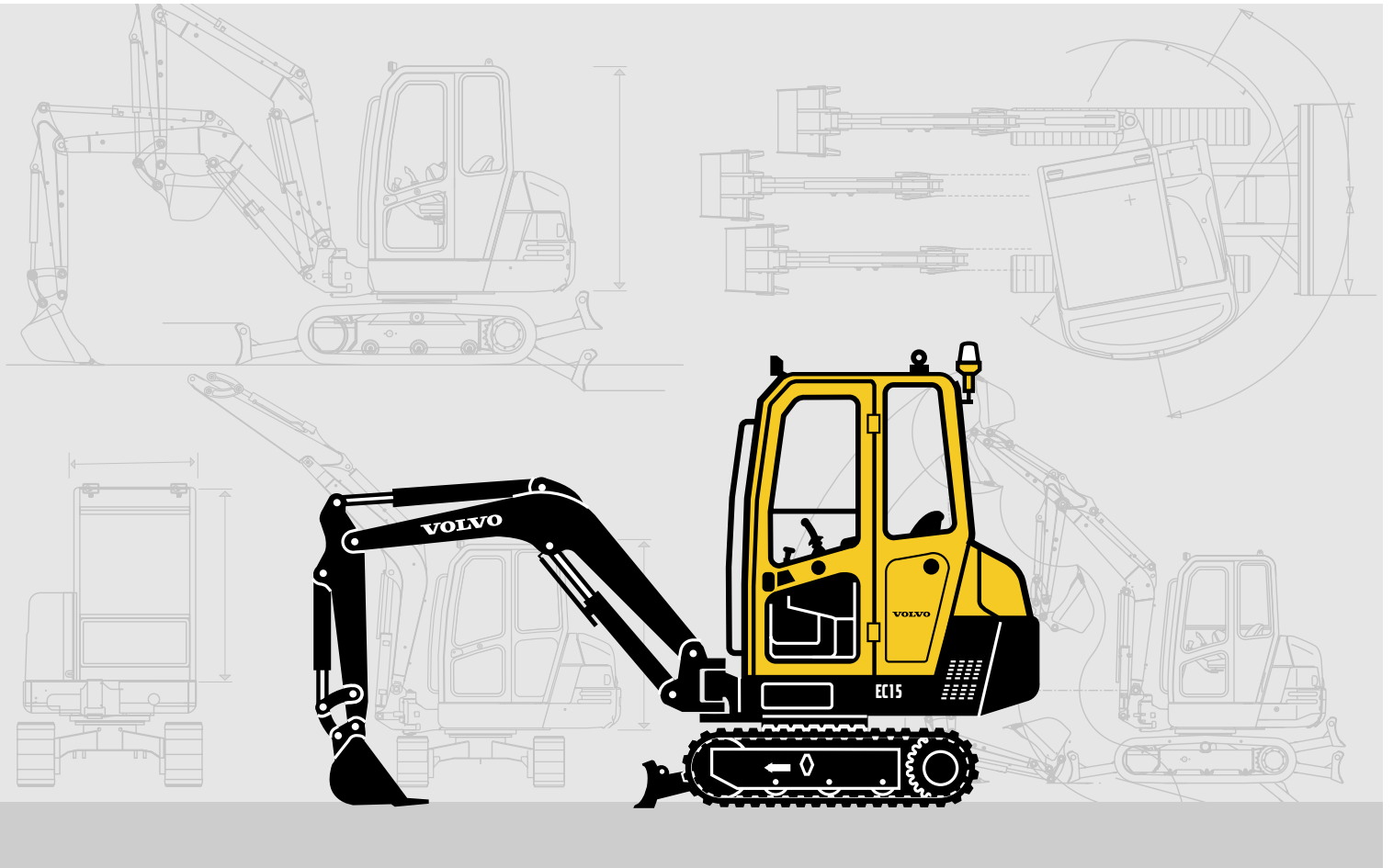


## VOLVO COMPACT EXCAVATOR

# EC15



• **Gross Power:**  
ISO 9249 : 14 kW / 19 hp

• **Net Power:**  
ISO 9249 : 11.3 kW / 15.5 hp

• **Operating Weight:**  
1,435 - 1,565 kg / 3,164 - 3,451 lbs

• **Bucket Capacities:**  
16 - 60 l. / 0.02 - 0.08 yd<sup>3</sup>

• **Maximum Digging Depth:**  
2,200 - 2,450 mm / 7'3" - 8'0"

• **Simultaneous digging movements and high speed operations** for faster cycle times and increased productivity.

• **ROPS, TOPS and FOPS** cab and canopy for a better operator safety.

• **Compact dimensions. Wrap around counterweight** protects the rear compartment against impacts.

• **Control pattern selector (ISO/SAE)** for a quick change of operatin modes.

• **Excellent serviceability** thanks to easy access to the engine and hydraulic compartments.

# VOLVO



## ENGINE

Water-cooled low emissions Mitsubishi 3-cylinder diesel engine conforming to US EPA regulation.

Model .....L3E  
Gross power, rated (ISO 9249) ..14.0 kW (19.0 hp) @ 2,800 r/min (46.6 rps)  
Power, installed (ISO 9249) ....11.3 kW (15.5 hp) @ 2,200 r/min (36.6 rps)  
Displacement, total .....952 cc (58 in<sup>3</sup>)  
Maximum torque (ISO 9249)....54 Nm @ 1,850 rpm (40 lbf/ft @ 30.8 rps)  
Bore x stroke .....76 mm x 70 mm (3 in x 2.8 in)



## ELECTRICAL SYSTEM

Rated voltage .....12 V  
Battery capacity.....12 V - 45 Ah  
Alternator rating .....12 V - 40 A  
Starter motor output .....12 V - 2.2 hp



## 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 (2 x 4.2 US gpm)  
Maximum operating pressure .....17 MPa (2,465 PSI)

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

Maximum flow .....11 l/min (2.9 US gpm)  
Maximum operating pressure .....16.5 MPa (2,392 PSI)

Double-acting hydraulic circuit for accessories:

Maximum flow .....32 l/min (8.4 US gpm)  
Maximum operating pressure .....17 MPa (2,465 PSI)



## BUCKET PERFORMANCE

Breakout force .....1,510 daN (3,394 lbf)  
Tearout force .....960 daN (2,158 lbf)



## SWINGING SYSTEM

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

Swinging speed .....9 rpm



## UNDERCARRIAGE

Track width .....230 mm (9")  
Track tension .....by grease piston  
Blade height .....240 mm (9.4")  
Blade width .....980 mm (38.6")



## DRIVETRAIN

Each track is driven by an Orbitrol hydraulic motor equipped with an epicyclic reduction gear.

Max. speed .....2.0 km/h (1.2 mph)  
Max. tractive force .....1,260 daN (2,832 lbf)



## SERVICE FILL CAPACITIES

Fuel tank .....21 l (5.5 US gal)  
Hydraulic system, total .....23 l (6.1 US gal)  
Engine oil .....3.6 l (0.9 US gal)  
Cooling system .....4.5 l (1.2 US gal)



## WEIGHT

| Operating mass | Rubber Tracks           | Steel Tracks            |
|----------------|-------------------------|-------------------------|
| Canopy version | 1,435 kg<br>(3,164 lbs) | 1,495 kg<br>(3,296 lbs) |
| Cab version    | 1,565 kg<br>(3,451 lbs) | 1,625 kg<br>(3,583 lbs) |

| Ground pressure | Rubber Tracks   | Steel Tracks  |
|-----------------|---|---|
| Canopy version  | 0.28 kg/cm <sup>2</sup><br>(4 lbs/in <sup>2</sup> )   | 0.30 kg/cm <sup>2</sup><br>(4.3 lbs/in <sup>2</sup> ) |
| Cab version     | 0.31 kg/cm <sup>2</sup><br>(4.4 lbs/in <sup>2</sup> ) | 0.32 kg/cm <sup>2</sup><br>(4.5 lbs/in <sup>2</sup> ) |



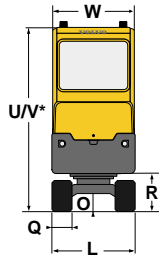
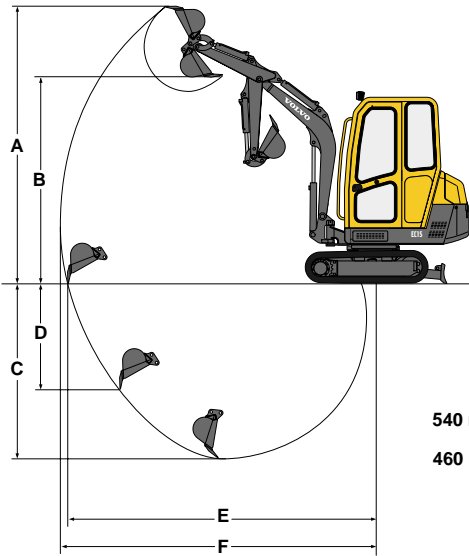
## NOISE LEVELS

Results of dynamic measurements:

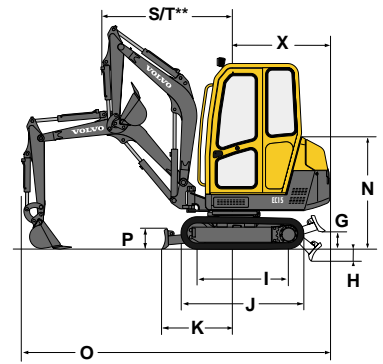
Noise level exterior (LwA) .....95 dB(A)  
Noise level in the cab (LpA) .....81 dB(A)  
Noise level under the canopy (LpA) .....81 dB(A)

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

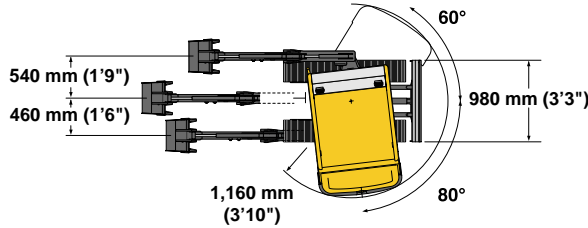
# DIMENSIONS










\* Canopy



\*\* Front turning circle with max. offset



| Buckets  |  Width |  Weight |  Capacity |
|--|---|--|--|
| Backhoe buckets<br> | 250 mm (10")  | 25 kg (55 lbs)   | 19 l (0.025 yd <sup>3</sup> )  |
|  | 300 mm (12")  | 28 kg (62 lbs)   | 24 l (0.031 yd <sup>3</sup> )  |
|  | 350 mm (14")  | 30 kg (66 lbs)   | 28 l (0.037 yd <sup>3</sup> )  |
|  | 400 mm (16")  | 32 kg (71 lbs)   | 33 l (0.043 yd <sup>3</sup> )  |
|  | 450 mm (18")  | 35 kg (77 lbs)   | 38 l (0.050 yd <sup>3</sup> )  |
|  | 500 mm (20")  | 37 kg (82 lbs)   | 43 l (0.056 yd <sup>3</sup> )  |
|  | 600 mm (24")  | 40 kg (88 lbs)   | 53 l (0.069 yd <sup>3</sup> )  |
| Ditch bucket<br>  | 850 mm (34")<br>1,000 mm (40")  | 43 kg (95 lbs)<br>47 kg (104 lbs)  | 52 l (0.068 yd <sup>3</sup> )<br>60 l (0.078 yd <sup>3</sup> )                             |

| Dipper  | A                | B               | C*              | C               | D                | E                 | F                 |
|---|------------------|-----------------|-----------------|-----------------|------------------|-------------------|-------------------|
|  900 mm (2'11")  | 3,410 mm (11'2") | 2,480 mm (8'2") | 2,200 mm (7'3") | 2,050 mm (6'9") | 1,500 mm (4'11") | 3,610 mm (11'10") | 3,710 mm (12'2")  |
|  1,150 mm (3'9") | 3,550 mm (11'8") | 2,620 mm (8'7") | 2,450 mm (8'0") | 2,300 mm (7'7") | 1,740 mm (5'9")  | 3,850 mm (12'8")  | 3,940 mm (12'11") |



\* Dig depth with blade down.

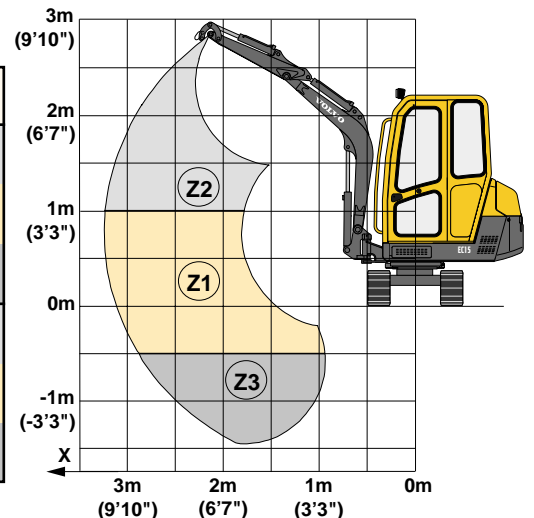
| G             | H             | I               | J               | K             | L             | M                | N               | O             |
|---------------|---------------|-----------------|-----------------|---------------|---------------|------------------|-----------------|---------------|
| 210 mm (0'8") | 150 mm (0'6") | 1,045 mm (3'5") | 1,415 mm (4'8") | 790 mm (2'7") | 980 mm (3'3") | 3,650 mm (12'0") | 1,325 mm (4'4") | 210 mm (0'8") |

| P             | Q             | R             | S                | T               | U               | V               | W             | X               |
|---------------|---------------|---------------|------------------|-----------------|-----------------|-----------------|---------------|-----------------|
| 240 mm (0'9") | 230 mm (0'9") | 450 mm (1'6") | 1,520 mm (4'12") | 1,230 mm (4'0") | 2,250 mm (7'5") | 2,190 mm (7'2") | 980 mm (3'3") | 1,120 mm (3'8") |

# LOAD CAPACITIES

These capacities are given for a machine without a bucket or quick-release coupling and fitted with a 900 mm (2'11") dipper, rubber tracks and cab.  
The handling capacity is 75% of the tipping load or 87% of the hydraulic limit.

| Outreach  |    | 1.00 m (3'3")        | 1.50 m (4'11")       | 2.00 m (6'7")        | 2.50 m (8'2")      | 3.00 m (9'10")     |
|---|----|----------------------|----------------------|----------------------|--------------------|--------------------|
|  | Z2 |                      |                      | 325 kg* (716 lbs)*   | 250 kg* (551 lbs)* | 280 kg* (617 lbs)* |
|   | Z1 | 745 kg* (1,642 lbs)* | 665 kg* (1,466 lbs)* | 455 kg* (1,003 lbs)* | 350 kg* (772 lbs)* | 305 kg* (673 lbs)* |
|   | Z3 | 745 kg* (1,642 lbs)* | 590 kg* (1,301 lbs)* | 565 kg* (1,245 lbs)* | 450 kg* (992 lbs)* |                    |
|  | Z2 |                      |                      | 325 kg* (716 lbs)*   | 240 kg (529 lbs)   | 185 kg (408 lbs)   |
|   | Z1 | 745 kg* (1,642 lbs)* | 440 kg (970 lbs)     | 295 kg (650 lbs)     | 220 kg (485 lbs)   | 175 kg (385 lbs)   |
|   | Z3 | 745 kg* (1,642 lbs)* | 440 kg (891 lbs)     | 300 kg (661 lbs)     | 225 kg (496 lbs)   |                    |



1 - Lifting capacity in front longitudinal position and resting on the blade.  
2 - Lifting capacity in total rotation over 360° with the blade raised.

\* hydraulic limit

## STANDARD EQUIPMENT

### Engine

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

### Electrical system

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

### Undercarriage

230 mm (9 in) wide rubber tracks.  
Dozer blade.  
Towing and anchoring points.  
Remote lubrication of the swinging crown ring.

### Hydraulic system

Control pattern selector valve (ISO/SAE)  
Circuit for hydraulic breaker with folding control pedal and direct return of oil to the hydraulic tank.  
Piping as far as dipper arm.  
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, antenna 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

1,750 mm (5'9") long monobloc boom.  
900 mm (2'11") 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

FOPS 1 conforming to ISO standard 3449 and SAE J1043.  
TOPS conforming to ISO standard 12117.  
ROPS conforming to SAE J1040 and ISO 3471.  
Soundproofing conforming to directive n°861662EEC and its amendments.  
Engine conforms to US EPA regulation.

### Service and maintenance

Tool kit.

## OPTIONAL EQUIPMENT

### Working equipment

Long dipper (1,150 mm - 3'9").  
Mechanically-controlled quick-release attachment bracket.

### Hydraulic circuits for attachments

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

### Undercarriage

Steel tracks (230 mm wide - 9 in).

### Lighting

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

### Comfort and safety

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

### Miscellaneous

Special customized 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

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