.
- **Maximum Digging Depth :**
2015 - 2165 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

More power, more profitability

COMPACT EXCAVATOR EC14

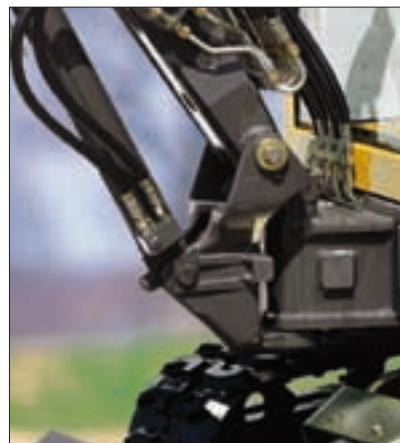
With its 15.5 hp 3-cylinder engine and its reinforced protective features, the EC14 is designed to withstand the harshest operating conditions. Built by the leading European mini-excavator manufacturer, the EC14 has extraordinary work potential on all sites. Easy to operate and maintain thanks to the simplicity of its design, this Volvo will reveal its incredible reliability and its exceptional profitability day after day, year after year.



Because some knocks are unfortunately unavoidable, the back of the machine is protected by the wrap-around counterweight and by sturdy side protectors (the canopy version). The steel cover is mounted recessed in relation to the counterweight to improve its protection.



The exclusive quick coupling system available as an option permits very fast accessory changing, whilst preserving the bucket's performances and operating sequence.



A well-dimensioned pivot mounted on a long pin for more rigidity, large-diameter cylinders, reinforced protective features: Volvo sturdiness down to the last detail for operation in the most extreme conditions.





All the equipment's hoses are free and sheathed and therefore with no rubbing or wear and are connected at the bottom of the boom for very quick replacement, if necessary.



The directional control block is ideally situated at the front of the machine for immediate, easy access. All the circuits are equipped with pressure pick-ups for fast diagnostics.



All Volvo pipes, pins, nuts and bolts are zinc-coated and passivated to resist corrosion. For optimum protection, the pipes are mounted on the top part of the boom.

A very high level of comfort and safety

COMPACT EXCAVATOR EC14



An anti-theft keypad, available as an option, enables machine starting and the main hydraulic functions to be locked.



The wide cover opens completely, giving excellent accessibility to the engine. All the maintenance and checking points are close at hand to save time. The fuel tank is transparent so that the level can be checked quickly and is easily removed for cleaning.



The dashboard groups together the fuel gauge, hour counter and oil pressure, water temperature and charge indicator lights. An electric socket enables an inspection lamp to be connected.

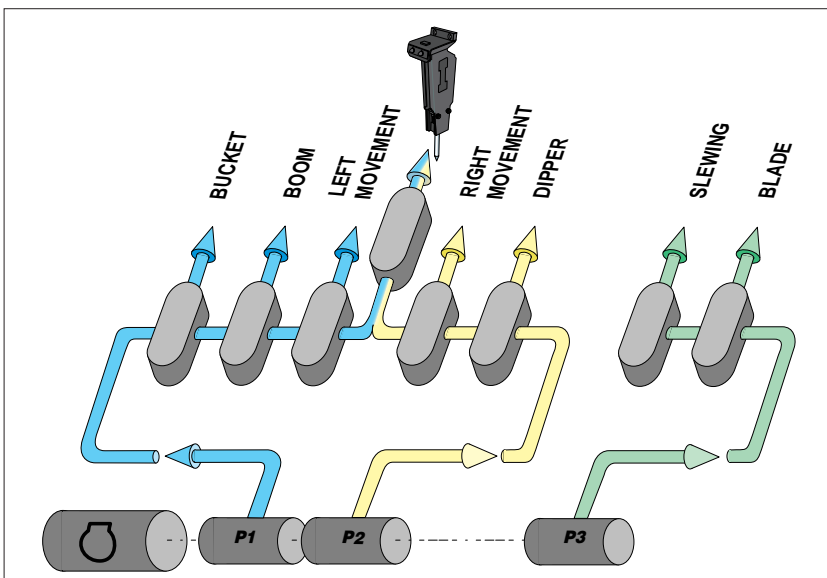


The EC14's cab and canopy have a very high level of safety, guaranteed by the FOPS 1 (Falling Object Protection Structure), ROPS and TOPS (Roll and Tip Over Protection Structure) certifications. The seatbelt is part of the standard equipment.



If you want a EC14 in your company's colours, that is no problem. Simply let us have the exact references of your colours and Volvo will do the rest.

Operator comfort is a priority for Volvo. The operator's cab is spacious and easily accessible. The hydraulic controls are power-assisted and very progressive for more flexibility and precision. Volvo's ergonomic manipulators feel good and are complemented by side arm rests which give a natural and very comfortable operating position.



At the leading edge of technology, the Volvo hydraulic circuit is fed by three independent pumps which enable several movements to be controlled at the same time. Slewing is, for example, completely independent of the equipment, making for faster, more precise work. The blade is independent of the movement circuit to speed up levelling operations. The accessory circuit enjoys the cumulative delivery of the two main pumps for even better breaker performances.



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 rpm
Power, installed (ISO 9249) 11.3 kW (15.5 hp) at 2200 rpm
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 - 70 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 16 MPa (160 bar)

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

Maximum flow 13 l/min
Maximum operating pressure 14.5 MPa (145 bar)

Double-acting hydraulic circuit for accessories :

Maximum flow 32 l/min
Maximum operating pressure 16 MPa (160 bar)



BUCKET PERFORMANCE

Breakout force 1295 daN
Tearout force 765 daN



SLEWING SYSTEM

Turntable slewing is provided by an Orbitrol hydraulic motor which drives a ball internal crown wheel with remote lubrication :

Slewing speed 9 rpm



UNDERCARRIAGE

Overall widths 980 mm*
Track width 230 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 950 daN



SERVICE FILL CAPACITIES

Fuel tank 21 l
Hydraulic system, total 36 l
Engine oil 3.6 l
Cooling system 4.5 l



WEIGHT

Operating mass and ground pressure	Rubber Tracks
Canopy version	1400 kg 0.27 kg/cm ²
Cab version	1530 kg 0.30 kg/cm ²

Transport mass (according to standard ISO 6016)	Rubber Tracks
Canopy version	1293 kg
Cab version	1423 kg



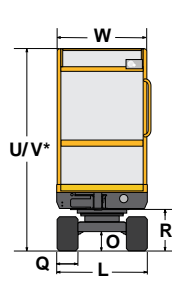
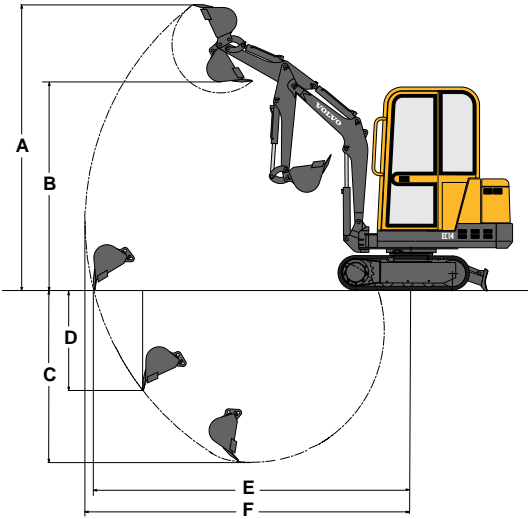
NOISE LEVELS

Results of dynamic measurements :

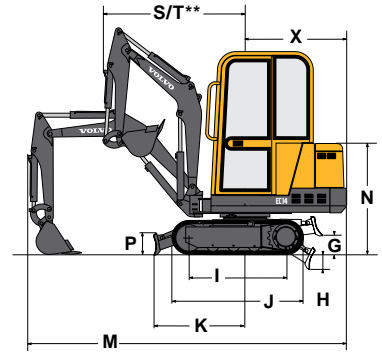
Noise level exterior (LwA) 93 dB(A)
Noise level in the cab (LpA) 82 dB(A)
Noise level under the canopy (LpA) 80 dB(A)

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

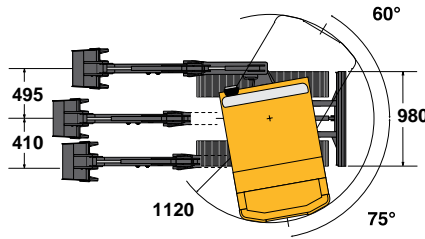
DIMENSIONS









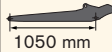
* Canopy



** Front turning circle with max. offset



Buckets	 Width	 Weight	 Capacity
 Backhoe buckets	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
 Ditch bucket	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	3075	2255	2015	1850	1070	3415	3510
 1050 mm	3150	2325	2165	2000	1200	3560	3650

* Dig depth with blade down.

G	H	I	J	K	L	M	N	O
210	190	1045	1415	790	980*	3410	1200	210

* Option : 1200 mm

P	Q	R	S	T	U	V	W	X
240	230	460	1510	1205	2190	2100	980	1090

in mm

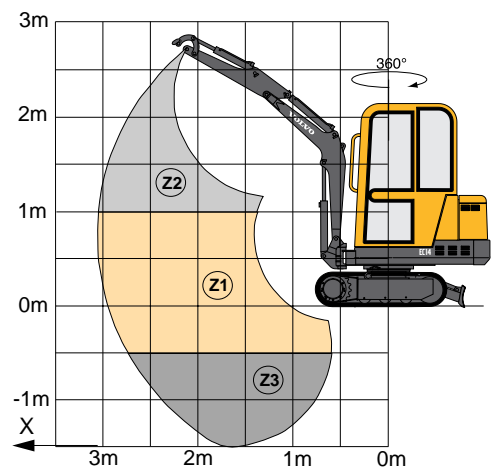
TOTAL ROTATION LOAD CAPACITIES (CAB VERSIONS)

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	1.50 m	2.00 m	2.50 m	3.00 m	3.10 m
 900 mm	Z2			320	235		
	Z1	725 *	435	295	220	175	
	Z3	725 *	435	295	220		
 1050 mm	Z2			310	235	175	
	Z1	395 *	430	290	215	170	165
	Z3	645 *	430	290	215		

* Hydraulic limit

in kg



STANDARD EQUIPMENT

Engine

Dry-type air filter.
Electric pre-heating device.
Transparent diesel oil filter, pre-filter and sediment bowl.
Hand throttle.

Electrical system

12 V - 70 Ah 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.

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.
One working light.
Two-speed heating and ventilation.
Cab heat adjustment.
Front window with opening system power-assisted by two gas rams.
Sliding window (right).
Door stops.
Interior lighting.
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.
Fuel gauge.
Hour meter.
Shut down for automatic switching off engine in the event of overheating or drop in oil pressure.

Working equipment

1630 mm long monobloc boom.
900 mm dipper.
135° 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

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 (1050 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 ...)

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).
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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