

VOLVO COMPACT EXCAVATORS

EC15C, EC17C, EC18C, EC20C



- **Gross Power:**
12,3 kW (16,8 hp)
- **Net Power:**
ISO 3046/1: 11,9 kW (16,2 hp)
- **Operating Weight:**
EC15C: 1540 - 1630 kg
EC17C: 1560 - 1650 kg
EC18C: 1670 - 1760 kg
EC20C: 1850 - 1940 kg
- **Maximum Digging Depth:**
2120 - 2557 mm
- **Load Sensing Hydraulic System** for very precise controls under all load conditions
- **Slew and offset movements combination** with electro proportional joystick control
- **Volvo Care cab** offers optimum comfort with ergonomics controls, switches and very good all around visibility
- **Excellent serviceability**, all service points are easily accessible under the engine hood
- **Auto Kick Down** function, the travel speed of the machine adapts automatically to the workload
- **Large hydraulic travel pedals**, 2 ergonomic aluminium pedals designed for intensive, frequent use and maximum grip
- **VOLVO Engine D1.1DCA4**, Tier 4 compliant diesel engine, 3 cylinders, 1.1 liters, water cooled, in line fuel injection pump
- **ROPS, TOPS, OPG1 cab / canopy** for all machines to secure the operator in all kind of environment and applications
- **Equipment hydraulic hoses** routed in the boom and fully protected from damages and day to day wear
- **Variable width undercarriage** (EC18C and EC20C) for better stability and access to narrow sites

MORE CARE. BUILT IN.



SPECIFICATIONS EC15C, EC17C, EC18C

Engine

Low emission, water-cooled, indirect injection, Volvo 3 cylinder diesel engine, meeting Tier IV environmental regulations and equipped with automatic engine shut down (engine oil pressure or engine temperature)

Model	D1.1DCAE4
Gross power, rated (ISO 3046/1)	12,3 kW (16,8 hp) at 2000 rpm
Power, installed (ISO 3046/1)	11,9 kW (16,2 hp) at 2000 rpm
Displacement, total	1116 cc
Maximum torque according to ISO 3046/1	65,2 Nm (+/-5%) at 1 500 rpm (+/-100)
Bore x stroke	76 mm x 82 mm

Electrical system

Battery capacity	12 V - 52 Ah
Alternator rating	12 V - 40 A
Starter motor output	12 V - 1.1 kW

Hydraulic system

Closed centre Load Sensing hydraulic system providing total independence of each movement.

Control	power-assisted hydraulic controls
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Hydraulic pump for all the equipment and travel circuits

Maximum flow	
EC15C, EC17C - Gear pump	31 l/min
EC18C - Variable displacement pump	44 l/min
Maximum operating pressure	17 MPa (170 bar)

Finger-tip controlled double-acting hydraulic circuit for accessories : Electro proportionnal.

Maximum adjustable flow	
EC15C, EC17C	31 l/min
EC18C	44 l/min
Maximum operating pressure	17 MPa (170 bar)

End-of-stroke cushions :

On boom ram	at the end of the rod extension
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Bucket performance

Breakout force	1290 daN
Tearout force (short arm)	800 daN

Slewing system

Turntable slewing is provided by an axial piston type swing moto :

Slewing speed	9,5 rpm
Turntable braking	automatic multi-disc brake
Absorption of hydraulic shocks	Shockless valve

Undercarriage

Bottom/top rollers per side	3 / 0
Track width	230 mm
Track tension	by grease piston
Blade (width x height)	
EC15C	980 mm x 238 mm
EC17C	980 mm x 241 mm
EC18C	994 / 1336 mm x 248 mm

Drivetrain

Max. speed (low speed/ high speed)	
EC15C	1.9 km/h
EC17C	1.9 km/h / 3.7 km/h
EC18C	2.5 km/h / 4.6 km/h
Max. tractive force	1160 daN

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

Service fill capacities

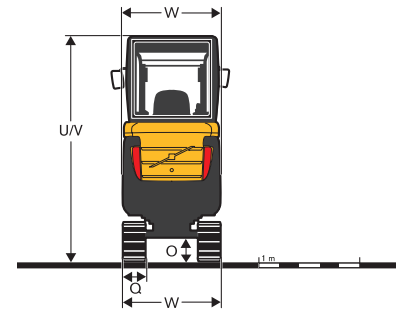
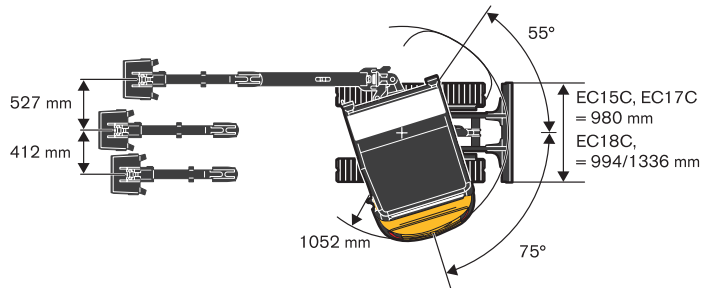
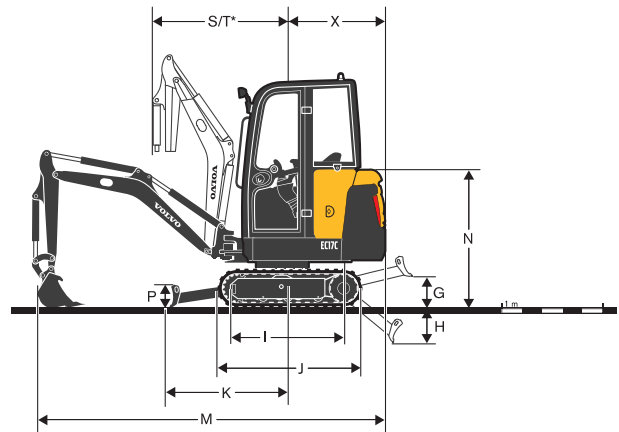
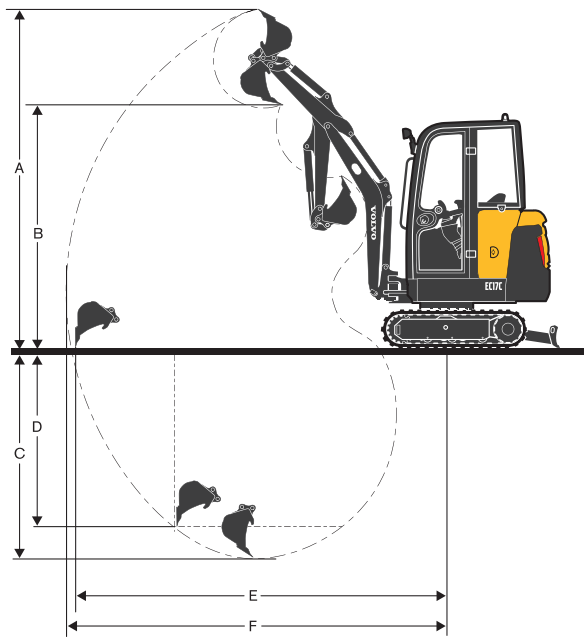
Fuel tank	20 l
Hydraulic tank	8.2 l
Hydraulic system, total	
EC15C, EC17C	21 l
EC18C	22 l
Engine oil including filter	3.5 l
Cooling system	5.6 l

Weight

Weight and ground pressure with 230 mm rubber tracks and standard bucket :

Operating	EC15C	EC17C	EC18C
Canopy version	1540 kg	1560 kg	1670 kg
Cab version	1630 kg	1650 kg	1760 kg

Ground pressure	EC15C	EC17C	EC18C
Canopy version	0,31 kg/cm ²	0,31 kg/cm ²	0,34 kg/cm ²
Cab version	0,33 kg/cm ²	0,33 kg/cm ²	0,35 kg/cm ²



- A** Maximum cutting height
B Maximum dumping height
C Maximum digging depth
(with dozer blade lowered to ground)
D Maximum vertical wall digging depth
E Maximum digging reach at ground level
F Maximum digging reach
G Highest position dozer blade
H Lowest position dozer blade

- I** Tumbler length
J Track length
K Dozer blade, maximum reach at ground level
L Overall width
M Overall length
N Overall height of engine hood
O Minimum ground clearance
P Dozer blade height
Q Shoe width

- R** Ground clearance to superstructure
S Front slew radius
T Front slew radius with maximum offset
U Overall height (canopy)
V Overall height (enclosed cab)
W Overall width of superstructure (canopy)
W1 Overall width of superstructure (enclosed cab)
X Tail slew radius

Dipper		A	B	C	D	E	F
EC15C	950 mm	3437	2475	2120	1793	3803	3856
	1150 mm	3580	2620	2323	1985	3996	4046
EC18C	950 mm	3460	2498	2097	1772	3799	3856
	1150 mm	3603	2642	2297	1961	3992	4046

Dipper		G	H	I	J	K	L	M	N	O
EC15C	950 mm	209	190	1082	1462	857	980	3580	1400	210
	1150 mm	209	190	1082	1462	857	980	3472	1400	210
EC17C	950 mm	321	294	1082	1462	1166	980	3580	1400	210
	1150 mm	321	294	1082	1462	1166	980	3472	1400	210
EC18C	950 mm	326	311	1082	1462	1215	994/1336	3591	1423	159
	1150 mm	326	311	1082	1462	1215	994/1336	3487	1423	159

Dipper		P	Q	R	S	T	U	V	W	W1	X
EC15C	950 mm	238	230	458	1452	1147	2296	2371	993	993	1052
	1150 mm	238	230	458	1471	1164	2296	2371	993	993	1052
EC17C	950 mm	241	230	458	1452	1147	2296	2371	993	993	1052
	1150 mm	241	230	458	1471	1164	2296	2371	993	993	1052
EC18C	950 mm	248	230	481	1452	1147	2318	2394	993	993	1052
	1150 mm	248	230	481	1471	1164	2318	2394	993	993	1052

SPECIFICATIONS EC20C

Engine

Low emission, water-cooled, indirect injection, Volvo 3 cylinder diesel engine, meeting Tier IV environmental regulations and equipped with automatic engine shut down (engine oil pressure or engine temperature)

Model	D1.1DCAE4
Gross power, rated (ISO 3046/1)	12,3 kW (16,8 hp) at 2000 rpm
Power, installed (ISO 3046/1)	11,9 kW (16,2 hp) at 2000 rpm
Displacement, total	1116 cc
Maximum torque according to ISO 3046/1	65,2 Nm (+/-5%) at 1 500 rpm (+/-100)
Bore x stroke	76 mm x 82 mm

Electrical system

Battery capacity	12 V - 52 Ah
Alternator rating	12 V - 40 A
Starter motor output	12 V - 1.1 kW

Hydraulic system

Closed centre Load Sensing hydraulic system providing total independence of each movement.

Control	power-assisted hydraulic controls
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Hydraulic pump for all the equipment and travel circuits .
Variable displacement pump

Maximum flow	44 l/min
Maximum operating pressure	21 MPa (210 bar)

Finger-tip controlled double-acting hydraulic circuit for accessories :
Electro proportionnal

Maximum adjustable flow	44 l/min
Maximum operating pressure	21 MPa (210 bar)

End-of-stroke cushions :

On boom ram	at the end of the rod extension
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Bucket performance

Breakout force	1827 daN
Tearout force (short arm)	1239 daN

Slewing system

Turntable slewing is provided by an axial piston type swing motor :

Slewing speed	9,5 rpm
Turntable braking	automatic multi-disc brake
Absorption of hydraulic shocks	Shockless valve

Undercarriage

Bottom/top rollers per side	4 / 0
Track width	250 mm
Track tension	by grease piston
Blade (width x height)	994 / 1336 mm x 248 mm

Drivetrain

Max. speed (low speed/ high speed)	2.5 km/h / 4.6 km/h
Max. tractive force	1440 daN

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

Service fill capacities

Fuel tank	20 l
Hydraulic tank	8.2 l
Hydraulic system, total	25 l
Engine oil including filter	3.5 l
Cooling system	5.6 l

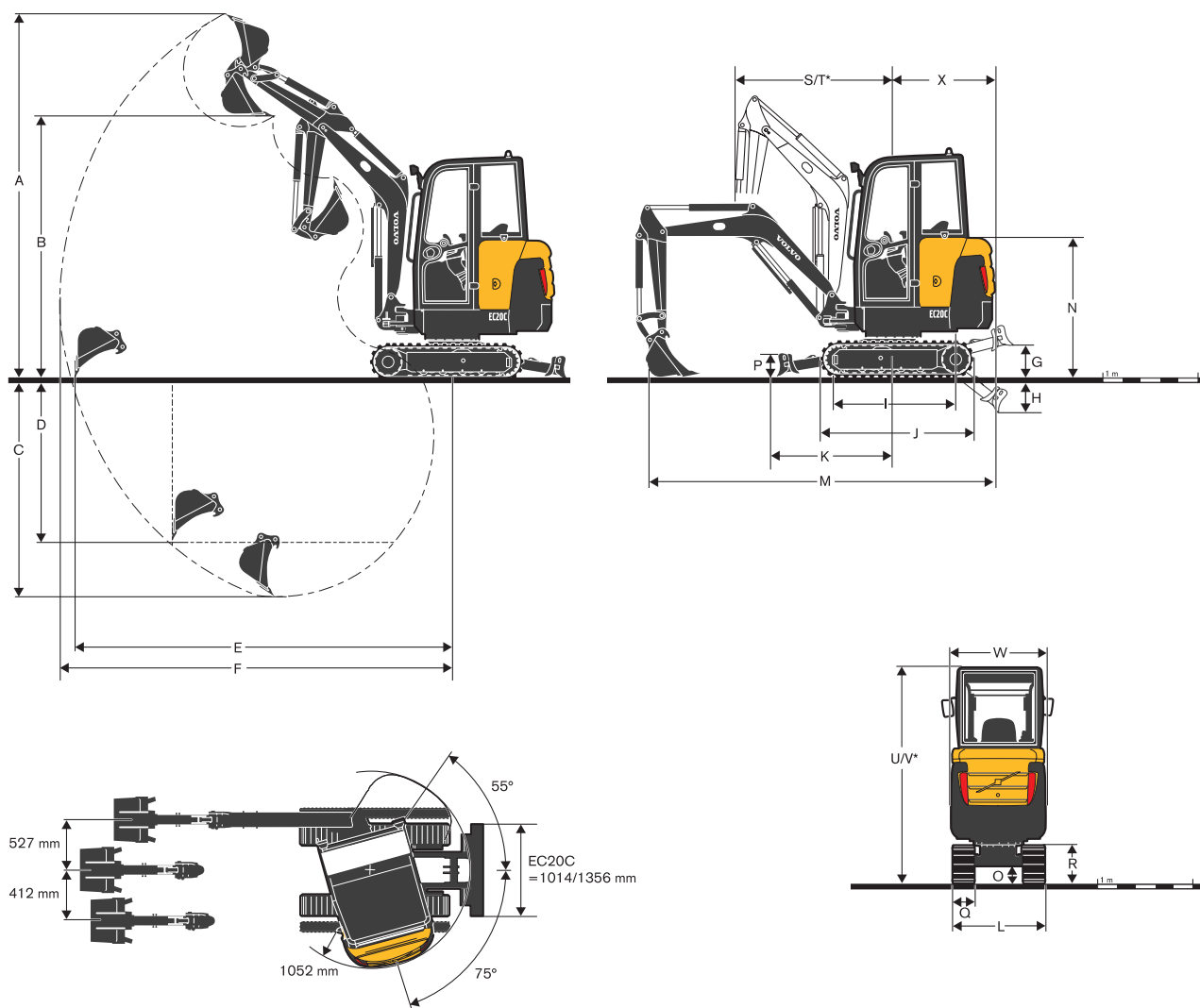
Weight

Weight and ground pressure with 250 mm rubber tracks and standard bucket :

Operating	
Canopy version	1850 kg
Cab version	1940 kg

Ground pressure

Canopy version	0,30 kg/cm ²
Cab version	0,31 kg/cm ²



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|--|---|--|
| A Maximum cutting height | I Tumbler length | R Ground clearance to superstructure |
| B Maximum dumping height | J Track length | S Front slew radius |
| C Maximum digging depth
(with dozer blade lowered to ground) | K Dozer blade, maximum reach at ground level | T Front slew radius with maximum offset |
| D Maximum vertical wall digging depth | L Overall width | U Overall height (canopy) |
| E Maximum digging reach at ground level | M Overall length | V Overall height (enclosed cab) |
| F Maximum digging reach | N Overall height of engine hood | W Overall width of superstructure (canopy) |
| G Highest position dozer blade | O Minimum ground clearance | W1 Overall width of superstructure (enclosed cab) |
| H Lowest position dozer blade | P Dozer blade height | X Tail slew radius |
| | Q Shoe width | |

Dipper	A	B	C	D	E	F
1050 mm	3807	2746	2257	1692	3971	4080
1350 mm	3982	2920	2557	1978	4261	4362

Dipper	G	H	I	J	K	L	M	N	O
1050 mm	326	311	1240	1620	1215	1014/1356	3746	1423	159
1350 mm	326	311	1240	1620	1215	1014/1356	3605	1423	159

Dipper	P	Q	R	S	T	U	V	W	W1	X
1050 mm	248	230	481	1683	1383	2318	2395	993	993	1052
1350 mm	248	230	481	1731	1430	2318	2395	993	993	1052

SPECIFICATIONS

STANDARD EQUIPMENT

Engine

Rear mounted low-emission EPA Tier 4 Volvo diesel engine, water cooled, indirect injection
Dry-type air filter
Electric feeding fuel pump
Fuel filter + transparent sediment chamber
Drain plugs under the hydraulic oil and fuel tanks

Electrical system

Water-resistant electrical connectors (IP67)
Two work lights on cab version
One work light on canopy version
Battery disconnect switch

Hydraulic system

Load-sensing system
ISO power-assisted hydraulic controls
Accessory circuit and the boom offset are controlled by an electroproportional control on the right joystick
Automatic two speed travel (EC17C/EC18C/EC20C)
Control of forward and backward movements by two levers coupled to hydraulic travel pedals
Double-acting hydraulic circuit for accessories
Progressive fingertip control of the accessory circuit and offset
Hydraulic variable displacement pump (EC18C/EC20C)
Hydraulic gear pump (EC15C/EC17C)
Automatic slewing multi-disc brake
Hydraulic hoses routed in the boom
Cushion on boom cylinder
ORFS hydraulic connectors

Seat

High resistant fabric or vinyl suspended seat with non retractable seat belt

Cab

Suspended and insulated cab platform
In cab heating and ventilation adjustment
Fully opening front window power-assisted by gas cylinder
Right hand side sliding window
Radio preparation (location for a radio and two speakers, aerial and electric wiring already fitted)
Windscreen wiper and washer (front)
Large and roomy uncluttered floor
Flat windows

Canopy

Suspended and insulated canopy platform
Large and roomy uncluttered floor
4 pillars canopy with safe handrail
Easy removable canopy

Instrumentation and monitoring

Central warning lamp
Control lamp for offset, engine temperature, preheating, air filter, engine oil, seat belt and battery charge control lamps
Fuel level gauge
Digital operating hour meter

Earthwork equipment

1750 mm long monobloc boom (EC15C/EC17C/EC18C)
1900 mm long monobloc boom (EC20C)
950 mm arm (EC15C/EC17C/EC18C)
1050 mm arm (EC20C)

Dozer blade with 2 additional extensions (EC18C/EC20C)
Protected blade cylinder

Safety

Machines cab and canopy are :
- TOPS (Tip-Over Protective Structure)
- ROPS (Roll-Over Protective Structure)
- OPG 1 (Object Protective Guard)
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
Retractable and non retractable seat belts

Official approval

Machine conforming to European directive 2006/42/EC
Noise emissions in the environment conforming to directive 2000/14/EC
Object handling device conforming to EN 474-5 standards
ROPS conforming to ISO standard 3471-1
TOPS conforming to ISO 12117 and EN 13531 standards
OPG 1 conforming to ISO 10262 standards
Electromagnetic compatibility (EMC) conforming to European directive 2004/108/EC and its amendments

OPTIONAL EQUIPMENT

Handling and earthwork equipment

Long arm : 1150 mm (EC15C/EC17C/EC18C), 1350 mm (EC20C)
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 and arm cylinders.
Double acting accessory boom line
Double acting accessory arm line
Kit 2 Push Pull hydraulic couplings
Kit 2 Flat Face hydraulic couplings

Hydraulic circuits for attachments

Drain kit return to hydraulic tank

Lighting

Additional work light on the boom
Additional rear work light and rotating beacon
Additional rotating beacon

Environmental protection

Bio-degradable normal climat hydraulic oil VG46
Bio-degradable cold climat hydraulic oil VG32

Comfort

Deluxe high back fabric or vinyl suspended seat with 4 adjustments

Retracting seat belt 2" or 3" with visual indicator on instrument panel
Radio CD player (cab version)
Anti-theft system

Safety

Left rear view side mirror
Caretrack GPS/GSM system
Control pattern selector and travel alarm

Service and maintenance

Tool kit
Dual stage air filter

Miscellaneous

Special colours options (RAL specifications)

ATTACHEMENT OFFER

Low noise Hydraulic Breaker HB100LN and dedicated tools

Mechanical pin-on attachment bracket (VAB)
Mechanical attachment bracket (QC PELJOB)
Mechanical attachment bracket (Lehnhoff)

Complete range of Volvo genuine trenching and ditching buckets



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 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 - **More care. Built in.**



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Volvo, Global Marketing

English (Global)
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