

VOLVO COMPACT EXCAVATORS

# EC15C, EC17C, EC18C, EC20C

1.54-1.94 t 16.8 hp



# GET IT DONE IN COMFORT.

The compact excavator range of Volvo EC15C, EC17C, EC18C and EC20C is ready to help you tackle all your jobs. Each is built for comfort – your all-day comfort in the cab and to comfortably fit in and around a wide range of job applications. Climb in, get behind the controls and go to work. Another productive day awaits you.

## Room to operate

Long days are more comfortable in the large and roomy, uncluttered cab.

- Single-piece cab platform is quick and easy to clean and maintain.
- Due to the functional control on the right joystick for the attachment circuit and offset function, the control pedal has been removed for even more foot space.
- More operator comfort means more productivity.

## Get a good read on it all

The new instrument panel provides you with complete monitoring of all machine gauges, controls and warnings.

- Easy to view, located on the right side of the operator.
- The digital operating hour meter and fuel level gauge are located on the top part of the instrument panel.
- Keep tabs on maintenance costs, service warnings and more: central warning, engine temperature, engine oil pressure, battery charge, offset, preheating, air filter, seat belt.
- Clear, precise operator information for more comfort and safety.

## Counting the hours

A digital hour meter on the side instrument panel shows the total engine running hours.

- Hours display without starting the machine for quick and easy checks – even from outside the cab.

## A wide range of...

The range of Volvo compact excavators is right for your work. Choose from the Volvo EC15C, EC17C, EC18C or EC20C and perform a wide range of jobs, from digging trenches and footers, to drainage work, loading and site preparation.



- Fully-opening front window comfort.



- All-around visibility for jobsite safety.



- Large travel pedals for comfort and control.



- Volvo quick coupler makes attachment changes easy.



- Easy combined control of slew and boom offset.
- Smooth, precise control, at your fingertips.
- Spacious comfort in the Volvo Care Cab.



- Dozer blade positioned for maximum reach.

# MORE RELIABILITY. BUILT IN.

A quality product lasts, and that's why the Volvo EC15C, EC17C, EC18C and EC20C are built with more care, more quality and reliability you can see and feel. They are sturdy and stable to handle whatever you put in front of it, year after year.

## Sturdy and durable

The sturdy digging equipment is designed for durability, much like on larger machines.

- Boom and arm ends are made of cast steel to offer maximum durability between boom and arm connection.
- More reliability for lower operating and maintenance costs.

Hydraulic hoses are fully protected through routing in the boom.

- Protective guards for important parts: arm cylinder hoses, bucket cylinder hoses and attachment hydraulic circuit.

## Travel at your speed

In high speed mode, travel speed is automatically shifted from high to low speed according to the travel load.

- Adapts for optimal tractive force when working on slopes, levelling or performing backfilling work with the blade.

High travel speed performance has been increased compared to previous models.

- Provides more productivity during travelling or levelling applications.

## High performance equipment

VOLVO buckets deliver considerable breakout and tear-out forces for machines in this category.

- It's quicker and easier to tear into your work, improving cycle times and productivity.

The bucket has a wide 195° rotation angle, providing a good attack and square excavations at all depths.

- Helps retain more material during loading and dumping movements, reducing risk/injury from falling material.

## Aiding your productivity

Each machine is equipped as standard with a hydrostatic slewing brake.

- Greater precision and safety during slewing applications.

The EC15C and EC17C are equipped with a hydraulic fix displacement pump.

- Gear pump generates constant flow at different pressure levels for sturdy, reliable operation.

The EC18C and EC20C are equipped with a hydraulic variable displacement pump.

- Pump flow is automatically adapted to the application need, saving fuel and operating costs.



- Reliable Tier 4 Volvo diesel engine.



- Protected, smartly-positioned boom cylinder.



- Versatile, variable-width undercarriage.



- Precise travel and operational movements.
- Durable counterweight offers high level rear protection.



# SERVING YOU AND YOUR WORK.

One of the keys to productivity is uptime. Get working faster each day and stay out there longer with an easy to maintain machine that is built for easy owning and operating. And to keep you working smarter, the Volvo EC15C, EC17C, EC18C and EC20C lead the way in safe operation.

## Seated in safety

A retracting seat belt is available in two sizes: 2" (50,8 mm) or 3" (76,2 mm).

- Offers perfect adjustment to safely and comfortably suit each operator, and retracts out of the way when not in use.

## Always in control

To avoid risk of an accident when the operator gets into or out of the cab, all of the machine's controls are locked when the safety strut is raised.

- Covers equipment, offset and travel controls – for less risk and more safety.

## Easier hydraulic maintenance

Very good access to all the main hydraulic components.

- Removing right hand cover provide access to all main hydraulic components.
- Simply remove 6 screws in the cab floor for easy, direct access to main control valve and slew motor.
- Fast hydraulic maintenance: top of the main control valve, slewing joint, slewing motor, various hoses, travel control.
- Tilting oil cooler for easy cleaning

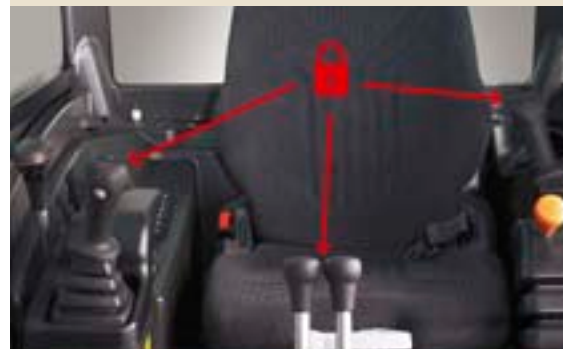
## Volvo warranty service

For full fleet coverage on virtually any jobsite in the world, Volvo's CareTrack System keeps close track of your machines through real time monitoring from the moment they leave our factory.

- Remotely track machine location, usage.



- Feel protected in the TOPS/ROPS/OPG1 structure.



- Controls lock when the safety strut is raised.



- The easy-access main control valve.



- Trusted dealer parts and service support.
- Fast daily maintenance access under the large engine hood.



- Easy-access battery disconnect switch.

# PRODUCTIVITY IN VIEW.

- The comfort of slew and offset function combination.

- Smooth, precise control for accessory line and boom offset, at your fingertips.

- Fully-opening front window comfort and communication.

- Sturdy digging equipment designed for durability.

- Protected, smartly-positioned boom cylinder.



- Automatic two-speed travel according to load.

- Improved travel speed performance.



- Dozer blade positioned for maximum reach.





- Operate in a protected TOPS/ROPS/OPG1 safety structure.

- Feel the spacious comfort in the Volvo Care Cab.

- Fast daily maintenance access under the hood.

- Reliable Tier 4 Volvo diesel engine with automatic shut down function.

- Durable counterweight offers rear protection.

- Precise travel and operational movements.

# SPECIFICATIONS EC15C, EC17C, EC18C

## Engine

Low emission, water-cooled, indirect injection, Volvo 3 cylinder diesel engine, meeting Tier 4 environmental regulations and equipped with automatic engine shut down (low engine oil pressure or too high engine temperature)

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

## Electrical system

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

## Hydraulic system

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

<b>Control</b>	power-assisted hydraulic controls
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Hydraulic pump for all the equipment and travel circuits

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

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

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

End-of-stroke cushions :

<b>On boom ram</b>	at the end of the rod extension
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## Bucket performance

<b>Breakout force</b>	1510 daN
<b>Tearout force (short arm)</b>	900 daN
<b>Tearout force (long arm)</b>	700 daN

## Slewing system

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

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

## Undercarriage

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

## Drivetrain

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

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

## Service fill capacities

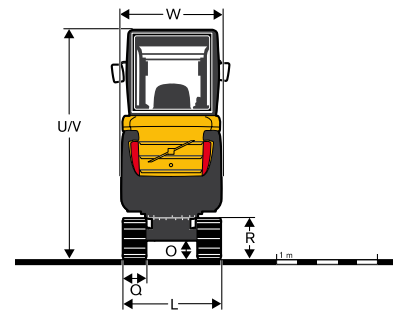
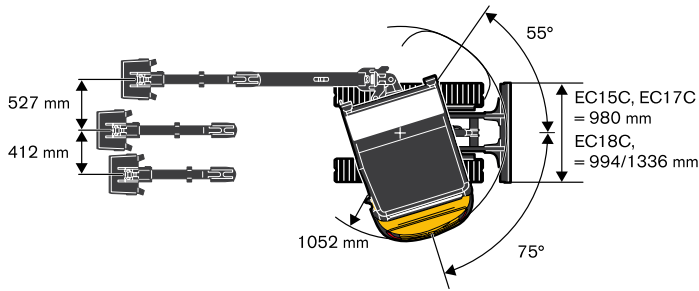
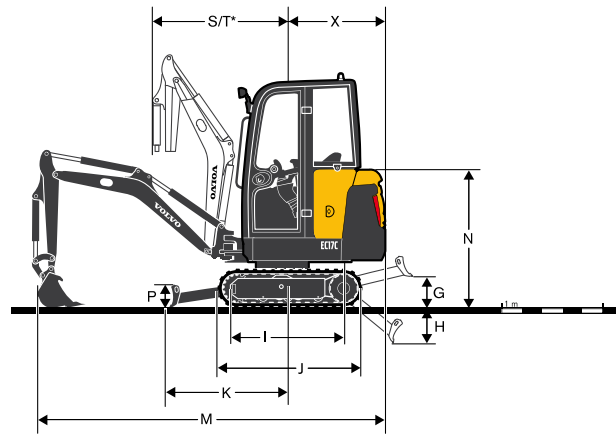
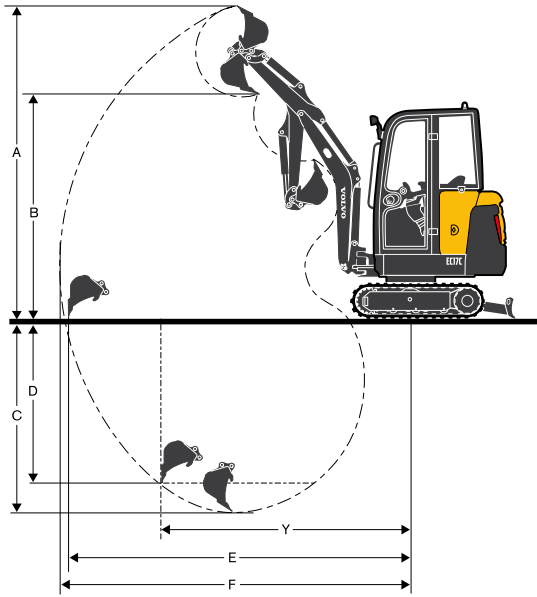
<b>Fuel tank</b>	20 l
<b>Hydraulic tank</b>	14.6 l
<b>Hydraulic system, total</b>	
<b>EC15C, EC17C</b>	21 l
<b>EC18C</b>	22 l
<b>Engine oil including filter</b>	3.5 l
<b>Cooling system</b>	5.6 l

## Weight and ground pressure

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

		EC15C	EC17C	EC18C
<b>Operating weight</b>	(kg)	1540	1650	1760
<b>Ground pressure cab</b>	kg/cm <sup>2</sup> kpa	0,29 (28.5)	0,30 (29.5)	0,31 (30.5)
<b>Ground pressure canopy</b>	kg/cm <sup>2</sup> kpa	0,28 (27.5)	0,28 (27.5)	0,3 (30.5)
<b>Transport weight</b> (Heated cab, 230mm rubber tracks, short arm, 500mm direct-fit bucket, full fuel tank)	(kg)	1550	1570	1680
<b>With canopy</b>	(kg)	-90	-90	-90
<b>With long arm</b>	(kg)	+5	+5	+5

<b>Sound Level</b>		EC15C	EC17C	EC18C
<b>Interior sound level according to ISO 6396 (LpA)</b>	dB(A)	78	78	78
<b>External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009 (LwA)</b>	dB(A)	93	93	93



- A** Maximum cutting height
- B** Maximum dumping height
- C** Maximum digging depth
- 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
- Y** Reach at maximum vertical wall digging depth

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	P
EC15C	950 mm	209	190	1082	1462	857	980	3580	1400	210	238
	1150 mm	209	190	1082	1462	857	980	3472	1400	210	238
EC17C	950 mm	321	294	1082	1462	1166	980	3580	1400	210	241
	1150 mm	321	294	1082	1462	1166	980	3472	1400	210	241
EC18C	950 mm	326	311	1082	1462	1215	994/1336	3591	1423	159	248
	1150 mm	326	311	1082	1462	1215	994/1336	3487	1423	159	248

Dipper		Q	R	S	T	U	V	W	W1	X	Y
EC15C	950 mm	230	458	1452	1147	2338	2371	993	993	1052	2736
	1150 mm	230	458	1471	1164	2338	2371	993	993	1052	2803
EC17C	950 mm	230	458	1452	1147	2338	2371	993	993	1052	2736
	1150 mm	230	458	1471	1164	2338	2371	993	993	1052	2803
EC18C	950 mm	230	481	1452	1147	2360	2394	993	993	1052	2736
	1150 mm	230	481	1471	1164	2360	2394	993	993	1052	2799

# SPECIFICATIONS EC20C

## Engine

Low emission, water-cooled, indirect injection, Volvo 3 cylinder diesel engine, meeting Tier 4 environmental regulations and equipped with automatic engine shut down (low engine oil pressure or too high engine temperature)

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

## Electrical system

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

## Hydraulic system

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

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

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

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

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

End-of-stroke cushions :

<b>On boom ram</b>	at the end of the rod extension
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## Bucket performance

<b>Breakout force</b>	1850 daN
<b>Tearout force (short arm)</b>	1250 daN
<b>Tearout force (long arm)</b>	1050 daN

## Slewing system

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

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

## Undercarriage

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

## Drivetrain

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

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

## Service fill capacities

<b>Fuel tank</b>	20 l
<b>Hydraulic tank</b>	14.6 l
<b>Hydraulic system, total</b>	25 l
<b>Engine oil including filter</b>	3.5 l
<b>Cooling system</b>	5.6 l

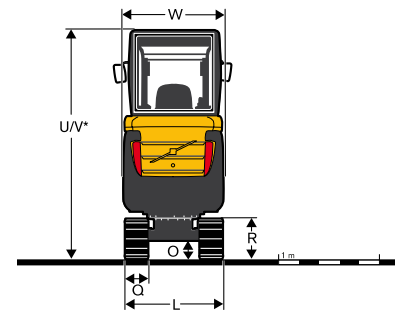
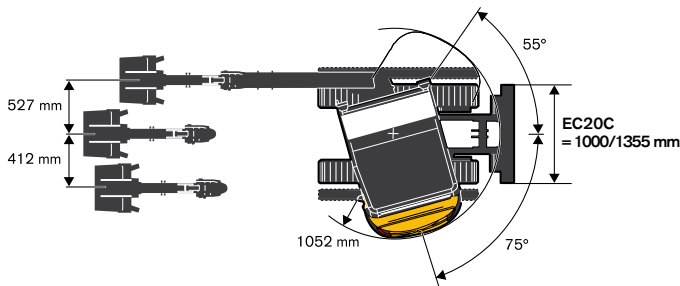
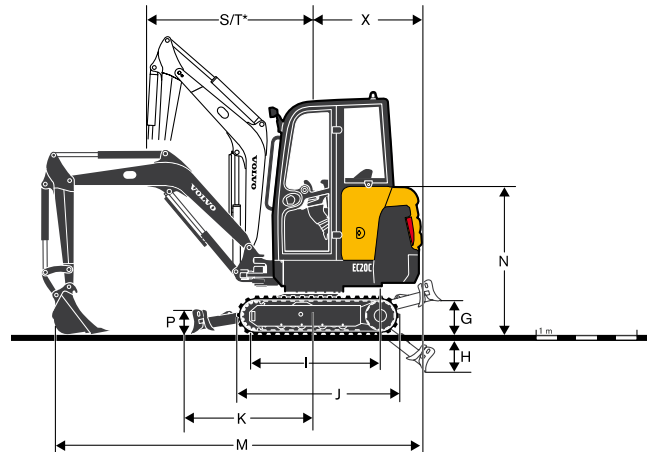
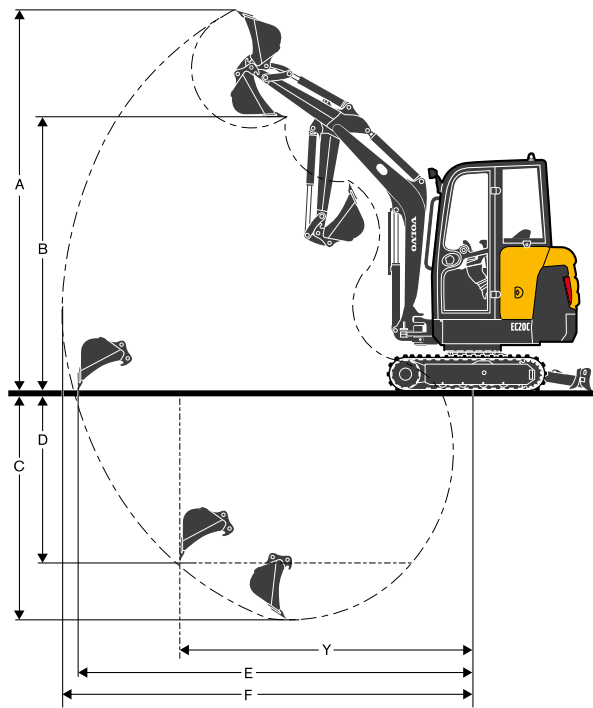
## Weight and ground pressure

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

EC20C		
<b>Operating weight</b>	(kg)	1940
<b>Ground pressure cab</b>	kg/cm <sup>2</sup> kpa	0.28 (27.5)
<b>Ground pressure canopy</b>	kg/cm <sup>2</sup> kpa	0.27 (26.5)
<b>Transport weight</b> (Heated cab, 230mm rubber tracks, short arm, 500mm direct-fit bucket, full fuel tank)	(kg)	1855
<b>With canopy</b>	(kg)	-90
<b>With long arm</b>	(kg)	+10

## Sound Level

EC20C		
<b>Interior sound level according to ISO 6396 (LpA)</b>	dB(A)	78
<b>External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC) and 474-1:2006 +A1:2009 (LwA)</b>	dB(A)	93



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- W1** Overall width of superstructure (enclosed cab)
- X** Tail slew radius
- Y** Reach at maximum vertical wall digging depth

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	P
1050 mm	326	311	1240	1620	1215	1000/1355	3746	1423	159	248
1350 mm	326	311	1240	1620	1215	1000/1355	3605	1423	159	248

Dipper	Q	R	S	T	U	V	W	W1	X	Y
1050 mm	250	481	1683	1383	2360	2395	993	993	1052	2917
1350 mm	250	481	1731	1430	2360	2395	993	993	1052	3011

# 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  
Automatic engine shut down

### Electrical system

Water-resistant electrical connectors (IP67)  
Two work lights on cab version  
One work light on canopy version  
Battery disconnect switch  
Two 12V power sockets

### Hydraulic system

Load-sensing system  
ISO power-assisted hydraulic controls  
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  
Return oil filter

### 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 lockable windows  
Lockable tool box and document box

### 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  
Right rearview mirror

### 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) conforming 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.

## 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 arm line  
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

### 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/MP3  
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)

## 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, LQC)



# VOLVO CONSTRUCTION EQUIPMENT

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.

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.

# **VOLVO**

**Volvo Construction Equipment**  
[www.volvoce.com](http://www.volvoce.com)

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2013.01  
Volvo, Global Marketing

English-21  
CEX