

VOLVO COMPACT EXCAVATORS

EC20C



MORE CARE. BUILT IN.



GET IT DONE IN COMFORT.

The Volvo EC20C compact excavator is ready to help you tackle all your jobs. 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.

- Helps remind the operator when maintenance work should be performed according to the operating hour reading.
- Hours display without starting the machine for quick and easy checks – even from outside the cab.



- Fully-opening front window comfort.



- All-around visibility for jobsite safety.



- Large hydraulic travel pedals for comfort and control.



- New Volvo Attachment Bracket makes attachment changes easy.



- The comfort of slew and offset control levers.
- 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 EC20C is 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 end is made of cast steel and the arm base is made of cast iron 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.

- Damage protection 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 buckets

Bucket forces 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.

Aiding your productivity

EC20C is equipped as standard with a hydrostatic swing brake.

- Greater precision and safety.

The EC20C is 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.



- Precise operational movements.



- Versatile, variable-width undercarriage.

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 EC20C leads the way in safe operation.

Seated in safety

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

- 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, blade and travel controls – for less risk and more safety.

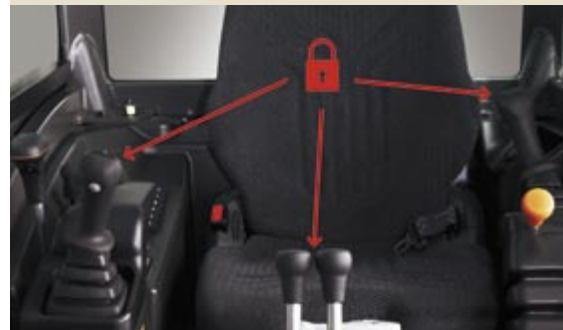
Easier hydraulic maintenance

Very good access to all the main hydraulic components.

- Simply remove 6 screws in the cab floor for easy, direct access.
- Fast hydraulic maintenance: top of the main control valve, swing joint, swing motor, various hoses, travel control.



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



- Controls lock when the safety strut is raised.



- The easy-access main control valve.

PRODUCTIVITY IN VIEW.

- The comfort of swing and offset control levers.
- Smooth, precise control, at your fingertips.
- Sturdy digging equipment designed for durability.
- Fully-opening front window comfort and communication.



- 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.

- Durable counterweight offers rear protection.

- Precise travel and operational movements.

SPECIFICATIONS

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 2,000 rpm
Power, installed (ISO 3046/1)	11.9 kW (16.2 hp)	at 2,000 rpm
Displacement, total	1,116 cc	(68 cu in)
Maximum torque according to ISO 3046/1	65.2 Nm (+/-5%) at 1,500 rpm (+/-100)	
	48 lbf/in (+/-5%) at 1,500 rpm (+/-100)	
Bore x stroke	76 mm x 82 mm	(3.0 in x 3.2 in)

Electrical system

Battery capacity	12 V - 52 Ah	
Alternator rating	12 V - 40 A	
Starter motor output	12 V - 1.1 kW	(1.5 hp)

Hydraulic system

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

Control	power-assisted hydraulic controls	
Hydraulic pump for all the equipment and travel circuits. Variable displacement pump		
Maximum flow	44 l/min	(11.6 US gpm)
Maximum operating pressure	21 MPa (210 bar)	(3,046 PSI)
Finger-tip controlled double-acting hydraulic circuit for accessories: Electro proportional		
Maximum adjustable flow	44 l/min	(11.6 US gpm)
Maximum operating pressure	21 MPa (210 bar)	(3,046 PSI)
End-of-stroke cushions:		
On boom ram	at the end of the rod extension	

Bucket performance

Breakout force	1,850 daN	(4,159 lbf)
Tearout force (short arm)	1,250 daN	(2,810 lbf)

Swing system

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

Swing 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	(10")
Track tension	by grease piston	
Blade (width x height)	1,000 / 1,336 mm x 248 mm 3' 3" / 4' 4" x 0.8"	

Drivetrain

Max. speed (low speed/ high speed)	2.5 km/h / 4.6 km/h (1.5 mph / 2.8 mph)	
Max. tractive force	1,440 daN	(3,237 lbf)

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

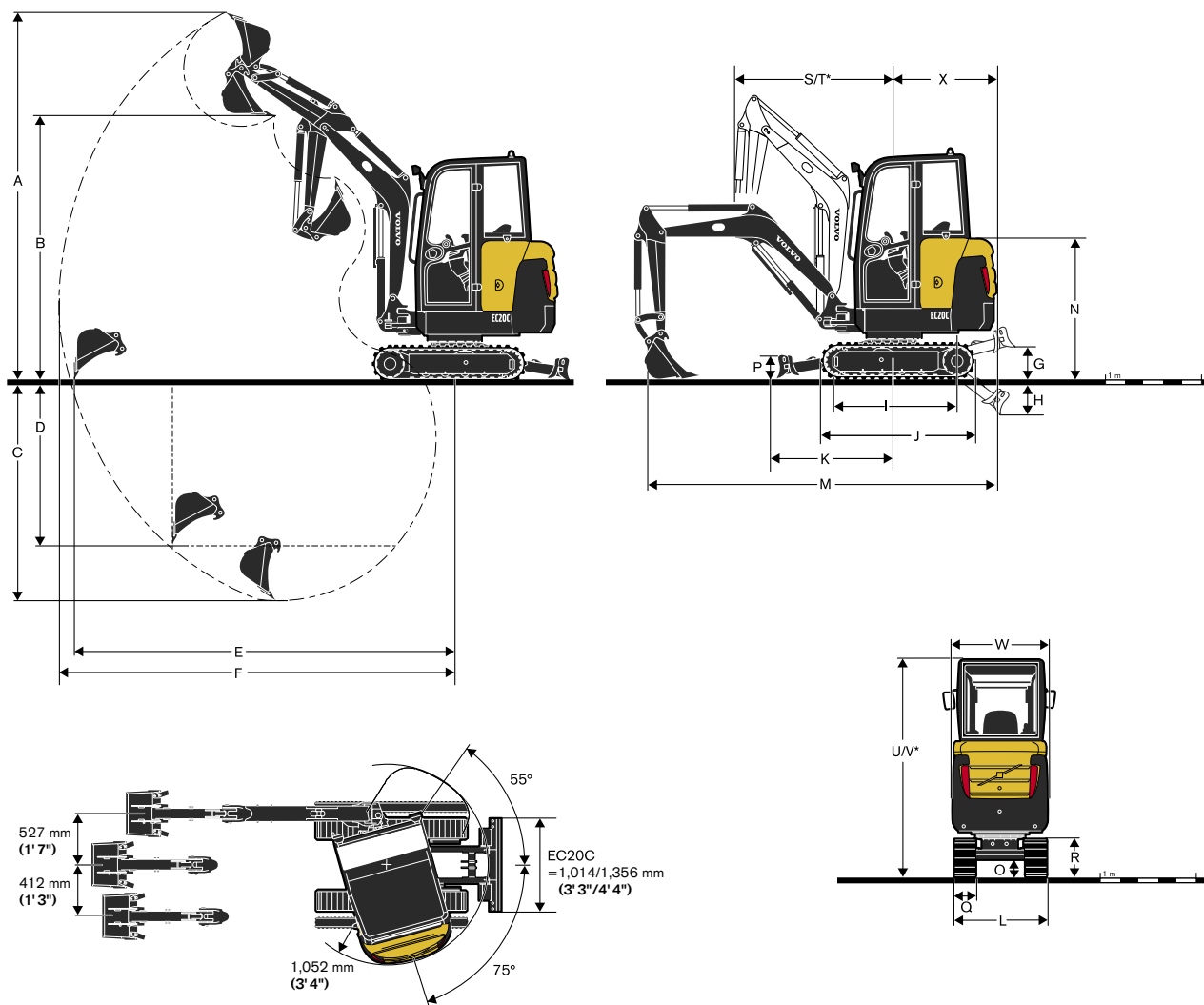
Service fill capacities

Fuel tank	20 l	(5.2 US gal)
Hydraulic tank	8.2 l	(2.2 US gal)
Hydraulic system, total	25 l	(6.6 US gal)
Engine oil including filter	3.5 l	(0.9 US gal)
Cooling system	5.6 l	(1.5 US gal)

Weight

Weight and ground pressure with 250 mm **(10")** rubber tracks and standard bucket:

Operating		
Canopy version	1,850 kg	(4,078 lbs)
Cab version	1,940 kg	(4,277 lbs)
Ground pressure		
Canopy version	0.30 kg/cm ²	(4.3 lbs/in²)
Cab version	0.31 kg/cm ²	(4.4 lbs/in²)



- | | | |
|--|---|--|
| 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
1,050 mm 3' 4"	3,807 mm 12' 5"	2,746 mm 9' 0"	2,257 mm 7' 4"	1,692 mm 5' 5"	3,971 mm 13' 0"	4,080 mm 13' 4"
1,350 mm 4' 4"	3,982 mm 13' 1"	2,920 mm 9' 6"	2,557 mm 8' 4"	1,978 mm 6' 5"	4,261 mm 14' 0"	4,362 mm 14' 3"

Dipper	G	H	I	J	K	L	M	N	O
1,050 mm 3' 4"	326 mm 1' 1"	311 mm 1' 0"	1,240 mm 4' 1"	1,620 mm 5' 3"	1,215 mm 4' 0"	1,000/1,355 mm 3' 3"/4' 4"	3,746 mm 12' 3"	1,423 mm 4' 7"	159 mm 0' 5"
1,350 mm 4' 4"	326 mm 1' 1"	311 mm 1' 0"	1,240 mm 4' 1"	1,620 mm 5' 3"	1,215 mm 4' 0"	1,000/1,355 mm 3' 3"/4' 4"	3,605 mm 11' 8"	1,423 mm 4' 7"	159 mm 0' 5"

Dipper	P	Q	R	S	T	U	V	W	W1	X
1,050 mm 3' 4"	248 mm 0' 8"	230 mm 0' 7"	481 mm 1' 6"	1,683 mm 5' 5"	1,383 mm 4' 5"	2,318 mm 7' 6"	2,395 mm 7' 8"	993 mm 3' 2"	993 mm 3' 2"	1,052 mm 3' 4"
1,350 mm 4' 4"	248 mm 0' 8"	230 mm 0' 7"	481 mm 1' 6"	1,731 mm 5' 5"	1,430 mm 4' 5"	2,318 mm 7' 6"	2,395 mm 7' 8"	993 mm 3' 2"	993 mm 3' 2"	1,052 mm 3' 4"

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
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
Automatic swing 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 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 safety handrail

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

1900 mm (75") long monobloc boom
1050 mm (41") arm
Dozer blade with 2 additional extensions
Protected blade cylinder

Safety

Machines cab and canopy are:

- Control pattern selector ISO/SAE
- Travel alarm
- 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

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

Service and maintenance

Tool kit
Dual stage air filter

OPTIONAL EQUIPMENT

Handling and earthwork equipment

Long arm: 1350 mm (53")
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

Environmental protection

Bio-degradable normal climate hydraulic oil VG46
Bio-degradable cold climate 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 player (cab version)
Anti-theft system

Safety

Left rear view side mirror

Miscellaneous

Special colors options (RAL specifications)

ATTACHMENT OFFER

Low noise Hydraulic Breaker HB100LN and dedicated tools

Mechanical pin-on attachment bracket (Volvo Attachment Bracket)
Mechanical attachment bracket (Quick Coupler Pel Job style)

Complete range of Volvo genuine trenching and ditching buckets

CUSTOMER SUPPORT NORTH AMERICA



CareTrack - Volvo's telematics system works with Volvo's exclusive machine tracking info system, MATRIS, using guided diagnostics to track and analyze your machines remotely minimizing costs and maximizing uptime.



Customer Support Agreements - Gives you peace of mind by reducing total ownership costs, maximizing uptime, and distributing maintenance and major repair costs.



Parts - Genuine Volvo Parts and certified Volvo technicians will keep your machine running and working hard over the long haul.



Attachments - Providing customers with a wide variety of attachments to keep your machine working and to open up new job opportunities.

THE VOLVO GROUP NORTH AMERICA



Volvo Trucks - With manufacturing that began in 1928, Volvo is the world's second-largest producer of heavy trucks, marketed in over 130 countries.



Volvo Financial Services - Develops and coordinates Volvo's operations within customer financing and related services.



Mack Trucks - One of the largest manufacturers of heavy trucks in North America and leader in the vocational segment of the North American truck market.



Volvo Bus Corporation - The world's second-largest bus manufacturer, with production in Europe, North and South America, and Asia.



Volvo Aero Corporation - Develops and manufactures components for civil and military aircraft engines, space rockets, and land-based gas turbines.



Volvo Penta - Provides engines and complete power systems to boats and power-generating equipment through over 5,000 dealers globally.



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 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.**



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

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