

# VOLVO COMPACT EXCAVATOR

## EC20B XT, XTV



- **Gross Power:**  
14 kW / 19 hp
- **Net Power:**  
ISO 9249: 11.3 kW / 15.5 hp
- **Operating Weight:**  
EC20B XT: 1685 - 1865 kg  
EC20B XTV: 1777 - 1957 kg
- **Bucket Capacities:**  
30 - 115 l.
- **Maximum Digging Depth:**  
2570 - 2810 mm
- **Load Sensing Hydraulic System** for very precise controls under all load conditions.
- **Hydraulically adjustable crawler undercarriage** for better stability and access to narrow sites or 1200 mm wide fixed undercarriage.
- **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 all impacts.
- **Two travel speeds** for higher mobility on job sites.
- **Excellent serviceability** thanks to easy access to the engine and hydraulics compartments.

**MORE CARE. BUILT IN.**



# SPECIFICATIONS

## Engine

Water-cooled low emissions Tier 4 Volvo D1D diesel engine.

<b>Displacement, total</b>	952 cc
<b>Gross power, rated</b>	12.0 kW (16.1 hp) at 2200 r/min
<b>Power, installed (ISO 9249)</b>	11.7 kW (15.7 hp) at 2200 r/min
<b>Maximum torque (ISO 9249)</b>	53 Nm at 1800 rpm
<b>Bore x stroke</b>	76 mm x 70 mm
<b>Gas emission</b>	PM: 0.4 g/kwh NOx + HC : 7.5 g/kwh CO: 6.6 g/kwh

## Electrical system

<b>Rated voltage</b>	12 V
<b>Battery capacity</b>	12 V - 45 Ah
<b>Alternator rating</b>	12 V - 40 A
<b>Starter motor output</b>	12 V - 1.6 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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Variable displacement pump for all the equipment, travel and power-assisted circuits:

<b>Maximum delivery</b>	44 l/min.
<b>Maximum operating pressure</b>	21 MPa (210 bars)

Double-acting hydraulic circuit for accessories:

<b>Maximum delivery</b>	40 l/min
<b>Maximum operating pressure</b>	21 MPa (210 bars)

Cushions:

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

<b>Breakout force</b>	1850 daN
<b>Tearout force</b>	1250 daN

## Slewing system

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

<b>Slewing speed</b>	9 r/min
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## Undercarriage

<b>EC20B XT</b>	
<b>Track width</b>	250 mm
<b>Track tension</b>	by grease piston
<b>Blade height</b>	240 mm
<b>Width of the blade</b>	1200 mm

## Undercarriage

<b>EC20B XTV</b>	
<b>Track width</b>	250 mm
<b>Track tension</b>	by grease piston
<b>Blade height</b>	240 mm
<b>Width of the blade</b>	980 mm and 1350 mm

## Drivetrain

Each track is driven by an axial piston hydraulic motor equipped with two speeds and an epicyclic reduction gear.

<b>Max. speed (low/high speed)</b>	2.7 - 4.7 km/h
<b>Max. tractive force</b>	1770 daN

## Service fill capacities

<b>Fuel tank</b>	21 l
<b>Hydraulic system, total</b>	33 l
<b>Engine oil</b>	3.6 l
<b>Cooling system</b>	4.5 l

## Weight

<b>EC20B XT</b>		
<b>Ground pressure</b>	<b>Rubber Tracks</b>	<b>Steel Tracks</b>
<b>Cab version</b>	0.29 kg/cm <sup>2</sup>	0.30 kg/cm <sup>2</sup>
<b>Canopy version</b>	0.27 kg/cm <sup>2</sup>	0.28 kg/cm <sup>2</sup>

<b>Operating mass</b>	<b>Rubber Tracks</b>	<b>Steel Tracks</b>
<b>Cab version</b>	1809 kg	1865 kg
<b>Canopy version</b>	1685 kg	1741 kg

<b>Transport mass</b>	<b>Rubber Tracks</b>	<b>Steel Tracks</b>
<b>Cab version</b>	1666 kg	1722 kg
<b>Canopy version</b>	1542 kg	1598 kg

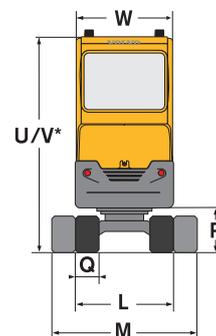
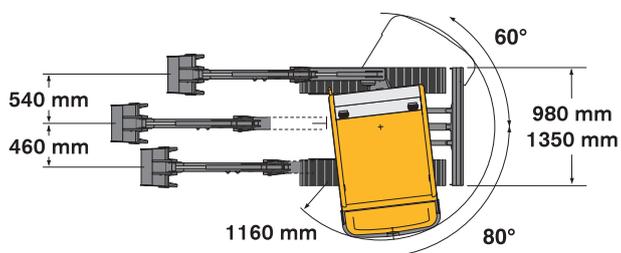
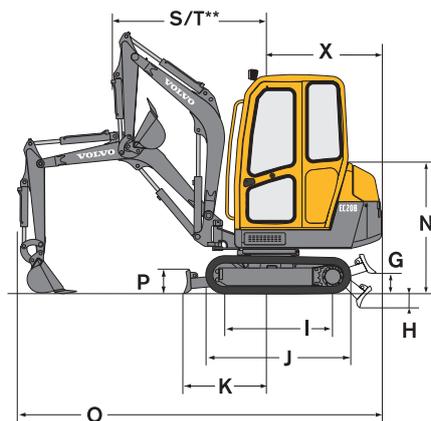
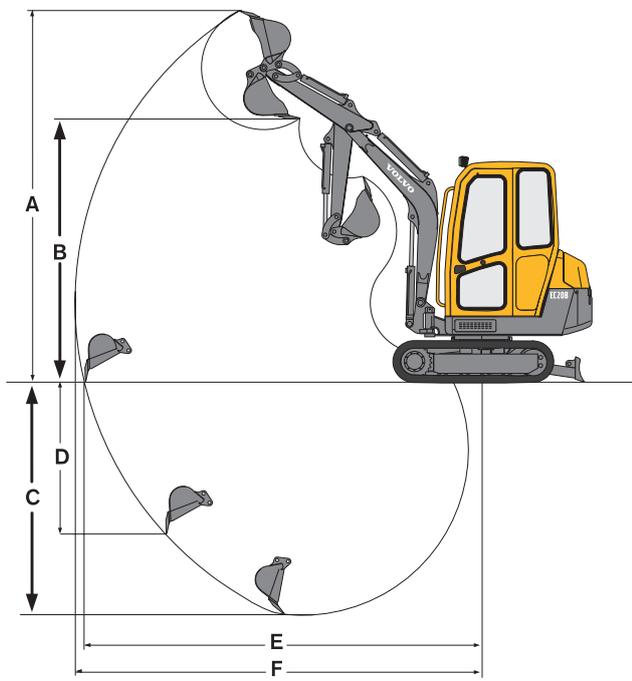
<b>EC20B XTV</b>		
<b>Ground pressure</b>	<b>Rubber Tracks</b>	<b>Steel Tracks</b>
<b>Cab version</b>	0.30 kg/cm <sup>2</sup>	0.31 kg/cm <sup>2</sup>
<b>Canopy version</b>	0.28 kg/cm <sup>2</sup>	0.29 kg/cm <sup>2</sup>

<b>Operating mass</b>	<b>Rubber Tracks</b>	<b>Steel Tracks</b>
<b>Cab version</b>	1901 kg	1957 kg
<b>Canopy version</b>	1777 kg	1833 kg

<b>Transport mass</b>	<b>Rubber Tracks</b>	<b>Steel Tracks</b>
<b>Cab version</b>	1758 kg	1814 kg
<b>Canopy version</b>	1634 kg	1690 kg

## Noise levels

The EC20B conforms to the 2006 European Machine Directive Noise Level (2000/14/CE) of 93 dB(A) for this class of machine.



Buckets EC20B XT/XTV			
	Width	Weight	Capacity
Excavator bucket	250 mm	33 kg	30 l
	300 mm	36 kg	32 l
	400 mm	42 kg	47 l
	450 mm	46 kg	55 l
	500 mm	50 kg	62 l
	600 mm	55 kg	77 l
Ditch bucket	1000 mm	102 kg	115 l

Dipper	A	B	C*	C	D	E	F
1050 mm	3750	2670	2570	2350	2350	4010	4100
1300 mm	3900	2820	2810	2600	2600	4250	4250

\* Dig depth with blade down.

	G	H	I	J	K	L	M	N	O
EC20B XT	250	275	1240	1630	1075	1200	-	1360	3780
EC20B XTV	240	230	1240	1630	975	1000	1350	1360	3780

	P	Q	R	S	T	U	V	W	X
EC20B XT	260	250	470	1620	1310	-	2210	980	1120
EC20B XTV	260	250	470	1620	1310	-	2210	980	1120

## STANDARD EQUIPMENT

### Engine

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

### Electrical system

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

### Undercarriage

250 mm wide rubber tracks.  
Fixed or variable width undercarriage according to version.  
Dozer blade.  
Blade extensions with supports on the blade (variable width undercarriage).  
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) 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.  
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, aerial 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-multiadjustable 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

1900 mm long monobloc boom.  
1050 mm dipper.  
140° hydraulic boom offset.  
Cushion on the boom ram.  
Handling equipment for loads inferior to 1000 kg (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

Machine conforming to directive n° 98/37 EEC and its amendments.  
Sources emissions in the environment conforming to directive 2000/14/CE.  
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 (1150 mm).  
Mechanically-controlled quickrelease attachment bracket.

### Hydraulic circuits for attachments

Hydraulic circuit for single or double-acting attachments (Auger...).  
Hydraulic circuit for operating a clam-shell bucket (opening/closing and rotation of the bucket).  
Push-pull connectors for attachment line.

### Undercarriage

Steel tracks (230 mm wide).

### 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).

Rear wind-deflector on canopy.  
Battery isolator switch.  
Fabric seat (cab).  
Translation pedals.  
Retractable seatbelt.  
Safety valve on boom and dipper ram.  
Dual stage air filter.  
Audible travel warning.  
Document storage.

### Miscellaneous

Tool kit.  
Special customised paint (RAL specifications).



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# **VOLVO**

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